

The Encyclopedia of Natural Whole Person Health, Wellnesses, Long Life and Good Health

The A to Z Essentials for Health Well Being and Long Life

BY:
GERALD T. LALLA, D.C.
P. DIANE LALLA, H.D.H.R, C.A.

FREE: There is no charge for this book as well as:
SEX AND FEMALE HORMONES EVERYTHING YOU WANTED TO KNOW ABOUT
SEX AND FEMALE HORMONES

The wisdom of All Ages

These books were written with the hope that somewhere somehow people who are sick and or want to live a long life free of drugs and dependence on doctors could learn more about the alternatives to natural health and be in charge of their lives but tap into the wisdom of all ages and the unlimited wealth of health opportunity's..

ALL RIGHTS RESERVED - 2017

Acknowledgements

The longer one lives the more they encounter people who influence their lives and most has been our case. Each one of them has and continues to have positive impacts on and in in our lives who have shared their wisdom and love

Therefore you because without the knowledge and love they have given us and whatever blessings you might receive in this and our other books and clinical practice are influenced by them.

Certainly the thousands of patients we have been allowed us to be part of their lives. Similarly that is also true of those who have participated in the Fellowship of the great Physician and House Call Television

The untold numbers of people who have loved us and uplifted us in their prayers and support.

Family

We also want to acknowledge our daughters Rose, Jean and Anne- their husbands (Richard, Mark and Todd and grandchildren Colin, Ryan, Elyse Chase, Evan and Kate) who we would not be here if it hadn't been their ever expanding care of us.

Also (but of equal importance)

Peter Henrich- who has been with us for many years taking care of us and our home and our other needs. Even though we are not biological brothers we see him as our bother.

Duane and Jeanette Nelson

Scott and Maria Murray

Paul, Christine and Fredrickson

Elizabeth Schatz

Joel and Carol Wise

David and Rhonda Schwietert

John and Carrie Thie

Ken and Marylyn Choate

Bryan and Janet Jamison

Greg Peterson – Nutri Dyn Midwest who has enabled us to not only serves our patients but granted us permission to use the nutritional protocols of the 200 plus nutritionally related conditions.

ORIGIN

The original birth of this book began in 1965 with our first book Healing of The Whole Person – A Nutritional Guide Health and Healing followed by its second edition in 1978. Then later in the 2010 Greg Peterson re-incarnated it as the Nutritional Guide that was oriented to the 200 conditions and food supplements related them.

During the ensuing years we began updating our second edition of Healing of The Whole Person – A Nutritional Guide Health and Healing as well the second edition of:

SEX AND FEMALE HORMONES - EVERYTHING YOU WANTED TO KNOW ABOUT SEX AND FEMALE HORMONES"

EXPRESS TO FINANCIAL SUCCESS– a universally accepted book on the keys to not only achieving financial success but also without problems and keeping those resources.

THE CHIROPRACTIC PRACTICE – regardless if you are at present a patient of a Doctor of Chiropractic and/contemplating becoming one this book give tremendous in sight to practice of chiropractic that is true north oriented and open to self-help healing

What then is the difference between this book and Greg Petersons guide?

His book (which is no longer in print) was written exclusively for health care providers with singular emphasis on food supplements whereas this book is more expansive regarding whole person health and wellbeing through better understanding of the various aspects, therapy's involved in alternative health.

What then is alternative health?

Anything that basically looks at health and healing that is devoid of orthodox medicine.

What is this book?

It is another life-changing and revolutionary book by the Lalla's who we wrote it for laypersons looking for information and opportunity's to study of not only the natural approaches to either personally remain healthy and/or regain health or learn more of how they might help someone who is struggling with health issues.

Secretes Revealed

Much of the nutritional information was previously only exclusive to health care providers. Now you can be in the driver's seat of your health and if are involved with a health care provider or someone selling food supplements, diets, weight loss or exercise programs you can be equal and make intelligent decisions about your health.

The Book For Vital Life

If you lack health and vitality, have been diagnosed or suspect that you have some undiscovered causes health issues, have tried diets, drugs and have concerns about their possible adverse effects, have tried food supplements and have not achieved the results you want and/or want to help you live a long life of good health, then this is the reference book to help you achieve those goals.

A Natural Health Reference Guide to Health

If you have any health issues and have tried drugs and have concerns about the possible adverse effects of them and/or have tried food supplements and not achieved the results you want and/or want to do things that might help you're the internal biochemical activities in your body, live a long life of good health then this is the reference book in helping you achieve those goals.

Who are The Lalla's?

Gerald Thomas Lalla is an Alumnus of the Palmer College of Chiropractic, Graduate of Northwestern College of Chiropractic, licensed and credentialed by the Minnesota Board of Chiropractic Examiners, licensed by the Florida Board of Chiropractic Examiners, is a Diplomate of the National Board of Chiropractic Examiners, holds a Certificate in the Basic Sciences from the Minnesota Board of Examiners in the Basic Sciences, Qualified with the National Board of The American Academy of Impairment Rating Physicians, Certificate In Family Practice – Clinical Applications of Natural Medicine Chiropractic Primary Care American Chiropractic Association, Graduate of The Goodheart Institute of Applied Kinesiology, Graduate and Certificate from The Touch For Health Foundation, Graduate of the Parker Chiropractic Research Foundation, Faculty of the Institute of Practice Management at the Parker Chiropractic Research Foundation, Certificate in Infectious Disease Control – National College of Chiropractic, Founder and Chiropractic Clinic Director Union Gospel Mission, and Co-founder and Director of ChiroCESeminars, (an online license renewal program of 200 plus post graduate classes for Doctors of Chiropractic program authorized by Chiropractic Licensing Boards of Examiners), co-produced 500 television programs through House Call Television (televised on cable TV and the internet – search “House Call Television”).

To Date

Years in practice: 50 plus years 12,000 new patients have entered our clinic and been successfully cared for.

Treatment Procedures Successfully Administered- 200,000 and ongoing

To Date: Over 20,000 Doctors of Chiropractic have attended in person Professional Post Graduate Seminars. Various State Board of Chiropractic Examiners have certified CE (Chiropractic Education) Seminars as a post-graduate continuing license renewal organization that is directed by the Lalla's and associates. Every State licensed health care provider is required by law to take 20 plus hours of continuing education annually or biannually) and the courses they take must be

reviewed by and certified by the practitioners licensing Board of Examiners and that's what

ChiroCESEminars, (an online license renewal program of 200 plus post graduate classes for Doctors of Chiropractic program authorized by Chiropractic Licensing Boards of Examiners),

Doctors of Chiropractic utilized over 50,000 hours of Chiropractic Board Certified online license renewal programs prepared by Drs. Lalla and Jensen.

Produces, records and continues broadcast of 500 plus House Call Television productions

Over 100 million lay persons have studied with us through "House Call" healing television programs

Co Authored With Patricia Diane Lalla

Internationally published articles - 25

2 books on Success, Health and Happiness – available on Amazon - search "Lalla"

Five (5) Text Books on Professional Chiropractic Practice utilized in Chiropractic Colleges and internationally throughout the health care professions

P. Diane Lalla

Patricia Diane Lalla holds an honorary Doctor of Human Relations degree, Graduate Certificate as a Chiropractic Assistant –Parker Chiropractic Research Foundation, is Chief Administrative Officer of the Fellowship of the Great Physician, Executive Director of ChiroCESEminars and the Lalla Chiropractic Clinic where she with Dr. Lalla and clinical staff provide interventional, natural whole person health, wellness and functional medicine.

Future questions answered:

Because we receive many questions about health and our approach to it we begin with addressing the most commonly asked.

Do we provide consultations?

Yes through our **Free Online House Call Health.**

In effect we make House Calls through telephone calls, faxes, Emails and paper/CD of health that people send us.

Possible ways of contacting us:

Telephone number: 651-484-8521.

Fax 651-484-7374

www.youtube.com/user/futurehealthtoday

www.futurehealth-today.com

Is there any charge for any consultation?

No there is no charge for a consultation or review of health care records but we hold them in the strictest of confidence.

Do people who contact us have to be patients in our clinical practice?

No but when personal health information's or there is a dialog between us and the people who contact us we relate to them as we would with the patients who are involved in our clinical practice.

Why do we produce books and no charge for them?

Because it gives access to anyone as well as saves people time and money to travel to gain health information from such a broad spectrum health source such as ours.

Why are our books free?

1. Because we feel that the mass majority of books published today on natural health lack full and comprehensive whole person health information therefore expensive possibly preventing some from acquiring them.
2. Secondly many are overpriced and produce little comprehensive scientific integrity.

Is this book or purely secular scientific?

Yes but we take into consideration that people come from all perspectives of life and we respect that and we avoid mixing religion or politics in them.

Do we sell vitamins in our clinic and/or are we a vitamin company?

No. Unlike most health care providers, health clubs, drug, health, food stores sell food supplements we don't.

Rather when a person wants GMP Certified Pharmaceutical Food Quality food supplements we direct them to Nutri Dyn Midwest where they can purchase them at discount.

Why do we mention Nutri Dyn Food Supplements?

1. Because people are always asking us what food supplements we use in our clinical practice.

2. Because Nutri Dyn provides a great source of credible scientific data on food supplements.
3. Over the past 50 years in our clinical practice we have studied food supplements and tried countless numbers of other food supplement company's products and we and our patients have found Nutri Dyn food supplements to produce far superior results than any other company's food supplements.
4. Because of those far superior results our patients had to take fewer food supplements thus it saved our patients money.
5. Lastly but certainly not the least Because Nutri Dyn products are GMP Certified Pharmaceutical Quality where most other food supplements are not – more about that latter
6. Likewise Nutri Dyn Midwest provides the opportunity for readers of our books and patients to order on line directly and also by pass the retail prices and profits that middle man in pharmacies, health food stores and health care providers make.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes and it's simple and easy

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today
2. Go to www.nutri-dyn.com
3. Click on Create Account
4. Click on Patients
5. Complete the short form and type in the following Account Number 100160
6. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive

On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee. Basically on the minimum order of \$200.00 the person saves \$28.00

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

What makes the Nutri Dyn Food supplements so special that we prescribe and recommend them?

Unlike most other food supplements they are GMP Certified Pharmaceutical Quality not just solely Pharmaceutical grade. Many manufactures of food supplements advertise their products to be "Pharmaceutical grade" but that does not mean that there products a GMP Certified Pharmaceutical Quality there leaving the door open for the possibility that that they may not be natural pure, free of toxic metals, hormones antibiotics, pesticides and herbicides.

Does Our Clinic have associates who are Chiropractic Physicians?

Yes we are associated with other Board Certified traditional as well as alternative health care including being State Certified in Acupuncture, meridian therapy and Eastern Medicine. That being the case when you call for a consultation you might be directed to one of those associates but they will relate to you as an independent health care provider who shares clinic space and facilities. We also have referral relationships with Chiropractic radiologists and many medical doctors and other medical diagnostic facilities.

Are We Radical?

No in that we attempt to be a scientific and credible as possible but we are most certainly there are those who are anti-drug, medicine or chiropractic. Even though we attempt to give references to the information we share we attempt to use common sense therefore we are not some kooks who are far out of the realm of balance.

Your Personal On line Health Resource and Nutritional Pharmacy

1. Listed below are some of the health subjects discussed in this book as well
2. Conditions we care for and treat in our clinic as well as

3. Have access to over 700 of GMP Pharmaceutical Certified Food Quality food supplements including but not limited to the causes and natural alternatives to freedom from them:

Acid reflux — gastroesophageal reflux disease

Automobile and Personal Injury – No Out of Pocket Expenses

What does No Out Of Pocket Expenses mean? It means that we do not require patients injured in automobile and other personal injury's to pay for care we might dispense.

Acne (acne vulgaris; cystic acne)

Acne Rosacea ADD / ADHD (Attention Deficit/Hyperactivity Disorder)

Acupuncture

Adrenal Fatigue / Adrenal Insufficiency

Aerobic and Aerobic Parameters- finding the right forms of physical exercise

Allergy - Modifying the Allergy / Sensitivity Symptom Response

Alzheimer's Disease- natural alternative to effectively preventing it minimizing its condition

Ankylosing Spondylitis- freedom from it

Anxiety Disorder

Applied Kinesiology Touch For Health) Muscle Response Testing (AKMRT) – how it works

Asthma - regaining healthy breathing

Auricular Therapy

Battle Field Acupuncture

Blood Interpretation: includes a discussion of abnormalities of the following as well as Nutritional Options regarding those abnormalities: Cholesterol, HDL Cholesterol, Apolipoprotein B (Apo B). Triglycerides, Fibrinogen, C-Reactive Protein, Homocysteine, Glucose, Serum Insulin, Sodium, Potassium, Chloride, Carbon Dioxide (CO₂), BUN (, blood Urea Nitrogen), Creatinine, BUN/Creatinine Ratio, Uric Acid, Calcium, Phosphorus, Alkaline Phosphatase, Total Protein, Albumin, Globulin, Albumin/Globulin Ratio: (A/G Ratio), Calcium/Albumin Ratio: (Ca/A ratio), GGT (Gamma-glutamyl transferase), SGOT: (also known as AST), SGPT: (also known as ALT), LDH, Total Bilirubin, CPK (Creatine Kinase), Serum Iron (Fe), Parathyroid (PTSH) and Thyroid Hormones.

Autoimmune Diseases- causes and natural corrections

Metabolic Detoxification Program – simple ways to prevent internal toxicity and how to cleanse oneself of it

Back problems – causes and natural solutions
Bipolar Disorder / Manic-Depressive Illness- dealing with it naturally
Blood Sugar Dys-regulation — Cardiometabolic Syndrome- freedom from it
(CMS) (Also known as Metabolic Syndrome (MetS), Syndrome X,
Insulin Resistance, Pre-diabetes), and Type 2 Diabetes – causes and natural
corrections
Body Composition / Healthy Weight Management- loss weight naturally
Bone Loss / Low Bone Density / Osteopenia / Osteoporosis / Fracture /
Stress Fractures
Bone Spurs- freedom from them
Bursitis- busting forth from bursitis
Cardiovascular Problems including: Atrial Fibrillation / Atrial Flutter / Cardiac
Arrhythmia /PACs (Premature Atrial Contractions) /PVCs (Premature
Ventricular Contractions)/ Atherosclerosis –/ Angina Pectoris,
Cardiomyopathy / Enlarged Heart Cardiovascular Disease – natural
alternatives
Calcium – Good and bad types of ingesting it
Cancer- Understanding It and Natural Approaches
Candidiasis / Candida Albicans / Yeast Overgrowth
Canker Sore (Aphthous Ulcer / Aphthous Stomatitis)
Carpal Tunnel Syndrome -
Cataracts
Cellulitis
Central Pain Syndrome
Cerebral Palsy -
Cervical Dysplasia / Cervical Cancer / Abnormal Pap smear
Chelation Therapy
Chemical Dependency
Chiropractic Care
Chronic Fatigue Syndrome
Circulation / Venous Insufficiency
Clostridium difficile (C. difficile) Infection / Clostridium
Difficile (C. difficile) Colitis / Chronic Loose Stools / Diarrhea
Coffee Enemas
Common Cold
Common Warts
Compartment Syndrome
Concussion / Brain Injury / Battered Brains

Congestive Heart Failure
Conjunctivitis (Pink Eye)
Constipation
COPD (Chronic Obstructive Pulmonary Disease) /
Chronic Bronchitis / Emphysema / Lung Disease /Impaired Lung Function
CT Scans
Cystic Fibrosis (CF)
Dementia / Cognitive Impairment
Devine Gate
Depression
Diabetes – Types 2/3
Detoxification – Utilizing It
Drug Induced Nutrient Depletions Reference Chart
Dysmenorrhea / Excessive Menstrual Cramps
Dementia / Cognitive Impairment
Diagnostic Tests including a discussion of Blood Profile and CBC, 24 Hour
Urine Hormone Analysis, IgE and IgG4 Food Sensitivity Test, Hain Mineral Toxic
Metals and Touch For Health Applied Kinesiology Muscle Response Test
Degenerative Disc Disease
Ear Infection (Otitis Media)
Enzymes their roles in the body
Eczema (AKA: Atopic Dermatitis) – freedom from it
Edema / Water — Fluid Retention
EPA/DHA –their importance to health
DHEA Its impotence to wellness
Differentiating Food Grade and GMP Certified Pharmaceutical Quality
Drugs – natural alternatives to them
Enzymes – There roles in the body and Therapy's
Essential Oils – There role in health
Exercise - Physical the types, indications and contraindications
Facet Syndrome / Lumbar Facet Syndrome – Freedom From
Fear – Phobias – freedom from fear naturally
Fibromyalgia distancing yourself from it naturally
Forgetfulness / Memory Loss / Cognitive Function Decline
Frozen Shoulder – freedom from shoulder problems
Gadolinium - If you're ever going to have an MRIs you need to know about
galaolinium
GMP Pharmaceutical Quality Food Supplements Vs Food Grade Food Supplements

Gastritis / H. Pylori Infection / Ulcers (Duodenal and Gastric
GERD / Heartburn / Reflux Esophagitis
Gestational Diabetes / Diabetes and Pregnancy
Glaucoma – dealing with it naturally
Gout / Gouty Arthritis – Freedom from it
Headache (Nonvascular and Vascular / Migraine
Hearing Loss – preventing it as well as eliminating it naturally
Heavy / Toxic Metal Detoxification- the importance of detoxification
Herbs – Applications for herbal remedy's
Nontraditional Vs traditional Health Care Alternatives
Hepatitis – keeping and/or gaining a healthy liver.
Herpes Simplex / Cold Sores / Fever Blisters — Genital Herpes
(HSV Type 1 & HSV Type 2)
Herpes Zoster (Shingles) – dealing with it naturally
Hives (Urticaria) and Angioedema
Homocysteine (High) – the importance of having a normal homocysteine
Homeopathy – the good and potentials of herbs
Hypertension (High Blood Pressure) – enjoying normal blood pressure
naturally
Influenza or “Flu”
Interstitial Cystitis (AKA: IC, Painful Bladder Syndrome (PBS),
Interventional Chiropractic Care
Iron-Deficiency Anemia – naturally remedies of anemia
Joint Problems – freedom from joint problems
Ketogenic Diet – the ins and outs of it
Kinesiology- a revolutionary approach to health
Kidney Stones – causes and cures
Night Shade Related Health Problems – there adverse effects on health
Leaky Gut Syndrome / Inflammatory Bowel Disease (IBD)
Lectins allergy's to them
Liver / Gallbladder Problems – no need for liver or gall bladder problems
Liver Disease — Cirrhosis /Nonalcoholic Steatohepatitis (NASH) /
Nonalcoholic Fatty Liver Disease / Fatty Liver Disease – preventing or
eliminating fatty liver problems
Low Back Pain / Disc Injury / Degenerative Disc Disease - eliminating Disc
Disease.
Lung Infections (Bronchitis / Pneumonia) dealing with them naturally
Lyme disease – Dealing with it naturally

Macular Degeneration – keys to normal eye health
Magnetic Therapy – its potential values to well being
Meridian Therapy – Meridian therapy – experiencing the health values to it
Minerals – Indications and Contraindications
Mitral Valve Prolapse (MVP) – natural interventions
Mouth / Lip Conditions — Angular Stomatitis and Cheilosis
MRI – uses of it. Because the MRI requires a contrast agent (gadolinium) of the organ being evaluated and gadolinium can be harmful to the functions of the patient's kidney. Again the issue will be determined by the radiologist ordering the MRI and or technician who will be performing the MRI.
Multiple Sclerosis (MS) –combating it naturally
Myofibrositis –natural solutions
Narcolepsy / Cataplexy –freedom from it
Negative Mood / Depression- natural options
Neuropathy – freedom from it without drugs or surgery
Oils (Diffuser and Essential) – There potential roles in health
Osteoarthritis / Degenerative Joint Disease (DJD) – regaining health joints
Pain / Inflammation Management – natural alternatives
Parathyroid Disorders (Hypoparathyroidism or Hyperparathyroidism)
Parkinson's disease – natural solutions
Peripheral Artery (Arterial) Disease (PAD) and Claudication /
Peripheral Nerve Disorders – freedom from it
Pinworm Infection – natural solutions
Polymyalgia Rheumatica and Giant Cell Arteritis – enjoying freedom from it
Post-Cancer Nutritional Support Strategies – natural alternatives
Prostatitis (Prostatic Hypertrophy, Benign) - effective solutions
Protomorphens – necessary ingredients to health
Psoriasis & Psoriatic Arthritis – no long effected by it
Restless Legs Syndrome and Leg Cramps
Rheumatoid Arthritis – natural solutions
Shen Men opening the door to its energy in your life
Sciatica –freedom from it
Sleep Disorders / Insomnia – sleeping better naturally
Sprain / Strain – healing of them
Stenosis – Spinal- natural solutions
Stress- living a stress free life
Sty / Eye Infection
Systemic Lupus Erythematosus (SLE) – conquering SLE naturally

Trigger Zone Therapy – finding your body's trigger zones and using them to your health's advantage
Touch For Health Applied Kinesiology Muscle Response Testing- you're learning how to treat yourself
Tendinitis – natural cures for it
Tennis Elbow (Lateral Epicondylitis)
Thyroid Conditions – Natural options
Tics / Tremors / Seizures / Epilepsy / Tourette syndrome
Tinnitus / Meniere's syndrome – freedom from them
Urgency and Frequency Syndrome) – regaining control of urinary bladder issues
Urinary Tract Infection (UTI) / Bladder Infection (Cystitis) - regaining control of urinary bladder issues
Visual Disturbances – solutions to healthy vision
Vitamins – Indications and contraindications
Weak Bladder, Stress Incontinence, Enuresis (Bedwetting) - regaining control of urinary bladder issues
Whooping Cough (also known as: Pertussis)
Blood Interpretation: includes a discussion of abnormalities of the following as well as Nutritional Options regarding those abnormalities: Cholesterol, HDL Cholesterol, Apolipoprotein B (Apo B). Triglycerides, Fibrinogen, C - reactive protein, Homocysteine, Glucose, Serum Insulin, Sodium, Potassium, Chloride, Carbon Dioxide (CO₂), BUN (Blood Urea Nitrogen), Creatinine, BUN/Creatinine Ratio, Uric Acid, Calcium, Phosphorus, Alkaline Phosphatase, Total Protein, Albumin, Globulin, Albumin/Globulin Ratio: (A/G Ratio), Calcium/Albumin Ratio: (Ca/A ratio), GGT (Gamma-glutamyl transferase), SGOT: (also known as AST), SGPT: (also known as ALT), LDH, Total Bilirubin, CPK (Creatine Kinase), Serum Iron (Fe), Parathyroid (PTH) and Thyroid Hormones.

Are we a retail vitamin company?

No instead of passing the costs of maintain a retail outlet we are able to pass those savings onto people who order directly from Nutri Dyn Midwest In effect we act as facilitators to those lay people who desire GMP Certified Pharmaceutical Food Quality supplements at 10% discount and opportunity to avoid shipping and handling fees.

In this book as well as our *SEX AND FEMALE HORMONES - EVERYTHING YOU WANTED TO KNOW ABOUT SEX AND FEMALE HORMONES* BOOK we offer information we have learned not only about hormone health related issues and seen many patients respond well to natural alternative perspectives that they purchased at discount from Nutri Dyn Midwest the same company that other health care providers buy Nutri Dyn food supplements from and then resell them at a profit.

What is the major difference between Drug Therapy and Chiropractic Therapy's?

The medical profession accepts the reality of adverse reactions to drugs whereas Chiropractors don't tolerate adverse reactions to the care they dispense. The very few complaints filed regarding negligence on the Chiropractors therapy involve lack of due Diligence not causing physical harm to patients which is opposite of the majority of complaints filed against medical doctors/hospitals.

Due Diligence

As you process through our books one of the things you will see is we repeating the usual and customary diagnostic options to be considered with diagnosis of every health condition we discuss. Part and parcel in doing so (Due Diligence) is to make readers aware of diagnostic options available with reference to the condition they are 'searching for information on.

Why? Because many people are not aware of those options therefore are better informed when they consult with any medical provider.

Does it bother us that those food supplement companies that do not submit their products for GMP Certification?

NO. That's the way they choose to run their business and it makes no matter to us but we know that GMP Certification is the so-called gold standard in testing to see scientific nutritional quality of food supplements.

Why don't they submit their products for GMP certification?

You'd have to ask them but most certainly it's logical to assume they and their distributors can make more money in not doing so.

Is there hope for sick people or people who want to a doctor and drug free life?

Yes and part and parcel in doing so includes some familiarity with vitamins, minerals, hormones and herbs therefore depending on that degree some of the information will be a review and that's good in that when we cover some previous information new doors of understanding open giving us opportunity to advance in those subjects. This then is in part a course of positive self-discovery with emphasis on addressing hormone related problems from their cause as well as natural alternatives to them.

Are we opposed to drugs or surgery?

No we are not as sometimes people get into situations where they need prescribed medications and surgery that are potentially lifesaving and we are thankful that those opportunities exist but we also recognize that sometimes traditional medicine doesn't achieve the health goals people have and are looking for alternative health information that is life science based.

What makes the Nutri Dyn Food supplements we recommend special?

They are GMP Certified Pharmaceutical Quality not just Pharmaceutical grade. Many manufactures of food supplements advertise their products to be "Pharmaceutical grade" but that does not mean that there products a GMP Certified Pharmaceutical Quality but we do not present them as a medical food or imply that if ingested suggest that if ingested the could cure disease nor prevent diseases promise cure, prevention, make a diagnosis, treatment or that the FDA has evaluated the product.

What's differentiates GMP Certified Pharmaceutical Quality food supplements from Pharmaceutical Grade food supplements?

When you see a food supplement company or distributor use the term Pharmaceutical Grade food supplements it means that the manufacture says that there are no dyes, insipients or extenders in the product whereas Nutri Dyn food supplements are **GMP Certified Pharmaceutical Quality meaning that they** have submitted their products to an independent laboratory for analysis and that the laboratory also found that the product is not only free of dyes, insipients or extenders but even more importantly guaranteed to be all:

Natural,

In proper biochemical ratio,

Compatible to the human body,

Free of microbes, antibiotics, inorganic toxic metals, hormones, pesticides and herbicides and potentially toxic insipients, in the product but not the case of food grade supplements. More about that in this and the **“SEX AND FEMALE HORMONES - EVERYTHING YOU WANTED TO KNOW ABOUT SEX AND FEMALE HORMONES”**

Pharmaceutical Quality Vs Food Grade food Supplements

Periodically you will see us refer to the differences between Pharmaceutical Quality Food Supplements and Pharmaceutical grade food supplements. In spite of all the glossy hype of some organizations that sell food supplements, most prove not to be GPM Pharmaceutical Certified Food Quality but rather Food Grade.

What's the difference? Pharmaceutical Quality food supplements are GMP Certified (like the best high quality/octane) and would generally be prescribed by licensed health care providers whereas Pharmaceutical Grade food (like low quality/octane) supplements are not thus can be sold by almost anyone. Fact is as sad as it is you open yourself to unscrupulous people when you trust them and accept what they're selling. Thus it should not surprise anyone who takes food grade food supplements and doesn't get the health results they were hoping for.

Either when the manufacture combined the ingredients they are not biocompatible therefore the bodies cannot accept them and either defecates or urinates them out of the body or while in the body interrupt the normal biochemistry of the body.

What is GMP Certification?

The International Society for Pharmaceutical Engineering issues a Good Manufacturing Practice (GMP) Certificate which ensures that products are consistently produced and controlled according to science based quality standards.

It is designed to minimize the risks involved in any pharmaceutical production that cannot be eliminated through testing the final product. Through independent laboratory testing, GMP certifies that:

- ❖ the ingredients listed on the label are actually in the product
- ❖ the ingredients are natural and in proper biochemical ratio – compatible to the human body,
- ❖ The product is free of microbes, antibiotics, inorganic toxic metals, hormones, pesticides and herbicides and potentially toxic insipients – this is not the case of Pharmaceutical grade food supplements.
- ❖ **Note:** Because of the importance of ingesting GPM Certified Pharmaceutical Quality food supplements you will see us refer to it periodically as well as the difference between it and Pharmaceutical grade food supplements.

What is involved in a food supplement obtaining GPM Pharmaceutical Quality Certification?

An independent Laboratory analysis must include the following:

- ❖ “Proprietary” it must that for the manufacture to have Proprietary designation in its creation and formulation of products no other manufacturer of a nutraceutical can copy or duplicate it without serious legal consequences. From what we know Nutrition Dynamics is one of the only manufacturers of nutraceuticals that has:
- ❖ GMP Certification of the Natural Products Association (www.naturalproducts.org), by the International Society for Pharmaceutical Engineering
- ❖ NSF Manufacturing Facility status (www.nsf.org)
- ❖ TGA Therapeutic Administration (www.tga.gov.au). Unlike most other food supplement manufacturers, they have submitted all of their vitamins, minerals, homeopathic remedies and nutraceuticals for independent laboratory analysis and has:
 - ✓ GMP – Certified Manufacturing by NPA, NSF International, and TGA to ensure quality- every time.
 - ✓ Independent Laboratory Scientific Evaluation of ingredients has been verified by those organizations that the ingredients of the formula, quality, presence and concentration of active factors to ensure efficacy,
 - ✓ That comprehensive independent laboratory Safety Reviews were conducted before the formula was developed – putting the health and safety of patients first,
 - ✓ Advanced Scientific Staff and Research Facilities, such as the Metal Proteomics Nutrigenomics Research Center, to help shape the future of vitamins, minerals, homeopathic remedies and nutraceuticals. This process evaluates the existence of inorganic Metal Proteomics Nutrients thus if the label states ASS and RF it means that there were no inorganic toxic metals found or that they were far below any scientific evidence of causing acute illnesses and/or accumulated health issues. That process investigates harvested plants’ high or non-capability to extract toxic metals from the soil in which they were harvested.
 - ✓ The Nutrigenomics Research Center is dedicated to researching how nutrients and genes interact influencing our inherited genomic nature and the genomic nature through life. It tells us that what our forbearers ate and what we eat in foods and/or food supplements does affect our genomic nature. A supplement successfully meeting NRC’s rigorous testing and auditing criteria receives the USP Verified Mark. When you see the Mark, it means the supplement: Contains the ingredients listed on the label, in the declared strength and amounts; does not contain harmful levels of specified contaminants.

What then does that logically lead one about people who purchase Pharmaceutical grade food supplements?

They must be health conscious and that's great.

Secondly apparently they do not know that there is sought a realm as GMP Pharmaceutical Certification and think that if a food supplement label says Pharmaceutical grade that it must be good and it would be wrong to think less of them.

Third either they have health issues and want to use nutraceuticals and/or are healthily and take nutraceuticals worth the goal of remaining healthy.

Why doesn't the FDA make a distinction about the difference between Pharmaceutical Grade and GMP Certified Pharmaceutical Quality Food Supplements?

We don't know but we suspect that either they don't think it's important and or possibly the lobbyists of Pharmaceutical Grade food supplements are influencing the F.D.A not requiring **GPM Pharmaceutical Quality Certification?**

BECAUSE OF THE IMPORTANCE OF GMP PHARMACEUTICAL QUALITY IT ON OCCASION WILL BE MENTIONED AGAIN IN THIS BOOK.

THE INTENT IS TO BE AS DIRECT AS POSSIBLE ABOUT NOT ONLY THE HEALTH IMPORTANCE OF GMP CERTIFIED PHARMACEUTICAL QUALITY FOOD SUPPLEMENTS BUT THEY VAST DIFFERENCES BETWEEN THEM AND THOSE THAT ARE NOT

The Possible realities of False Food supplement Labeling

Because there is so little government oversight in the food supplement manufacturing industry and retail distributors of food supplements many food supplement manufactures list ingredients that aren't even in the food supplement making it appear that the food supplement contains many ingredients when in fact it doesn't.

Similarly when there are ingredients in the food supplement that are listed on the label but the amount of Mgs (Milgram's) and IU's (International Units) are false or far below what they list..

How does a potential purchaser know if what's listed on the food supplement label is true?

You don't but if the food supplement is GMP Pharmaceutical Certified (which is highly regulated by the FDA then the food then you know that what the ingredients that the manufacture listed on the label are in the food supplement.

Is there any danger in taking a food supplement that lists ingredients as being in the product but in reality are not?

Yes in that the person may be taking the food supplement for a certain health goal and/or a Board Certified health care provider may have discovered some health issue that either could harm the individual or not achieve some desired result for the persons diagnosed health problem. Fact is there are potentials of harm and adverse reactions to some food supplements..

Who owns those food supplement companies?

Most are owned by international drug companies and that is not the case of Nutri Dyn Inc. as they are not owned by a drug company.

Where do most food supplements come from?

1. The majority of food supplements sold in the United States are not manufactured in the United States - the major food supplement manufacturers are in China and other Far East or Latin America companies, shipped in bulk containers to the USA or Mexico where they are packaged and sold under the label of many of the food supplements you see sold in some health care providers' offices, drug stores, discount retailers, vitamin outlets and independent vitamin distributors.

2. Interestingly even though the products may have different names, colors and shapes and the labels state a different company, they are basically the same and owned by the company's that manufactured them.

3. Many of the ingredients in food supplements are derived from country's outside the USA thus there is little to no Federal or State oversight in the condition of the land the product is grown on or taken from and their manufacture.

4. Unless GMP Certified Pharmaceutical Quality is printed on the label and the manufacture does not have proof their products are GPM certified it indicates that the product they are selling have not been subjected to independent laboratory analysis therefore there is a serious question if the products meet GMP standards.

When that's the case there is a high probability that the product will not live up to their reported benefits and it could in fact cause harm. If they didn't cause immediate harm, they may be contribute to accumulated harm and/or possibly wouldn't provide the promised or hoped for results and could be rejected by the body, making the person's urine very expensive.

5. These issues are compounded in that no governmental agency forces them to have independent laboratory testing and secondly unlike most prescribed drugs there

is no traditional measurement of the need to take a food supplement nor any laboratory measure of the immediate and/or accumulated effects of taking the food supplements nor does someone's testimony that they feel better after taking a food supplement prove that it was the food supplement that was the cause of the feeling better.

The reality of pollution containing food supplements.

Because so much of the soil and water (including hydroponic gardening) that foods are grown in are fertilized with animal waste, hormones, Genetic Modified Ingredients and synthetic fertilizers, much of the foods and food supplements sold are not natural or free of toxic metals, hormones, antibiotics, pesticides and herbicides, therefore potentially harmful to the body and very often the FDA is aware of that fact but the manufactures are constantly attempting to pressure the FDA to increase the acceptable standards of toxic metals, hormones, antibiotics, pesticides and herbicides without they having to list any of those potentially harmful chemicals on their labels.

Pollution knows no limits

Water comes from rain, lakes, rivers and wells which contain good things like oxygen, but also contains invisible gases and hydrocarbons that fall on the ground and pollute the soil. When foods are grown on that polluted soil or watered plants absorb everything in the rain and enter the food chain and our bodies. In effect we are slowly being poisoned and biochemically "Chernobylied" by pollutants and radiation.

Is that a situation with some food supplement manufactures?

All of the earth's surface is polluted so there are going to be poisons in it that are going to enter the eco system of plants or inorganic toxic chemicals that are used to manufacture minerals, vitamins and other food supplements.

When it comes to toxic metals in foods and food supplements, unless the manufacturer or seller has legitimate independent scientific and GMP Certification substantiation that their products are free of toxic metals, microbes, anti-biotics, hormones, pesticides and herbicides, you then can assume they are not, or that they exceed the Federal Drug Administration minimalized limits for inorganic toxic elements which when consumed can lead to exposure and acute and/or accumulated toxin causing health problems.

Cereals contain toxic metals

One example of that is an article authored by Catherine Saint Louis and published in the April 2, 2016 New York Times "F.D.A Offers Limits in Rice Cereal for Babies"

regarding arsenic in infant rice cereal. Those children fed rice are being exposed to inorganic arsenic (three times more than adults) predisposing them “to diminished intellectual function early in life but also to adverse pregnant outcomes, such as stillbirth.” One can complain about the FDA, which is heavily bombarded by drug, food and food supplement manufacturers’ lobbyists, but the FDA’s scientists know what they’re talking about. Unless food supplement manufacturers and sellers take responsibility to have their products evaluated by independent laboratories and/or receive GMP Certification, one would logically have to question if their products are free of toxic metals, pesticides, herbicides, hormones and other chemicals that could cause acute health problems. The food and food supplement manufacturers try to influence the FDA to establish high limits of those chemicals existing in foods and food supplements, which can cause immediate health problems and/or health problems that are the result of accumulations in the body.

The presence of heavy toxic metals

There are many heavy metals in nature that are toxic to the body and have no known good biochemical benefits to the body thus have the potential to cause physiological harm in that they bind in tissues and cause free radicals (oxidative stress), adversely effects the endocrine system (hormones) and interrupting electrolytes and their activity’s.

Cadmium, Mercury, Lead

Cadmium, Mercury and Lead are three of the worst heavy metals on the body

Cadmium is known to be carcinogenic.

Lead damages the nervous system.

Mercury damages the brain and nervous system and

Lead comes through lead pipes gasoline emissions, and the others from various other sources including electricity generation, coal burning, cleaning products (nanomaterials).

Solutions - Find the cause and the cure become clearer

1. Blood, Urine and Hair Mineral Toxic Metal Analysis – if you don’t monitor you can’t scientifically manage
2. Consider consuming organic foods (that an IgG and IgG4 food sensitivity tests) are proven to be biogenic/biochemical compatible with your body).containing sulfur (sulforaphanes and indole- 3 carbinol
3. Avoidance fish (fresh as well as salt water) that are not certified as heavy metal free.)
4. Foods high in water soluble fiber- grains and legumes - psyllium husk),

5. Fruits, garlic, onions, allium containing vegetables and the brassicae/cruciferous (Broccoli, Brussels sprouts, cabbage, cauliflower, bok choy, turnips, family)
5. Foods or food supplements containing Vitamin C, Calcium, Selenium, Iron, the B complex vitamins, Folic acid, B12, Taurine (an amino acid), and EPA-DHA that are GMP certified.
6. Proteins – preferably vegetable that are known to contain the essential proteins that are reported to be important in heavy metal detoxification especially glutathione, alpha-lipoic acid, N-acetyl cysteine, L-glutathione and milk thistle which contains a glutathione increasing substance that has the ability to increase the flavonoid Silymarin.

Caution

Unless the manufacturer of a food supplement that says that its products are either GMP Certified Pharmaceutical Quality or says that their products are Pharmaceutical Grade is willing to give you credible documentation that they are certified by independent laboratory's then it is highly unlikely that their statements contain falsehoods and the possibility that they are not in proper biochemical nature and may contain toxic metals, hormones, herbicides and pesticides.

Fact is just because some individual or corporation sells food supplements doesn't mean that they are good, compatible in the human body and/or GMP Certified Pharmaceutical Quality and that appears to be the case in most food supplements sold.

Why do we make mention of Nutri Dyn and Nutri Dyn Midwest products?

1. Because we always feel it's best to be up front right at the beginning.
2. Secondly we and our patients have had many good years of experience with countless numbers of food supplement manufacturers and **Nutri Dyn and Nutri Dyn products** have proven to achieve in our clinical practice superior results than all those other companies.
3. They also are a recognized international manufacturer of GMP Pharmaceutical Certified Food Quality food supplements (not food grade) who we are fortunate to have offices (Nutri Dyn Midwest) in Minnesota that distribute Nutri Dyn GMP Certified Pharmaceutical Quality food supplements throughout the United States.
4. And how did it achieve that predominance? By continuing to attempt to be the best and in that ongoing process attracted more licensed health care

providers who prescribe its products. Why? Because those health care providers evidently see Nutri Dyn products achieve better results than other food supplements they formerly prescribed

5. Less Expensive. In that process they have also seen that Nutri Dyn products are less expensive in that patients not only get better results but end up taking fewer food supplements therefore less they spend less money on food supplements.

Do we have any ownership in any drug or Nutri Dyn or any other food supplement manufactures or distributors or diagnostic laboratories?

No. Neither we nor any member of our clinical support staff or family own stock in any diagnostic laboratory or any other manufacture or distributor of food supplements, diets or physical exercise equipment or health club facilities but we could not have produced this or the *SEX AND FEMALE HORMONES - EVERYTHING YOU WANTED TO KNOW ABOUT SEX AND FEMALE HORMONES* books or the discount of Nutri Dyn Products without a professional compensation arrangement.

When we discuss health conditions in this format do we list what we know to be some of the natural alternatives to them?

Yes but we do not suggest that they are in any way a medical food or if ingested could cure disease nor prevent diseases promise cure, prevention, make a diagnosis, treatment or that the FDA has evaluated the product. From what we know at present Nutri Dyn, Inc. does not violate those requirements and we also have endeavored not to do so.

Is there a difference between Nutri Dyn Inc. and Nutri Dyn Midwest?

Yes in that Nutri Dyn Inc.'s corporate entity whereas Nutri Dyn Midwest is a designated and incidentally the largest distributor of Nutri Dyn products.

Are there any most commonly ordered GMP Certified Pharmaceutical Food Quality supplements?

Yes and they are as follows but we do not share them as an attempt to advertise them but rather that many people seem to initially and subsequently utilize them.

Supplemental Facts

Interestingly even though the ingredients might be different when you look up other Nutri Dyn products or any condition in our books you will see a Supplemental Facts” which is a comprehensive and broad description of the ingredients in products.

Why is that important?

It is important in that anyone can produce food supplements and publish anything thing/ingredients on the products label and but the only legitimate method of knowing if the ingredients are really in the food supplement is if it is GMP Pharmaceutical Quality Food Supplements.

Cal Apatite

Product Description

Bone health is of the utmost importance at every age. Cal Apatite Bone Builder Chewable from Metagenics provides what at present is known as optimal support for bone health in the form of a delicious chocolate-flavored chewable that is great for children and adults.

Product Details:

- These details are not presented to in any way stop taking a prescribed medication or ingested could cure disease nor prevent diseases promise cure, prevention, make a diagnosis, treatment or that the FDA has evaluated the product. From what we know at present Nutri Dyn, Inc. does not violate those requirements and we also have endeavored not to do so.
- Chewable is formulated with MCHC, which is a calcium-packed substance from bovine that supports optimal overall bone health and strength
- Formulated to offer benefit from calcium, trace minerals, and other organic factors that naturally present in healthy bones

Supplement Facts:

3 tablets contain:

Calories 24

Total carbohydrate 6g

---Sugar alcohol 1g

Vitamin D (as cholecalciferol) 75 IU

Calcium (as MCHC and dicalcium phosphate) 300mg

Phosphorus (as MCHC and dicalcium phosphate) 189mg

Magnesium (as magnesium bis-glycinate) 75mg

Zinc (as zinc glycinate) 6mg

Copper (as copper glycinate) 750mcg

Manganese (as manganese glycinate) 750mcg

Microcrystalline Hydroxyapatite Concentrate (MCHC) 750mg

Other Ingredients: sorbitol, fructose, cocoa, natural chocolate flavors, stearic acid, natural flavors, silica, guar gum, xanthan, carrageenan, cellulose gum, and licorice extract.

Formulated to Exclude: wheat, gluten, yeast, soy, dairy products, nuts, tree nuts, fish, crustacean shellfish, or artificial colors, flavors or preservatives.

Recommended Use:

Adults and children (age 2 and up): Take three tablets daily or as directed by your health care professional.

Warning:

Excess consumption of sorbitol may cause gastrointestinal upset. Children age 12 and under should not exceed the recommended serving size. Keep out of the reach of children.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

5000 IU Vitamin D3

Product Description

D3 5000 from Nutri-Dyn is designed to aid the human body in hopefully support bone, immune, cardiovascular, mood health - and much more. Vitamin D is crucial to normal cellular and immune function, but lack of sufficient, healthy exposure to sunlight, aging and certain health conditions can increase our need for the "sunshine vitamin".

About this D3 Supplement:

Vitamin D is believed to help regulate normal cellular function, calcium absorption, cardiovascular, cognitive, muscle and immune function - all important for keeping your teeth and bones strong, your heart pumping normally, your brain working correctly and your mood positive but again it is not a medical food nor suggest that if ingested it could cure disease nor prevent diseases, promise cure, prevention, make a diagnosis, treatment or that the FDA has evaluated the product. From what we know at present Nutri Dyn, Inc. does not violate those requirements and we also have endeavored not to do so.

When vitamin D levels get low, many areas of our health can suffer. A simple blood test can tell you if you're deficient. Even if it's wintertime and you just can't get the sunlight your body needs to make enough D on its own, you can help support those levels with a natural D3 supplement.

Product Details:

- Features natural Vitamin D3 (cholecalciferol)
- High potency - 5000IU per softgel
- Solubilized in oil for improved absorption
- May help boost low vitamin D levels
- May help support normal immune, cardiovascular, neurological, and bone health
- May support healthy mood, normal healthy blood pressure and blood sugar, mineral absorption and muscle strength

Vitamin D receptors are found in nearly every cell in our bodies. That means it's pretty important to maintain healthy D levels. If you've tested low or you want to keep your levels up throughout a dark winter, try this high-potency D3 supplement

Supplement Facts:

1 softgel contains:

Vitamin D3 (as cholecalciferol) 5,000 IU (1,250% DV)

Other Ingredients: Safflower oil, olive oil, gelatin, glycerin, and water.

Contains NO: GMOs, gluten, dairy.

Options

Adults: Do not exceed recommended dosage unless directed by your healthcare practitioner.

Warning: If you are pregnant, nursing, or taking medication, please consult your healthcare professional before using this product. Keep out of the reach of children.

Women:

As we look at some food supplements that offer women natural options for female health it is important to consider the following questions that we receive from both women and men regarding changing and influencing gender characteristics through food supplements

But as we look at those options one of the questions we frequently receive regards changing is it possible to change sexual characteristics (male to female and/or female to male through food supplements? Certainly that occurs through drug therapy and we are frequently told by males taking male influencing food supplements people taking attempting to influence gender characteristics more toward female as well as females taking food supplements that are reported to influence male characteristics some of those people report that they receive better results than they were with drug therapy and others report that the food supplements enhance the effects there trying to achieve through drugs.

Are we advocating doing so? No but we live in a democracy therefore people have freedom of choice and we can't don't feel that we have the right to discourage people from taking food supplements with the goal of changing the gender.

Have we ever seen or heard of any reports of adverse reactions in people who use food to change their gender characteristics. No

Wellness Essentials for Women

Vitamin D3 5000

Cal Apatite Bone Builder

Probiotic Pro

500-C Methoxyflavone

Where there are issues related to decrease in hormone production:

Estro Pro Cream

DHEA

Wellness Essentials For Women Changing and Influencing Gender Characteristics through Food Supplements

But as we look at those options one of the questions we frequently receive regards changing is it possible to change sexual characteristics (male to female and/or female to male through food supplements? Certainly that occurs through drug therapy and we are frequently told by males taking male influencing food supplements people taking attempting to influence gender characteristics more toward female as well as females taking food supplements that are reported to influence male characteristics some of those people report that they receive better results than they were with drug therapy and others report that the food supplements enhance the effects there trying to achieve through drugs.

Are we advocating doing so? No but we live in a democracy therefore people have freedom of choice and we can't don't feel that we have the right to discourage people from taking food supplements with the goal of changing the gender.

Have we ever seen or heard of any reports of adverse reactions in people who use food to change their gender characteristics. No

Vitamin D3 5000
Cal Apatite Bone Builder
Probiotic Pro
500-C Methoxyflavone

Medical Foods

As potentially good as the ingredients within those products [they are not a medical food nor](#) suggest that if ingested the could cure disease nor prevent diseases promise cure, prevention, make a diagnosis, treatment or that the FDA has evaluated the product. From what we know at present Nutri Dyn, Inc. does not violate those requirements and we also have endeavored not to do so.

Do any FDA prohibitions regarding use of food supplements that they consider to be medical foods prevent people from using them beyond the FDA's prohibitions?

Not really in that people have freedom of choice to ingest whatever dosages they chose.

What about the use of the term Functional Medicine?

It is one of those flavors of the day terms that some natural health care organizations are using in their promotions but as catchy as it might be to

some people it still is another re-incarnation of wellness, whole person, holistic, etc.

From what we see and know those promoting themselves as practicing Functional Medicine are really no different than those who purport to be practitioners of wellness, whole person or holistic health care.

Where there are issues relates to PMS:

EstroFactors

DHEA

Wellness Essentials For Women

Vitamin D3 5000

Product Cal Apatite Bone Builder

Estro Pro Cream

Product Description

Balanced Estrogen and Progesterone to Support the Feminine System

Manufactured by DNA Laboratory's, INC.

Available through Nutri Dyn Midwest

Estro Pro Cream is a transdermal cream naturally derived from progesterone and estrogen cream that can be useful in coping with the symptoms associated with decrease in hormone production. The formula has been designed to match the natural pattern of circulating estrogens found in the body, 80% estriol, 10% estrone and estradiol.

Ingredients:

Purified water, aloe Vera gel, propylene glycol, Carbamide, MSM (Methyisulfonyethane), octyl palmitate, octylalchol, rose hips oil, panthenol, PEG, 8 sterate, glycerin, monol de tahiti,, progesterone UPS, polysobate 65, natural vitamin E, and mixer tocopherols, citrus oils, TEA, carbomer, diazolidinyl urea, and iodopropynyl butylcarbomate, sodium hyaluronate, grapefruit seed extract, natural color, fragrance, estriol, estrogen and estradiol.

Options: Use as directed by your health care provider

ESTRO PRO FACTORS

Product Description

Available through Nutri Dyn Midwest

Support Healthy Estrogen Metabolism with EstroFactors

Regardless of age, healthy estrogen metabolism and balanced hormones are important for all women. If you've been looking for a reliable supplement that may be able to help keep your body balanced and healthy, Metagenics offers a great option.

How might this help with estrogen-related issues?

- EstroFactors is designed to promote healthy estrogen detoxification and elimination, which supports an improved overall hormone balance
- Help modulate estrogen metabolism pathways
- Support a balanced estrogenic activity by hopefully influencing estrogen receptor function
- It also contains isoflavones and highly bioavailable blend of folates to support optimal overall health and wellness.

You'll benefit from a range of vitamins and herbal ingredients without having to worry about artificial colors, preservatives, or sweeteners, or any of the most common food allergens, including wheat, gluten, soy, and dairy products.

Supplement Facts

1 tablet contains:

Vitamin A 833 IU 17%---(50% as Betatene mixed carotenoids, 50% as retinyl palmitate)

Vitamin D (as cholecalciferol) 66.7 IU 17%

Vitamin E (as d-alpha tocopherol succinate) 66.7 IU 222%

Vitamin K (as phytonadione) 13mcg 16%

Vitamin B6 (as pyridoxine HCl) 16.7mg 835%

Folate (as calcium L-5-methyltetrahydrofolate) 266mcg 67%

Vitamin B12 (as methylcobalamin) 10mcg 167%

Isoflavones 33mg (from a proprietary blend of red clover (*Trifolium pretense*) aerial part extract and kudzu (*Pueraria lobata*) root extract)

Turmeric (*Curcuma longa*) Rhizome Extract 70mg - [standardized to 95% (66.7mg) curcuminoids]

Rosemary (*Rosmarinus officinalis*) Leaf Extract 66.7mg - [standardized to 11% min phenolic diterpenes and 7.6% min sum of carnosol + carnosic acid]

Resveratrol (from *Polygonum cuspidatum* root extract) 0.67mg

Trimethylglycine (as betaine HCl) 66.7mg

Chrysin 30mg

Other Ingredients: microcrystalline cellulose, stearic acid (vegetable), calcium silicate, croscarmellose sodium, silica, magnesium stearate (vegetable), and coating (hypromellose, medium chain triglycerides, and hydroxypropylcellulose).

Contains NO: Gluten, or GMOs.

Warning: Not recommended for pregnant or nursing women, for patients with hormone sensitive cancer like estrogen receptor-positive (ER+) breast cancer, or if you are taking tamoxifen. The effectiveness of oral contraceptives for birth control cannot be ensured while taking this product. Keep out of the reach of children. If you are taking medications, consult a healthcare practitioner before use. Excess vitamin A intake may be toxic and may increase the risk of birth defects. Pregnant women and women who may become pregnant should not exceed 5000 IU of preformed vitamin A (retinyl palmitate) per day.

Metagenics Wellness Essentials for Women

Even if you've might be making adjustments to your daily diet and exercise program, there may still be nutritional holes left by your diet. If you're looking for a way to fill those holes and keep yourself vital and active at the same time is the formulated to be daily-use natural supplement.

Product Features:

- It delivers 13 extracts and phytonutrients to keep your cells protected against free-radical damage and to help maintain stable DNA
- MCHC , which is comprised of beneficial ingredients like calcium, phosphorous, and other trace minerals
- Added EPA and DHA provides support for a healthier heart and a more positive mood

Wellness Essentials for Women comes in a once-daily packet and provides:

- 2 green tablets of PhytoMulti
- 2 yellow softgels of EPA-DHA Extra Strength (Lemon Flavor)

Supplement Facts:

Each packet contains:

Calories 20

Calories from Fat 20

Total Fat 2g

Cholesterol less than 5mg

Vitamin A [50% as mixed carotenoids and 50% as retinyl acetate] 10,000 IU

Vitamin C (as ascorbic acid and ascorbyl palmitate) 120mg

Vitamin D3 (as cholecalciferol) 1,000 IU

Vitamin E (as d-alpha tocopheryl succinate) 100 IU

Vitamin K (as phytonadione) 120mcg

Thiamin (as thiamin mononitrate) 25mg

Riboflavin 15mg

Niacin (as niacinamide and niacin) 50mg

Vitamin B6 (as pyridoxine HCl) 25mg

Folate (as calcium L-5-methyltetrahydrofolate) 800mcg

Vitamin B12 (as methylcobalamin) 200mcg

Biotin 500mcg

Pantothenic Acid (as D-calcium pantothenate) 75mg

Calcium 674mg ---(as microcrystalline hydroxyapatite concentrate and dicalcium phosphate)

Iron (as ferrous bis-glycinate) 18mg

Phosphorus 406mg ---(as microcrystalline hydroxyapatite concentrate and dicalcium phosphate)

Iodine (as potassium iodide) 150mcg

Magnesium (as magnesium citrate) 40mg

Zinc (as zinc citrate) 15mg

Selenium (as selenium aspartate) 100mcg

Copper (as copper citrate) 1mg

Manganese (as manganese citrate) 0.5mg

Chromium (as chromium polynicotinate) 200mcg

Molybdenum (as molybdenum aspartate complex) 50mcg

Microcrystalline Hydroxyapatite Concentrate (MCHC)** 2,000mg

Choline (as choline bitartrate) 25mg

Inositol 25mg
Lycopene 6mg
Zeaxanthin 2mg
Lutein 6mg
Resveratrol (from Polygonum cuspidatum root extract) 10mg

Proprietary Phytonutrient Blend 400mg of:

Citrus Bioflavonoid Complex [standardized to 45% hesperidin], green coffee bean extract [standardized to 45% chlorogenic acid], pomegranate whole fruit extract [standardized to 40% ellagic acid], grape seed extract [standardized to 90% polyphenols], blueberry fruit extract [standardized to 30% total polyphenols and 12% anthocyanins], green tea leaf extract [standardized to 60% catechins and 40% EGCG], bitter melon fruit extract [standardized to 5% bitter principles], prune skin extract [standardized to 50% polyphenols], watercress herb 4:1 extract, cinnamon [Cinnamomum burmannii (Nees) or Cinnamomum cassia] bark powder, Indian gum Arabic tree bark and heartwood extract [standardized to 6% catechins], rosemary extract [standardized to 11% min phenolic diterpenes and 7.6% min sum of carnosol+carnosic acid], artichoke leaf extract [standardized to 0.3% cynarins and 1% chlorogenic acid]

Natural Marine Lipid Concentrate 2g

---EPA (Eicosapentaenoic acid) 600mg
---DHA (Docosahexaenoic acid) 400mg

Other Ingredients

PhytoMulti): Microcrystalline cellulose, cellulose, croscarmellose sodium, silica, stearic acid (vegetable), and coating (water, hypromellose, medium chain triglycerides, hydroxypropylcellulose, and sodium copper chlorophyllin).

EPA-DHA Extra Strength): Marine lipid concentrate [fish (herring, sardine, anchovy) oil], gelatin, glycerin, purified water, natural lemon flavor, mixed tocopherols, rosemary extract, and ascorbyl palmitate.

Cal Apatite 1000): microcrystalline cellulose, stearic acid (vegetable), cellulose, croscarmellose sodium, silica and coating (water, hypromellose, medium chain triglycerides, and hydroxypropylcellulose).

Formulated to exclude: wheat, gluten, soy, dairy products, egg, nuts, tree nuts, crustacean shellfish, artificial colors, artificial sweeteners and preservatives.

Warnings:

Do not use if pregnant or nursing. Excess vitamin A intake may be toxic and may increase the risk of birth defects. Pregnant women and women who may become pregnant should not exceed 5000 IU of preformed vitamin A (retinyl acetate) per day. CAUTION: If taking medication - including blood thinning medication - consult your healthcare practitioner before use. Do not use before surgery.

Available through Nutri Dyn Midwest**For Men**

Wellness Essentials For Men

Prosta Glan

Vitamin D3 5000

Cal Apatite Bone Builder

Probiotic Pro

500-C Methoxyflavone

Wellness Essentials Men Vitality

Designed to promote longevity, sexual function and hormone levels with Men's Wellness Essential packets by Metagenics.

Product Description

Multi-vitamins don't always give the proper amount of nutrients that the body needs. Men require balanced support to sustain their everyday health. Wellness Essentials Men's Vitality by Metagenics includes 6 supplements in each packet. The box contains 30 packets which can be taken over a span of a month or several months to provide men's nutritional support.

What is in the Men's Vitality packets?

- **1 tablet of PhytoMulti:** the "smart multi" with essential nutrients and a proprietary blend of 13 concentrated extracts and phytonutrients to help protect cells and maintain DNA stability - activating health potential like no other supplement.

- **2 softgels EPA-DHA Extra Strength Lemon-Flavored:** a quality-guaranteed omega-3 fatty acid formula manufactured and third-party tested in Norway to ensure greater purity.
- **1 tablet of Testralin:** provides key ingredients that may help promote healthy hormone balance of the prostate and testosterone levels.
- **2 tablets Tribulus Synergy:** is specifically formulated to support a healthy sexual function and libido response.

Supplement Facts:

Each packet contains:

Calories 20

Calories from Fat 20

Total Fat 2g

Cholesterol less than 5mg

Vitamin A [50% as mixed carotenoids and 50% as retinyl acetate] 5000 IU

Vitamin C (as ascorbic acid and ascorbyl palmitate) 60mg

Vitamin D3 (as cholecalciferol) 875 IU

Vitamin E (as d-alpha tocopheryl succinate) 50 IU

Vitamin K (as phytonadione) 60mcg

Thiamin (as thiamin mononitrate) 12.5mg

Riboflavin 7.5mg

Niacin (as niacinamide and niacin) 25mg

Vitamin B6 (as pyridoxine HCl) 37.5mg

Folate (as calcium L-5-methyltetrahydrofolate) 600mcg

Vitamin B12 (as methylcobalamin) 115mcg

Biotin 250mcg

Pantothenic Acid (as D-calcium pantothenate) 37.5mg

Iodine (as potassium iodide) 75mcg

Magnesium (as magnesium citrate) 20mg

Zinc (as zinc citrate) 10mg

Selenium (as selenium aspartate) 150mcg

Copper (as copper citrate) 0.5mg

Manganese (as manganese citrate) 0.25mg

Chromium (as chromium polynicotinate) 100mcg

Molybdenum (as molybdenum aspartate complex) 25mcg

Tribulus (Tribulus terrestris) Fruit 500mg

10:1 Extract (containing saponins)

Ashwagandha (*Withania somnifera*) Root 400mg
15:1 Extract (containing withanolides)
Cowage (*Mucuna pruriens*) Seed 100mg
10:1 Extract (containing naturally occurring levodopa)
Choline (as choline bitartrate) 12.5mg
Inositol 12.5mg
Lycopene 3mg
Zeaxanthin 1mg
Lutein 3mg
Resveratrol (from *Polygonum cuspidatum* root extract) 5mg

Proprietary Phytonutrient Blend 200mg of:

Citrus Bioflavonoid Complex [standardized to 45% hesperidin], green coffee bean extract [standardized to 45% chlorogenic acid], pomegranate whole fruit extract [standardized to 40% ellagic acid], grape seed extract [standardized to 90% polyphenols], blueberry fruit extract [standardized to 30% total polyphenols and 12% anthocyanins], green tea leaf extract [standardized to 60% catechins and 40% EGCG], bitter melon fruit extract [standardized to 5% bitter principles], prune skin extract [standardized to 50% polyphenols], watercress herb 4:1 extract, cinnamon [*Cinnamomum burmannii* (Nees) or *Cinnamomum cassia*] bark powder, Indian gum Arabic tree bark and heartwood extract [standardized to 6% catechins], rosemary extract [standardized to 11% min phenolic diterpenes and 7.6% min sum of carnosol+carnosic acid], artichoke leaf extract [standardized to 0.3% cynarins and 1% chlorogenic acid]

Natural Marine Lipid Concentrate 2g

---EPA (Eicosapentaenoic acid) 600mg
---DHA (Docosahexaenoic acid) 400mg
Soybean Concentrate 62.5mg ---Total Isoflavones (containing all forms of genistin, daidzin, and glycitin) 25mg Phytosterols 50mg
---(containing beta-sitosterol, stigmasterol, campesterol, and other plant sterols)
Lignans 25mg
--- [as secoisolariciresinol diglucosides, (SDG)] [from 125mg flaxseed extract (*Linum usitatissimum*)]
Green Tea (*Camellia sinensis*) Leaf Extract 170mg
---Decaffeinated [standardized to 60% catechins (100mg) and 40%

epigallocatechin gallate (EGCG) (66.5mg)]
Oleanolic Acid [from olive (*Olea europaea*) leaf extract] 5mg
Turmeric (*Curcuma longa*) Rhizome Extract 79mg
--- [standardized to 95% (75mg) curcuminoids]
Betaine (as betaine HCl) 37.5mg

Other Ingredients (PhytoMulti): Microcrystalline cellulose, cellulose, croscarmellose sodium, silica, stearic acid (vegetable), and coating (water, hypromellose, medium chain triglycerides, hydroxypropylcellulose, and sodium copper chlorophyllin).

EPA-DHA Extra Strength): Marine lipid concentrate [fish (herring, sardine, anchovy) oil], gelatin, glycerin, purified water, natural lemon flavor, mixed tocopherols, rosemary extract, and ascorbyl palmitate.

Testralin decaffeinated green tea leaf extract, flax seed extract, lycopene, turmeric rhizome extract, microcrystalline cellulose, stearic acid, soy isoflavones (soy), phytosterols (soy), betaine HCL, croscarmellose sodium, calcium silicate, pyridoxine HCL, cellulose, selenomethionine, silica, zinc citrate, magnesium stearate, oleanolic acid, cholecalciferol, folic acid, methylcobalamin and coating (deionized water, hypromellose, maltodextrin, polyethylene glycol, and sodium copper chlorophyllin). Contains soy.

Other Ingredients (Tribulus Synergy): Microcrystalline cellulose, cellulose, croscarmellose sodium, stearic acid (vegetable), silica and coating (water, hypromellose, medium chain triglycerides, and hydroxypropylcellulose). **Formulated to exclude:** wheat, gluten, dairy products, egg, nuts, tree nuts, crustacean shellfish, artificial colors, artificial sweeteners and preservatives.

Warnings:

Do not use if pregnant or nursing. Excess vitamin A intake may be toxic and may increase the risk of birth defects. Pregnant women and women who may become pregnant should not exceed 5000 IU of preformed vitamin A (retinyl acetate) per day. CAUTION: If taking medication - including blood thinning medication - consult your healthcare practitioner before use. Do not use before surgery.

PROSTA GLAN

Product Description

Available through Nutri Dyn Midwest

Prosta Glan is a dietary supplement from Progressive Labs that is designed to provide nutritional support for prostate health. Maintaining good health and function of the prostate is vital for the optimal wellness of men. When a man ages, prostate health and function typically declines. There are many benefits a man who uses Prosta Glan from Progressive Labs will experience. A few of these possible benefits include:

- Support an optimal level of prostate health for men of all ages
- Provide support for urinary tract health
- Contains a wide variety of ingredients such as zinc and pumpkin seed that help the prostate function better
- Maintain prostate health during the aging process

Maintaining good prostate health is vital for the well-being of a man. Since prostate health typically declines as a man gets older, it is often necessary to consider a supplement. Prosta Glan by Progressive Labs is a supplement that provides men of all ages the support they need to be confident about their prostate health.

500-C Methoxyflavone

Product Description

500-C Methoxyflavone by Metagenics is a natural vitamin C bioflavonoids supplement that features a synergistic formula of full spectrum bioflavonoids and other phenolic compounds combined with vitamin C.

Vitamin C with Hesperidin/Methoxy-Flavone Complex

Provides potent antioxidant protection and supports healthy immune system function.

Supports healthy collagen production, the main component of connective tissue.

Suitable for vegetarians

Gluten free

In addition to their potent antioxidant properties, bioflavonoids may help maintain capillary permeability.

Vitamin C is a powerful antioxidant that supports healthy immune system function, supports healthy collagen production (the main component of connective tissue), and supports healthy capillary permeability.

Nutrition Facts

1 tablet contains:

Vitamin C (as ascorbic acid) 500mg (833%)

Citrus Bioflavonoid Complex 500mg

---[standardized to 45% (225mg) bioflavonoids: hesperidin, and other naturally occurring phenolic compounds]

Other Ingredients: Cellulose, silica, stearic acid (vegetable), croscarmellose sodium, magnesium stearate (vegetable), coating (hypromellose, medium chain triglycerides, and hydroxypropylcellulose)

Contains NO: gluten, GMOs. Vegetarian.

Warning:

If you are pregnant or nursing, please consult your healthcare professional before using this product. Keep out of the reach of children.

ProBiotics

Product Description

Designed to Help Balance Intestinal Flora

Probiotics are microorganisms (bacteria and yeasts) that are brought into the body to benefit a person's health, particularly their digestive system.

These good bacteria can be obtained from certain foods and from supplements. Their role is to balance intestinal flora. Prebiotics are indigestible substances that feed friendly bacteria and stimulate their growth.

Vinco offers a natural supplement called ProBiotic that provides 25 billion CFU/gram of a 50/50 blend of Lactobacillus acidophilus and Bifidobacterium infantis.

Product Information

- A professional formulation
- 25 billion CFU/gram

- With 3% prebiotic FOS
- 50/50 Lacto and Bifido blend
- Stimulates growth of beneficial bacteria
- Gluten free
- Formulated in the USA
- Keep refrigerated

This formula is free of wheat, gluten, corn, dairy, soy and yeast. Recommended use is to take one to two capsules per day, preferably before meals, or as directed by a healthcare provider.

If you're looking for a natural supplement that provides 25 billion CFU/gram of a 50/50 blend of Lacto and Bifido, check into Vinco's ProBiotic. Order online today!

Supplement Facts

2 capsules (1 gram) contain:

Total ProBiotics 25 Billion CFU/Gram

---(from Lactobacillus acidophilus 12.5 billion and Bifidobacterium lactis (infantis) 12.5 billion)

In a base of: Microcrystalline Cellulose and Fructo-Oligosaccharides (FOS).

Other Ingredients: Gelatin (capsule), Magnesium Stearate, Stearic Acid.

Contains NO: wheat, gluten, corn, dairy, soy, yeast.

Note:

Must keep refrigerated.

Warning:

If you are pregnant or nursing, please consult your healthcare professional before using this product. Keep out of the reach of children.

For Children

Note: One of the most common people who come to the off sight Emergency Rooms and Hospitals Emergency Rooms are children brought in by parents.

What is the cause of those children's crisis? Parents giving their children food supplements.

What are the most common food supplement that parents gave their child? Homeopathic and Essential Oils remedies.

Where do those parents get the information about using Homeopathic and Essential Oils remedy's? Off the internet or from independent lay persons working in health food stores, lay people who sell food supplements which when the parent gave their child those remedy's caused the child to become sicker –sicker to the degree that they had to take their child to an emergency facility.

Are we against lay people selling food supplements? No and we discuss that in greater detail latter but Homeopathic and Essential Oils remedies are nothing to be experimented with not only children but adults as well.

Children's Chewable Vitamins 100 tabs

Children s Chewable Vitamins 100 tabs by Seroyal Genestra are daily dietary supplements developed for children to help provide a healthy immune system for the fight against viral and bacterial infections and infectious diseases.

Children's Multi-Vi-Min 150 caps by Allergy Research Group
Many children don't get the vitamins and minerals their bodies need from the foods they eat and some children have health conditions that limit their diet or prevent them from fully absorbing nutrients from food. Children's Multi-Vi-Min by Allergy Research Group offers the following benefits:

- Children's Multi-Vi-Min by Allergy Research Group supplies many of the vitamins and minerals most critical to maintaining a healthy body, including vitamins A, B2, B3, B6, B9, B12, D3 and E; and calcium, magnesium, iron, zinc, selenium, potassium and copper.
- This product is formulated to aid in many biochemical reactions, supports the growth and maintenance of bones and tissues and improves the immune and nervous systems.
- Children's Multi-Vi-Min by Allergy Research Group offers a hypoallergenic alternative to other similar and over-the-counter products.

- This product can also support overall health in adults that can't swallow larger multivitamins.

Little Children's Multivitamin

Your child's overall health is always important, but is especially so as he or she continues to grow and develop. If you've been looking for a quality multivitamin that offers the nutrients that are designed to assist the body in support that growth and development, Metabolic Maintenance offers a great option.

The Little One Children's Multivitamin delivers all of the vitamins, minerals, and other nutrients that are essential for the healthy growth and development of children age 6 through 12.

Product Details:

- Little One Children's Multivitamins come in a small and easy-to-swallow capsule that contains the most bioavailable forms of essential vitamins and minerals
- It's completely free of gluten and contains no added excipients, so your child only gets what's on the label

Supplement Facts:

Each capsule contains:

Vitamin A 5,000 IU (100%DV)

---50% natural mixed carotenoids and

---50% retinyl palmitate

Vitamin C 100mg (167%DV)

---(as ascorbic acid)

Vitamin D3 (as cholecalciferol) 400 IU (100%DV)

Vitamin E 60 IU (200%%DV)

---(as d-alpha tocopheryl acid succinate)

Thiamine (as thiamine mononitrate) 5mg (333%DV)

Riboflavin 5mg (294%DV)

Niacin (as niacinamide) 25mg (125%DV)

Vitamin B6 (as pyridoxine HCl) 5mg (250%DV)

Folate (as L-5-methyltetrahydrofolate) 400mcg (100%DV)

Vitamin B12 (as methylcobalamin) 10mcg (167%DV)

Biotin 300mcg (100%DV)

Pantothenic Acid 25mg (250%DV)

---(as d-calcium pantothenate)

Iron (as iron bis-glycinate) 9mg (50%DV)

Iodine (as potassium iodide) 100mcg (67%DV)

Zinc (as zinc citrate) 15mg (100%DV)

Selenium (as l-selenomethionine) 100mcg (143%DV)

Copper (as copper gluconate) 2mg (100%DV)

Manganese (as manganese gluconate) 1mg (50%DV)

Chromium (as chromium niacinate) 100mcg (83%DV)

Molybdenum (as sodium molybdate) 25mcg (33%DV)

Other Ingredients: vegetarian capsule, l-leucine. Vitamin E is derived from soy oil.

Options

Children Ages 6-12: As a dietary supplement, take 1 capsule daily with a meal or as recommended by a healthcare professional.

Warnings: Accidental overdose of iron containing products is a leading cause of fatal poisoning in children under 6. Keep this product out of the reach of children. In case of accidental overdose, call a doctor or poison control center immediately.

Does that mean that a person has to order all those food supplements?

No many people begin with one or two products.

Other Options

24/7/365 Access

But if you go to "Find" and type in the subject you're interested in you will see a list of the related food supplements or www.nutri-dyn.com) or you telephone them (763.479.3444/ 800.444/0998) and they will assist you and if you order any of those GPM Certified Food Quality food supplements from them make sure that you give them the account Number **100160** and they will process your order at a discount of 10%.

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes and we for your convenience we again repeat the process.

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

- 1. Go to www.futurehealth-today**
- 2. Go to www.nutri-dyn.com**
- 3. Click on Create Account**
- 4. Click on Patients**
- 5. Complete the short form and type in the following Account Number 100160**
- 6. Click submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive

On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

- 1. Go to www.nutri-dyn.com**
- 2. Click on Create Account**
- 3. Click on Patients**
- 4. Complete the short form and type in the following Account Number 100160**
- 5. Click submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive

On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Does a person have to have diagnostic tests before they can order GMP Certified food Quality food supplements through Nutri Dyn Midwest. No.

If a health care provider uses other products than Nutri Dyn products does that make the practitioner wrong or that those products aren't good?

No in that the health care provider may have found some products that suit her/his patient's needs or what the practitioner is attempting to accomplish. Hopefully the products will be GMP Pharmaceutical Certified.

Do we provide consultations?

Yes Drs. Lalla and other licensed and Minnesota Board Certified associates are available to answer health questions or review laboratory reports?

Yes, they are, with sometimes a minimal charge that would be discussed by one of our staff members at if the situation looks that it might be quite lengthy. Normally we're able to answer peoples but most questions are answered quickly therefore there generally are no charges for the consultation.

Telephone number: 651-484-8521.

Fax 651-484-7374

www.youtube.com/user/futurehealthtoday

www.futurehealth-today.com

If you had contacted us previously and are satisfied will we telephoning you trying to sell you something?

No –Never but if you indicate that you would like e-blasts that are relative to updates on natural health we will do so without any charges.

If you had contacted us previously and are satisfied will we be sharing your name, email address with anyone?

No what you share will be held in the strictest of confidence and the only way we could legally do so would be if you gave us a signed authorization.

I've heard the term Shot Gunning the body with food supplements. What does that mean?

When a professional or lay health care provider, coach, etc. recommends a drug, food supplement, and exercise program to someone without following recommended case history and diagnostic protocols they are predisposing those people to serious health problems.

Is there some indication that someone promoting food supplements primary goal is to make money?

Yes they try to sell, push, and pressure, imply that it is a medical food, been tested by the FDA, make un substantiated claims and false testimonials of what the food supplement will do for them, suggest that if ingested the could cure disease nor prevent diseases promise cure, prevention, make a diagnosis, treatment or that the FDA has evaluated the product. From what we know and our experiences with Nutri Dyn, Inc. and Nutri Dyn Midwest do not violate those requirements and we have the same goals.

What is the procedure if a person is looking for some particular information in this book?

Go to "FIND" on your electronic device and type the word in and your electronic device will bring up those references.

References

Likewise when you see us cite (or other people or organizations "references" you should not think that all of those references are necessarily supported by accepted scientific research and credible clinical study's – fact is anyone can give a reference or imply credible scientific research but it may not be necessarily be accepted scientific research and credible clinical studies.

How does a person know if the information they are receiving is true?

You don't but one has hopes that truth will prevail and that you will attract honest people into your life and it there is any implication of the preceding

statements you then has a potential red flag that the company or persons selling the products are either totally false or distorted

Fact it appears that many food supplements do not live up to manufactures and distributors promises This is in part related to poor quality food supplements and thee many is there are countless numbers of people who are giving advice, selling diets, physical exercise equipment and food supplements (the latest cure some that had been lost but now re-discovered) but not everyone nor everything they teach and advocate is wholly true and very often they are not a licensed and Board Certified by a State Health Care Agency therefore there that leaves a wide door for those companies and individuals to say and sell whatever is going to financially line their pockets.

What does relating to a health care provider that is licensed and Board Certified by a State Agency provide?

It increases the percentage of them getting credible life science based information and health care but it doesn't guarantee that they know everything or are selling food supplements that are GPM Pharmaceutical Quality therefore have not.

Are we opposed to prescribed medications or medical care?

No. Sometimes people get into situations where they need prescribed medications and surgery that are potentially lifesaving and we are thankful that those opportunities exist.

The key then if a person is seeking preventative health information and/or are in need for medical intervention they should seek out those practitioners who are board certified in the specialty they think they need. In non – emergency's it is advisable to get second/third opinions before they take on some surgery, take prescribed drug(s), food supplement (s), etc.

As a matter of fact we have some wonderful professional relationships with medical personnel and when we have diet or nutritional suggestions we ask those patients permission to forward those recommendations, laboratory reports, etc. to their medical doctor.

Do we offer any diagnostic tests and if so why and what are the most common ones?

Yes we offer several diagnostic tests that are accepted by the scientific community but in the present health care system many are being neglected

primarily because many are very expensive, the patients' health insurance company may not pay for the tests and or the doctor doesn't want to take the time to order the tests.

Are the tests we recommend highly expensive?

Comparative to other health care organizations NO.

It all depends where the tests were ordered and performed. Certainly part of the costs involves the laboratory who performed them as well as the time the health care provider spends reviewing the results of the tests. But in comparison to the costs charged by other health care laboratories and practitioners the tests discussed are much less expensive and in many instances offer far more valuable health information.

Does competition play any roles in the costs of diagnostic tests?

Cost wise laboratories are very competitive but that's not necessarily true with health care providers. What does that say? Shop for a health care provider who has a proven track record of being service oriented rather than excess profit motivated.

One of our goals in patient care is to offer options that not only could best serve their health interest but from laboratory's who offer those services at the lowest fees.

This is not saying that we aren't marketed by many diagnostic laboratories but we only deal with those who provide the best services at the lowest fees.

The importance of first determining which tests will be included

In fact the results of the tests speak for themselves and it doesn't take a genius to help people understand the results or what the treatment options are but the laboratory costs of tests is based on the number of tests performed therefore a comparative lower cost is often related to the doctor minimizing the number of tests performed. What's the goal? You be the judge but one has to take into consideration that the person ordering the tests increases their profit by ordering few tests than another practitioner at the same or higher price therefore increasing her/his financial profits. Is doing so unethical or illegal? No it's just business at the expense of the patient.

What are the Most Common Tests we provide?

Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) and treatments

Hair Mineral Toxic Metal Analysis, Electrolytes

Chem Screen and CBC with Differential blood test,

Red and White Elements,

Homocysteine,

Neurotransmitter Amino Acid Analysis

IgG and IgG4 Hyper Food Sensitivity Tests

24 Hour Urine Hormone Analysis

Zinc Tally

Macroscopic and Microscopic Urinalysis

Diagnostic X-Rays

Do people who want to become patients purchase Nutri Dyn products or have to undergo diagnostic testing?

No. Everyone has similarities as well as dissimilarities therefore when someone wants a diagnostic test we endeavor to customize tests appropriate to their situation. Sometimes one test may be initially performed and later on people will ask that other tests be performed and that's fine with us

Why aren't some of the tests we routinely performed ordered by traditional medical facilities?

Several possible reasons of which defenders of the cost containment philosophy will argue debatable depending on who is or isn't ordering the tests.

1. Possibly because they don't generate the profit that so many other diagnostic tests do.

Traditional medical practitioners think traditional (just as unfortunately so do many nontraditional practitioners do) therefore even though most are aware of other nontraditional diagnostic tests they don't think or won't take the time or go through the hassles involved in their supervisors at the managed health care headquarters of ordering them

3. And if the managed health care organization they are employed by doesn't include them in their diagnostic protocol the doctors don't bother ordering them.

4. Like many other businesses many managed health care organizations impose how much money can be spent by doctors in ordering tests,

prescribing treatments, referrals and drugs prescribed. Therefore there is pressure to minimize expenses and therefore maximize profits and if the allotted monthly expenses are lower than what the managed health care organization allots there are bonus rewards. On the other hand if the doctor exceeds the monthly diagnostic, referrals of treatments expenses they are warranted and put on probationary list.

5. Fact is most of the alternative tests just don't generate the profit that CT Scans, MRIs, etc. do.'

Applied Kinesiology muscle Response testing/Treatment and Touch For Health Applied Kinesiology Muscle Response Testing/treatment.

There will be occasions where you will see us refer to Touch For Health Applied Kinesiology Muscle Response Testing and in fact they are very similar in that Touch For Health Applied Kinesiology Muscle Response Testing is basically a course offered attracts mostly lay persons taught by Matthew Thie (the son of its Founder and developer Dr. John Thie. Applied Kinesiology Muscle Response Testing/Seminars is an ongoing program sponsored by Nutri Dyn Midwest provides Applied Kinesiology Muscle Response Testing seminars for Doctors of Chiropractic and they are very good and support our original training with Drs. George Goodheart and John Thie whose work is at present being directed by his son Matthew Thie.

Giving Credit Where Credit Is Do

Because of our original training with Drs. Goodheart and Thie we refer to our training and dispensation of Applied Kinesiology Muscle Response Testing and Treatment as Touch For Health Applied Kinesiology Muscle Response Testing (TFHAKMRT) seminars are oriented to lay persons. Applied Kinesiology Muscle Response Testing (AKMRT) Seminars presented for Doctors of Chiropractic and (in the Midwest) sponsored by NutriDyn Midwest and usually taught by Drs. Robert Rakowski and Andrew Rostenberg who are excellent teachers highly skilled and recognized as primer teachers of Applied Kinesiology Muscle Response Testing (AKMRT).

Different Uses of Terms Similar Applications by Different Practitioners

When we refer to Touch For Health Applied Kinesiology Muscle Response Testing (TFHAKMRT) in our books is the term we use in our clinic and is the same as Drs. Robert Rawkowski and Andrew Rostenberg advocate.

When we use the term Touch For Health Applied Kinesiology Muscle Response Testing (TFHAKMRT) it is in the respect that the for the pioneering work of Drs. George Goodheart and John Thie that practitioners and teacher such as Drs. Robert Rawkowski and Andrew Rostenberg teach.

Don't Change

Thus if you are at present being treated or contemplating being treated by a Doctor of Chiropractic who utilizes Applied Kinesiology Muscle Response Testing/Treatment and you're getting good results that is fine and we encourage you to continue to do so.

Drs. Robert Rawkowski and Andrew Rostenberg

With the exception of Drs. Robert Rawkowski and Andrew Rostenberg it appears that all others who variations of what they promote as Applied Kinesiology Muscle Response Testing name and promote themselves but from what we see they are basically using the principals that Drs. Goodheart and Thie pioneered back in the 1950's through the 2000's.

Demystifying Natural Health Care

Because of the preponderance of misinformation and missing puzzles about natural health care this book separates facts from fiction, myths from reality, marketing from truth, hype from reality therefore is it a seminal work that is second to none when it comes to science-based, broad-spectrum clinical based experience in alternative nontraditional natural health.

Does this (as *SEX AND FEMALE HORMONES EVERYTHING YOU WANTED TO KNOW ABOUT SEX AND FEMALE HORMONES*)" book include a list of the names of health problems and the possible related life style alternatives and food supplements?

Yes included with a discussion of each of the 200 plus conditions are list of GPM Certified Food Quality food supplements (not food grade) discussed that are reported to possibly relative to each condition discussed as well as the process of lay persons ordering them.

But we again re-empathize that we do not promise cure, prevention, make a diagnosis, treatment or that the FDA has evaluated the product. From what

we know at present Nutri Dyn, Inc. does not violate those requirements and we also have endeavored not to do so.

Fact is if the food grade supplements that people are taking were producing the person's desired results then they wouldn't be reading our books and switching to Nutri Dyn food supplement products.

Is there information on how people can acquire the food supplements we discuss.

Yes. First we begin with that information because not everyone is initially going to read the entire book at one sitting.

Secondly many readers go to "Find" as they are looking for a particular condition and what food supplements that might be appropriate. Therefore it makes it easy to do so without having to go through us.

Can anyone order GMP Certified Pharmaceutical Quality food supplements or diagnostic tests from us?

You will see that even through this book was not written to sell diagnostic tests or food supplements people ask how they can order the food supplements we discuss and we attempt to answer that question right up front.

Is there a difference in food supplements?

Yes in many people complain that they have to be a patient of a licensed health care provider to get Nutri Dyn GMP Certified food Quality food supplements.

Is there any way they can avoid having to do so?

Yes through this book anyone can bypass the barrier of having to order Nutri Dyn GMP Certified Food Quality food supplements that traditionally could only be ordered through a licensed health care provider can through this going directly to Nutri Dyn Midwest who is a major distributor of GMP Certified Food Quality Food Supplements by going to www.nutri-dyn.com.

How is that possible?

Because of the worldwide distribution of this book and "Hormones and Health" books Nutri Dyn Midwest recognizes that many people are being exposed to GMP Certified Food Quality supplements through those books as well as House Call Television programs broadcast of Cable television, UTUBE

and therefore Nutri Dyn Midwest is making it possible for people to contact them directly for information as well as ordering food supplements at a 10% discount.

Does Nutri Dyn Midwest have a list of Food Supplements they make available?

Yes and when you go to their web site (www.nutri-dyn.com) you will see a list of over 700 hundred of them

Does that mean that if the products don't state any of those statements that the product is good, in proper biochemical ratio or biocompatible when ingested?

No, but to the best of our education and clinical experience the products and their ingredients have been GPM Certified as Food Quality and of biocompatibility to humans.

Is there a difference between Nutri Dyn Inc. and Nutri Dyn Midwest?

Yes in that Nutri Dyn Inc. is the corporate entity and distributes its products whereas Nutri Dyn Midwest is a major authorized distributor of Nutri Dyn products.

Do we sell vitamins in our clinic?

No, we do not - we are not here to sell food supplements, likewise we do not stock any food supplements in our clinic but we give people direct access to ordering Nutri Dyn Products directly from Nutri Dyn Midwest thus making it possible for them to save money, time and have high quality food supplements as well as access to free consultations with Dr. Lalla and other board certified associates.

Disclaimer

Likewise in this or any other of our books do imply, suggest or in any way make a diagnosis, treatment, promote cures or promise prevention nor compete with any else who sells food supplements. Rather with the present information we have we offer science and practical clinical based information that we have learned not only about natural health as well we have found to be the most effective food supplements in our 50 plus years of providing health care.

How is that possible?

Because of the worldwide distribution of this book and “**Sex and Female Hormones and Health**” books Nutri Dyn Midwest recognizes that many people are being exposed to GMP Certified Pharmaceutical Quality food supplements through those books as well as House Call Television programs broadcast of Cable television, UTUBE and therefore Nutri Dyn Midwest is making it possible for people to contact them directly for information as well as ordering food supplements at a 10% discount.

The Fallacy’s of Holistic/Wellness Health Care

Truly being holistic/wellness/whole person means looking at all possible avenues (bio individualities) that could be involved in a person’s present and possible future health and wellbeing. As sad as it is in many instances those terms are not much more than present day hype and marketing terms are not truly holistic.

Those providers that do so generally dabble in either no diagnostic tests while others pursue one or two diagnostic tests that are either not science based or make off like they are experts and more often than not have the goal of loading those who seek their services with some diet or a whole slew of food supplements, undergoing physical or massage therapy or signing up for a membership in a health club.

Does that mean that we only deal with people who have diagnostic tests through our clinic?

No. Many people who order food supplements through Nutri Dyn Midwest have not had any recent diagnostic tests performed through our clinic although many of them do email us, telephone us and send us copies of the results of diagnostic tests they have had of which we review and do respond to if the patients requests a professional response and usually there is no financial charge for us doing so.

Telephone number: 651-484-8521.

Fax: 652-484-7374

www.youtube/user/futurehealthtoday

www.futurehealth-today.com

Does Drs. Lalla or any of their clinic associates have any ownership in any drug or food supplement manufactures or distributors?

No, neither Drs. Lalla's nor any member of their clinical support staff or family own stock in any diagnostic laboratory or any other manufacture or distributor of food supplements, diets or physical exercise equipment or facilities but as we have previously stated we have a professional compensation arrangement with Nutri Dyn that in part passed on to those who order food supplements through Nutri Dyn Midwest.

Through this book is Drs. Lalla or any one on their staff attempting to make a diagnosis or propose a treatment, promise cure or prevention of disease?

No. You will see us repeat the following statement over and over again that we consistently encourage people to consult with their medical doctor or a Chiropractic Physician who are known to be experienced in the subjects at hand. Thus we are in no way attempting to make a diagnosis, propose treatments, make promises of cure or promote prevention.

Aren't all health care providers experienced in natural health care?

No in that many are advertising natural health care but in reality are not or some limited aspect of it.

Does this or "Female Sex and Hormones and Health and Healing" book recommend certain food supplements?

No but and this book discusses them in detail with the intent of people gaining information about the condition (s) and therefore making more informed decisions. Likewise as you scroll through both books you will sometimes see the name of a food supplement(s) listed in several different conditions – the reason being that it is universally accepted as a possible general need for humans and or is considered to contain ingredients for daily consumption.

How many different food supplements should a person consume?

As you scroll through various health conditions you at times will see more than one food supplement listed as possibly relative (not guaranteed) for a condition and that's fine but initially it could be over whelming therefore common sense suggest considering taking one or two of the top recommended ones and if they prove compatible with then consider adding others.

The dosages listed are based on typical dosages of adults or children. Again when there is a question we suggest that you contact a medical doctor, nutritionist or Chiropractic Physician who has the proven reputation of being skilled in answering that type of question. But never exceed the labels recommended dosage unless

contact a medical doctor, nutritionist or Chiropractic Physician who has the proven reputation of being skilled in answering that type of question.

When that's the situation are they doing anything bad?

They are creating the potential of harming their body and wasting money.

Is there some common practice characteristic amongst medical or chiropractic doctors and nutritionists that are involved in the nutritional component of health care?

1. Yes in that they attempt to base any diet or food supplement recommendations on the patient's results of the vitamins, minerals and other markers in blood, urine, hair and hormones tests.
2. Secondly they are conservative in how many food supplements they recommend. In other words they attempt to use products that do not duplicate other ingredients thus attempt to avoid over loading or over whelming there patients with large numbers of food supplements
3. Thirdly as sad as it is the majority appear skip comprehensive independent laboratory analysis therefore the products they recommend are GMP Certified Pharmaceutical Quality food supplements but rather Pharmaceutical grade.

Other than Nutri Dyn food supplements being GMP Certified are there any other companies that sell food supplements to Chiropractors or nutritionists that are not GMP certified Food Quality food supplements?

Yes. It seems that any drug or grocery store advertises and sells food supplements and the same holds true with reference to the internet and health publications but we never see in those advertisements "GMP Food Quality Certification. (See GMP certification.)

What some of them contend is that there products are Pharmaceutical grade which means that they are free of dyes, insipients and extenders but it does not mean that they are free of

Does the Federal Drug Administration require that food supplements manufactured or sold in the United States require testing of them or GMP Food Quality Certification?

No and that is basically true of all food supplements sold in the United States of America but the FDA requires that that a similar following statement accompany all food supplements. *The opinions and statements we give have not necessarily the statements that have been evaluated by the Food and Drug Administration. The natural chemicals discussed are not intended to diagnose, treat, cure, or prevent any disease.*

Is what the labels say about the ingredients in the food supplements true?

When it comes to Nutri Dyn GMP Pharmaceutical Certified Food Quality supplements YES but that may not GMP Pharmaceutical Certified Food Quality therefore one logically would have to question what there label lists This is based on the fact that over and over again when we formerly attempted to get information from those manufactures and distributors our requests went unmet.

Are there any common adverse reactions to food supplements?

Sometimes Yes but nothing remotely close to the potential immediate or accumulated adverse reactions to drugs.

If you are taking any food supplements and have been prescribed a medication you are advised to tell the pharmacist and ask she/he is there are any contraindications,

Similarly we advise you to ask if there are any foods that are contraindicated with the medication(s) the medical doctor has prescribed.

There can be adverse reactions to food supplements if:

1. If the product is biochemically incompatible in a person's body may be manifested with upset stomach, diarrhea, fever, fatigue,
2. If the product is involved in some aspect of normal internal cleansing or detoxification
3. If the person has started out with too high of a dosage
4. If the person had taken several food supplements all at once rather than gradually introduce one product at a time/day or at different times of the day.
5. Sometimes the person will have health issues that are to such an extent that initially the person's body has difficulty accommodating them.
6. Sometimes the person may be also taking other food supplements drugs etc. that are incompatible and cause an adverse reaction.
7. If the product was not GMP Certified Pharmaceutical Quality food supplements but rather Pharmaceutical grade.

Other than going to the doctor who prescribed the food supplement is there any other thing to measure that could be used

to possibly determine if the body might not be accommodating the food supplement?

Yes before they begin ingesting a food supplement they take the time to establish a baseline of the rate of their heart, pulse, oxygen, health, digestion and kidney and other excretory activates. When it comes to pulse and heart rate and oxygen levels it is very easy and inexpensive when they utilize some form of an Oximeter (one of those fingertip devices and based on science) that measure pulse, oxygen, heart rate.

Once that baseline is established then as they ingest food supplements they daily re-measure their heart rate, pulse and oxygen and compare thus makers to their baseline markers.

If there have been some improvements or worsening of their baseline markers they have some indication that the food supplement may not be good for them or good.

Similarly the same can be true when taking a drug but sometimes certain drugs are expected to possibly and temporarily cause adverse issues either the same day or the next day.

How is that?

It is often related to their body accommodating itself to the nutrients they ingested.

What about people who are taking prescribed drugs and want to also take food supplements?

Never ever do that without first discussing that idea with the doctor who prescribed the medication(s). **Why?** Because some drugs and food supplements react to one another therefore causing internal adverse reactions. Secondly you're medical doctor or a nutritionist who the doctor referred you or a Chiropractic Physician who is up to date on pharmacology and knows a great deal about that subject therefore we encourage you to avail yourself of their knowledge.

Discussion: For example anyone who is taking a prescribed blood thinner (Warfarin, Heparin, Lovenox etc.) should not also be ingesting Omega 3 or 6 fatty acid food supplements, vitamin E, Garlic, Coenzyme, Cranberry, Dong quai, Ginner, Ginseng, Glucosamine and that includes Aspirin **Why?** Because they are reported to cause thinning of blood (aPTT)

(thromboplastin) which could predispose the person to their blood becoming too thin.

What if for example a multi vitamin has a small amount of say vitamin E or some of those other natural blood thinning chemicals in it? Does that mean that the person on blood thinners should take that vitamin?

Not necessarily so in that the Mgs or IU's of the food supplements might be in the prescribing doctor's opinion contraindicated but again it should be discussed with the medical doctor who prescribed the blood thinner.

If a person blood studies indicate that they need a blood thinner can't they inject a natural blood thinner in place of a prescribed blood thinner?

Yes (based on freedom of choice) but we highly discourage doing so thus they should discuss that idea with their medical doctor. The issue isn't so much that natural blood thinners are bad but rather that they could either cause their blood to become too thin and/or that they might not achieve the levels needed for proper blood viscosity.

Injectable blood thinners (Lovenox) do not go through the digestive system and that's important especially in people who have known gastrointestinal issues.

Heparin/Warfarin

For example Heparin, Warfarin, Lovenox They are blood thinners that are commonly prescribed to lower the viscosity of blood or where a patient is diagnosed with venous or other clotting issues. But when a doctor prescribes them they call for regular testing of the patient's blood hoping to find that it can eventually be eliminated and/or the patient can go on a lower/maintenance dosage.

A Word of Caution: Prescribed and Natural Blood Thinners are not to be taken lightly or Without Proper Medical Advice.

Consult your medical doctor

Regardless of whatever your health situation might be if you have any health concerns we encourage you to discuss your health issue with a health care provider who is experienced in food supplementations therefore will also have advice regarding the possible dosage(s) that might be applicable to your situation or

interests. We therefore encourage you to seek out professional board certified and State licensed health care provider's advice before you decide what to do.

References and Study's

As you move through this and the "Hormones and Health" books you see us cite (other people or organizations) "references/study's" regarding the subjects discussed. Many other also books cite references/study's but we caution you not think that all of those references/studies are necessarily supported by accepted scientific research and credible clinical study's – fact is anyone can give a reference or imply credible scientific research, clinical study's thus having little to no scientific research to substantiate the products they promote.

You will also note that there are times where there are no references and this is because the food supplements listed has over lapping references with other conditions discussed.

Being in the health profession as long as we have we've come to accept the fact that there are always conflicting references/study's and some of them have differing opinions and agendas many of which support certain manufactures who have financially supported the person who has supposedly conducted research and cite their opinion.

Again the information we discuss is not meant to make a diagnosis, treat or promote or imply cure or prevention of any health issue through some food supplement or diet.

If you contact us or have previously contacted us will we be contacting you trying to sell you something?

No –Never basically we offer information and if you desire to receive periodic new information on natural health care we will put your name on our email list for those updates – There will be no charge to you for us to do so or follow up telephone calls, etc. which is based on our philosophy of being oriented to Patient First.

What does being Patient First Oriented mean?

Without trying not to sound religious or ultraistic our goal is to put people first thus be True North oriented but we recognize that there are all kinds of lay as well as health care professionals who are not true north oriented in that they put themselves first as well dabble in nontraditional diagnostic and some aspect of alternative health but history proves that few are true north oriented and not truly whole person oriented.

We have and continue to “Patient First” and that involves be interested in learning and serving people in as balanced as possible ways and while continuing to strive to make sure that we are progressive in embracing all the philosophy’s of diet, exercise program or taking some food supplement(s).

What types of conditions do we commonly see in our clinic?

Automobile Accident and Personal Property Injury’s – NO OUT OF POCKET EXPENSES

Acid Reflux\ADD/ADHD

Alzheimer’s disease

Anxiety and Stress Disorders

Asthma

Personal, Automobile and Work Related Injury’s

Back and Joint Problems

Blood Disorders

Chronic Fatigue Syndrome

Chronic Obstructive Pulmonary Disorders

Cystic Fibrosis

Depression

Diabetes

Dysmenorrhea

Fibromyalgia

Hormone Problems (Female/Male)

Hypertension

Intestinal Disorders

Insomnia

Joint Pain

Menopausal Problems

Neuropathy

Rheumatoid Arthritis

Yeast Infections

Persistent Weight Problems

What does no out of pocket expenses mean?

It means that we accept what the injured persons insurance company’s pays and if there were any other unpaid bills we do not bill nor expect the injured

patient to pay anything out of their pocket for what their insurance company won't pay.

The more we know the better equipped we are to make good decisions

Because of the years in private clinical practice, post graduate chiropractic continuing education license renewal seminars which included hundreds of Doctors and staff in those seminars.

We have produced, recorded 500 plus "House Call Television "on cable television that are broadcast worldwide as well through YouTube.comfuturehealthtoday programs.

That being the case our work is constantly be evaluated by health care licensing agencies, health care providers and if there was any suspicion that we were giving false information and or that the nontraditional diagnostic tests or treatments that we dispense we would not only have been disciplined of which we currently being investigated and there has never been any disciplinary action taken against us.

Experience – Expanding Knowledge and Wisdom

Logically it is filled with positive life changing natural health information revealing the secrets of health care and intelligent, life inspiring, compelling knowledge to assist their attempts to help people who have lost health and/or maintaining good health and longevity. It is a true masterpiece of life-defining, profound knowledge that brings natural health to the forefront like an ever evolving fountain of transformative wisdom, knowledge, health and wellbeing.

Is this book Radical?

Radical is an interesting word in that people have different definitions of it but it is radical from the perspective that it offers lay persons the opportunity to look at health and wellbeing from a broad based science and clinical experience perspectives which for many health care traditionalists are radical as other books don't.

But as true as that is we attempt not to imply that any of the physical exercises, diets or GMP Certified food supplements will or could cure or prevent disease nor are we in any way making or implying any diagnosis, treatment promise cure or prevention..

What does it possibly offer?

It offers lay people a comprehensive view of the alternatives to the traditional western drug exclusivity to treating health problems in positive and collaborative ways that anyone can utilize easily and inexpensively.

Collaborative Common Sense and Cutting Edge Natural Health Care.

Those that are natural health care providers who are science based and common sense oriented understand that sometimes drugs or surgery are needed just as sometimes certain diets, exercise programs or food supplements are contraindicated.

But as much as it should be there continue to be those practitioners who are totally oriented to the western medical drug belief system and that being the case might consider this book to be radical but observation will show that some aspects of the Alternative Health Care industry are way off balance and causing many people to make serious health care mistakes.

Are We Anti Medical or Anti-Drug therapy?

No there is a place for traditional medical care therefore if you are taking any prescribed medication and are considering trying some alternative approach to a health problem we encourage you to first discuss that idea with the health care provider who prescribed your medication.

Drugs – Potential Adverse Reactions

Let's turn our attention to drugs and the question of possible adverse reactions people experience when taking prescribed drugs.

First those (medical doctors, R.N's and P.A's) who prescribe drugs have good and well-rounded education, clinical experience and understanding of both the potential positive benefits as well as adverse reactions to the medications they are recommending but sometimes they have no other choice in their attempting to combat whatever health issue there patient is encountering in what they know are the best ways possible.

The Body Reacts to the Unnatural

Interestingly sometimes in attempting to regain health through drug therapy there are also going to be adverse effects of those prescribed medications – just as there at times are adverse effects of taking a vitamin, mineral or homeopathic remedy in the process of achieving the potential good effects.

No doctor or nurse or physician's assistant who is contemplating prescribing a drug would ever intentionally do so with the intent of worsening their patient's health issue – their goal always has the patient and the best possible results for the patient but those traditional (We've always Done It That Way) approaches don't always discover the missing s to the patients' health issues therefore persistent health problems continue.

What about M.D. s P.A's, R.N's and Physical Therapists and Board certified Nutritionists, being influenced by drug company's? Can you trust them?

Everyone (including us) is influenced by someone else and that's an important component of learning the old things that continue to achieve good results as well new things that scientific study's has proven to be of potential health

How else are they going to learn the newest drugs available but the mass majority of those health care providers are going to look at all possible pharmacological interventions and chose the one(s) that they feel would possibly serve their patient's best interests? If we never would have had contact with nutraceutical representatives we wouldn't have much of the expertise that we have regarding nutraceuticals.

What about Anti-Medical People

Unfortunately there are people who hate people who provide medical services and point out how evil and self-serving medical personnel are. Well no one is perfect but there are is far more good people and services in the medical profession than bad. Where would our society be without the fine people and lifesaving medical services and regulatory agencies that we have at present and those on the horizon?

Fact is anything we hate is seed sown and sooner or later the harvests of those seeds sown are going to come back into those peoples life. Sometimes even with the best intent and highest quality of medical care peoples being treated fail to respond in the positive but it is never because of wrong intent of those dispensing the treatment.

Are we also are marketed by drug and food supplement organizations?

Yes we encounter ongoing attempts by manufactures and distributors of drugs and food supplements but like those who prescribe drugs we evaluate

the company's products and attempt to find and recommend the ones that are proven to offer the most potential benefits in the least costly ways and time and experience has proven to us and our patients that Nutri Dyn food supplements has given the best results.

Un-Complicating Health Care

If anyone spent a day with a medical doctor or nurse and observed the variety of people and health problems they see they would recognize that sometimes there is no other honest or ethical choice but to prescribe a drug for combating those conditions. As unfortunate as it is the media by and large seeks people's attention to reporting on the negative ramifications of medicine rather than the vast positive effects of medical care.

What about advising patients of possible adverse effects of drugs and food supplements prescribed?

In this day and age the Internet and cable television has made everyone think they're an expert. Similarly they have divided peoples into camps of judge mentalism therefore when it comes to health care and providers of it they make it easy to judge and complain about medical providers drug manufactures, druggists. But thankfully we don't encounter many of those lay people or doctors or pharmacists who when prescribing or dispensing a drug that doesn't advise the patient of possible adverse effects when taking the drug. It is one thing to be informed but another to be ill-informed.

What about our relationship with medical care providers?

We have many personnel as well as integrated and collaborative professional relationships with medical doctors, nurses, therapists, nutritionists, dietitians, massage and physical therapists and pharmacologists. And because as valuable and life enduring as interventional chiropractic care is and other aspects of natural health has personally been to countless numbers of people we have encountered health issues that warranted surgical and pharmacological intervention. We therefore do not speak from an ultraistic perspective but from the trenches of years of finding what works as well as what doesn't work through alternative non-traditional health care. We can testify that all of the medical personnel that we have had contact with were professional and had great desire to the very best thing for us and our patients.

Caution

If you are under medical care, taking prescribed medications and contemplating changing your diet and/or being a program of ingesting food supplements on your own or based on what some natural health care provider has recommended and refuses to send those recommendations to your medical doctor then it is a red flag that the person is not only wrong but could be endangering your health.

Red Flags

What if your natural health care provider has sent the food supplement information to your medical doctor and the medical doctor refuses to acknowledge it or has looked at that information and without any justification puts that information or your natural health care provider it likewise is a red flag that you are dealing with a doctor, RN, PA or Nutritionist that could very well be predicted and potentially endangering your health.

What do any of those red flags imply?

That you should seriously consider changing that health care provider

Health care prejudice does exist?

This is not saying that everyone is positive toward our approach to health care but whatever their reason that's their issue not ours. Fact is no one is perfect and the mass majority of the minority of anti-natural health care is people now little to nothing about Chiropractic, Alternative Health Care and/or has prejudices. Everyone to varying degrees has less prejudices – some well-founded but as health care providers we all have a lot to learn and the more open minded we are the better humanity is served. When people block information from coming into their life they shoot the door to the positive things in that information therefore prevent themselves from profiting from the good within it.

Empathy or lack of it by medical providers

Very often some people complain that the doctor(s), nurses and other medical personnel are abrupt and lack empathy regarding their health issues.

Certainly we're all humans thus having varying personalities and sometimes medical personnel will come off as cold, aloof and un-sympathetic and when that's the situation some patients are discouraged.

What's the solution?

1. Mention that issue to the person or a supervisory person in an un-defensive possibility. 2. If on doing so and there is no inclination of being more sympathetic then ask for another health care provider.

Sometimes Situations Are Very Difficult

Admitted it or not with health problems come fatigue for patients as well as their families and medical personnel. To varying degrees people emotionally wear down and it surfaces in many ways most commonly in becoming negative.

Similarly it is never easy to discuss dire medical issues with patients or their relatives in that very often the patients' health issues are life threatening or have gone on for a long time and offer little to no hope.

This is especially so when the patients' health issues are similar to an avalanche of medical health issues and medical reports seen hopeless or that they have anti doctor attitudes or some un-resolved emotion issues that preexisted their physical issues.

This is particularly true with people who have many visits with medical personnel and those visits have gone on for months or years with repeated hospitalizations, clinic visits and pharmacy's.

This is also aggravated when people have restrictions in health coverage and even though their doctor had nothing to do with those restrictions patients often take their frustration/anger out on the doctor or associated support staff.

What makes people think or not think that a doctor is good?

As sad as it is time after time when people are asked those questions they say that their doctor is good or bad and they base it on the doctor listening or not taking time to listen to them.

Certainly some medical personnel are abrupt but for the most part they are doing what they do under time restrictions and doing the right thing in trimly fashion.

Secondly if you have been referred by another health care provider and seeing that the new doctor, PA or RN has reviewed your medical records that the previous medical personnel have sent them.

Thirdly people feel that their doctor is good when not only does she/he take time listening to them but is open to being asked questions as well as answering them and explaining their rationale in the treatments they prescribe.

Personality's Differ

We don't believe that any medical personnel sets out to being abrupt, aloof or not sympathetic but there is a very fine line in being truthful with patients and giving glimmers of hope. This is especially so with medical personnel that is involved with people whose health future is less than positive.

What does one do if they have incompatibility with medical personnel?

Take time in searching to find a health care provider that there will be mutual respect and satisfaction with.

What about anti-drug people - Food supplement organizations and sales people

One of the problems with many people who are buying or selling food supplements is that they tend to be anti-drug oriented and over emphasize value of Chiropractic care, massage, physical therapy, food supplements, diet, exercise program/equipment their purchasing or selling while also at putting down the value of drugs or encourage people to stop taking prescribed medications.

Certainly chiropractic care, food supplements, diet and physical exercise may help some people but when there are life threatening health problems that need immediate surgical or prescribed pharmacological intervention and when someone personally avoids necessary surgery, taking a prescribed drug or attempts to cure the problem with a diet, food supplement or exercise program they are on a worsening slippery slope to worsening health.

Some professional and lay sales people are sincere but sincerely wrong about food supplements.

If there is any group that attracts some of the most un-balanced people it is some of those who are selling weight loss programs, body building exercise equipment, health clubs memberships and selling food supplements. This is not saying that we are against people who is on a personal quest for natural health are wrong nor are those who are selling weight loss programs, body building exercise equipment, health clubs memberships or those selling food supplements but to some degree those endeavors seem to attract some very imbalanced and un-scrupulous people. Like any other aspect of society there are some of the nicest people who are radicalized about natural health and are not only dangerous to themselves but those who lack are not common sense oriented.

Avoiding Becoming Your Own Worst Enemy

When it comes to a personal quest for natural health we applaud those people but without a well-balanced scientific education in the realms of the basic sciences they are vulnerable to doing things, getting involved with food supplements, diet, exercise programs that in face may have some value but also bring with them potential deleterious consequences. Likewise we do not fault those who go off in some personal quest for natural health and wellbeing as some of those people have serious health issues that other forms of health care are not helping but again one should seek out professionals who are accredited in the subjects that they are pursuing.

Maximizing health benefits – Minimizing Mistakes

As you might suspect we encounter some people who in and through their own studies have acquired vast amounts of health information (some of it not proven scientifically) and we applaud the honest ones but they still could serve themselves better if they sought out some accredited science based professional who had proven integrity and is skilled in both nontraditional as well as traditional health care to help them get more of a well-balanced science based perspectives.

We applaud those people as at least they are trying to help themselves

We do not think less of those who won't as we understand that people us have freedom of choice and varying motivations but we are well served when we open ourselves to different science based perspectives. A major key then is to avail ourselves of well-balanced and health care providers

who are board certified and have and long term proven scientific credibility as it relates possibly to your situation - therefore remain open to ideas and approaches to health and wellness.

Seek professional State Board certified health care counsel

Sometimes people get into situations where they need prescribed medications and surgery that are potentially lifesaving and we are thankful that those opportunities exist. The key then if we are seeking preventative health information and/or are in need for medical intervention that we seek out those practitioners who are board certified in the specialty we think we need. In non –emergency s it is advisable to get second/third opinions before we take on some surgery, take prescribed drug(s), food supplement (s), etc.

Shooting From The Hip – The dangers of food supplements

Fact is when a health care provider recommends a drug, food supplement, and exercise program without first taking a past and present health history they are opening themselves as well as those persons to violating laws pertaining to health care as well as making mistakes and predisposing those people to serious health problems

As sad as that is those health care providers are like among a loaded gun at a suspected target. This is a particular problem that goes on in retail nutrition stores, health clubs, and independent food supplement sellers are doing so creating an open door to not only health consequences but wasting people’s money and creating the possibility of future health issues.

Being Forewarned Is Being Forearmed

As you expand your knowledge of health and wellness by reading this book, it will be beneficial to keep in mind that we live in a medically thus drug-oriented society.

From the time a student enters medical school their lives largely revolve around (and rightly so) studying drugs, writing prescriptions for whatever ails people – drug therapy being a major avenue to treating disease and a major economic engine in present day society. You cannot look at TV, the internet, print media, etc. without seeing advertisements for drugs, food supplements, exercise and diet much of which in reality predisposes people to adverse reactions and/or have little to no value which is very often the case when it comes to weight loss programs, exercise equipment and programs and food supplements. We in no way want to denigrate traditional medical care as it is needed but as society becomes more informed there

is a growing interest in alternatives health care some of which have proven health benefits others not so beneficial and potentially detrimental.

Health Insurance Discrimination

This is especially so with the drastic changes occurring in the health industry and that includes to continual increases the costs of medical care, escalating deductibles, Co-Pays and reduction of reimbursable health care services by the government, Health Insurance and Managed Health Care Organizations which is not only dividing people into one of the following categories:

1. HIGH Value (those with comprehensive insurance coverable/HSA programs,
2. LOW Value (those with very high insurance deductibles and limited health insurance coverable),
3. NO VALUE (those who either have little or no health insurance) and thus if any health care is available it will be minimal and highly restrictive.

In reality the health insurance companies that discriminate either miss –use laws and or formulate opinions, rules and regulations that make their discrimination against patients, doctors look legal.

It's Not the Health Care Providers but the Government and Health Insurance Company's

Health care providers now are being ever more regulated in the services they (based on scientific data and clinical experience) believe their patients should receive by people who are “No” oriented – No we won't pay for those services and they support their positions by having paid “experts” who give the “No” opinions that want. *Who then suffers?* The Patient. *Who then profits?* The company whose employees create barriers to health insurance coverages and say NO” and the “experts” who give the opinions they want to support their? No” positions. If (as we do) there is a law of sowing and reaping then there in all probability is going to be a lot of negative reaping in those organizations from the self-serving seeds they are sowing but that shouldn't surprise us as we live in a society that is becoming more self-serving rather than service oriented.

What then are people who are Low value and little to No Value to do?

1. If possible learn how to treat themselves without drugs but the problem is that many of those people's health problems can't be effectively self-treated therefore we have ever increasing numbers of people who have little to no medical care and are to varying degrees disabled.
2. If prescribed medications continue to be necessary find sources of drugs that are less expensive and that usually involves purchasing them through companies that are outside the United States of America and that might be fine and understandable

but it also opens the door to those drugs not being really what those company's say they are.

3. Find and maintain relationships with health care providers, who offer fees for services that are comparatively less expensive but the same or better quality, For example in our clinic we currently offer a very low entrance fee that covers the initial consultation, examination and spinal X-rays if needed. Some other Chiropractors advertise similar arrangements but when a person goes to those clinics they find very minimal examinations and as sad as it is some are unscrupulous in that they try to scare people into having additional services and up sell them for other products, services.

In our clinic

In our clinic we attempt to put the Patient First thus is True North based therefore that includes Informing Before We Perform, Receiving Permission - While We Perform, After We Perform and Asking Patients if they have any questions before they depart.

No services are dispensed prior or discussing the potential fee for the service as well as the various payment options. We also offer a cash plan that basically involves a discount.

The Way We Are Educated and Programed To Think

In our particular case we are trained as natural health care providers whose education involved care for the nervous system, human frame and the other systems in the body that are integral to whole person health in as scientifically and ethically in collaborative ways from the natural, drugless perspective when possible.

Rightly so on the other hand, the medical doctor is educated to think drugs and surgery but much of the freedom they previously had in ordering diagnostic tests and treatments is being restricted by the government, Health Insurance Company's and managed health care organizations which predispose patient's health care to be minimalized. When someone has a health issue that is beyond their expertise they commonly make referrals and that's good but in some situations the patient is put on a medical Ferris wheel being transported endlessly to other health care providers and ending up with countless opinions and little to no solution to their health issues.

Why are we presenting this book? Based on what we have already state the following is likewise relevant.

- To offer science-based health information as we presently know it
- To offer anyone personal empowerment in health and well being
- To offer up-to-date information to enable you to be more in charge of you present and future health

- To offer what we know at present in collaborative ways the most up-to-date keys to whole person health as well as scientific references to substantiate the health information that is of interest to you without having to go to a doctor or research the internet, the information on which is often misleading and undocumented.
- To inform and offer you with the most current science-based information possible to help charge of your quest for health and wellbeing if you decide to go to a doctor, or someone selling diets, food supplements or make some lifestyle change.
- Upon request we freely offer this as well as access to more than to 100 of the most common health conditions, diets, food supplements, medical as well as nutritional therapies from a whole person perspectives that were provided to us by Greg Peterson of Nutri Dyn Midwest.

The Federal Drug Administration

Current statistics indicate that there are over 7000 food supplement companies registered with the FDA and it is estimated that nearly 3 billion dollars are spent on food supplements in the USA. Many of those food supplement company's register themselves in States where over-sight is minimal but still they sell everywhere.

First the FDA consists of very diligent people who attempt to protect the public and doing so has its challenges as there are countless numbers of people and organizations trying to influence the FDA. When it comes to food supplements the Food and Drug Administration does not require independent laboratory testing of food supplements, but they do look at the food supplement industry and where they question some products, labeling, advertisements, they do and it usually involves lack science based substantiated claims or what they feel is misleading information (promises/cures, etc.) regarding products being sold by company's/persons they have congressional authority to intervene.

Similar to all Federal Agency's they also experience vast amount of political pressure from lobbyists and manufactures who attempt to enfeeble laws and regulations of the Federal and State governments regarding food supplements. And one of those influences is to increase the thresholds/amounts of toxic chemicals, insipients, extenders, hormones, pesticides, heavy metals that are in foods and food supplements. We have never had a problem with the FDA or any other government agency and we are on watch to see that we are in compliance with their rules and regulations just as we with our respective Chiropractic Board of Examiners.

Government regulation is important

Most people don't like regulation and we wouldn't need it if we all lived by loving one another and doing unto others as we would like others do unto us but that's not

always the case. In our books we have attempted to honor State and Federal regulations as we understand them in as scientifically ways as possible.

Similarly we consistently tell patients that if they are taking some food supplements and or are contemplating do so they should discuss that with their medical doctor. This is especially so if they ate taking any prescribed medication(s).

The Internet

As convenient and potentially good as the internet is one should very careful in what they read on the Internet, as well as television, radio, etc. as some information is not always true or take truths out of context. Because the Internet is basically a free for all anyone can put things out there regardless if it's true. That then being the case people who are mature and have no ax to grind or aren't interested in attention have little to know interest in miss using that un-restricted vehicle and access thus the opposite types largely rule the internet and off course attract like personalities.

This is especially true when testimonies are used and if investigated cannot be authenticated but those unscrupulous advertisers are banking on the hope that in peoples vulnerability's will not check out those testimony's or compare the product information to accepted science based information.

This is especially so in that many of those people try to take advantage of sick people through false hope and unrealistic speculations over statements, ambiguity's, over simplification, pseudo statements.

Many are in fact come off as educated and sincere but they are more often than not only sincerely wrong but con artists and con artists. They take a little knowledge and pump it up with false promises which not only fleece the pockets of the people they con but predispose those gullible people to sicknesses.

Diet and Food Supplement Scam Artists – Misuse of the terms Alternative, Future health.

Don't be scammed just because someone has a fancy name or credentials or glossy testimonials because very often they have no integrity and skirt laws and use marketing techniques that are either utterly false or ignore truths or twist the truth to make it look like their products like people who buy they will have miracle results.

As you pursue health information particularly on the Internet you are going to see endless numbers of people/organizations that are promoting their diets, exercise programs/equipment, food supplements and some of them will be using the term alternate health care, some form of future health-today but every one of them will be selling food supplements diets, exercise equipment. Some will also be promoting so-called diagnostic tests but most will be incomplete, highly expensive and there goal will be to sell you there "miracle" food supplements and dietary, weight loss, or health condition recovery program.

As sad as it is not everyone who is promoting food supplements, weight loss, and exercise equipment

or other diet programs are honest and/or trustworthy. This is not saying that they will go away and won't as long as they continue to make money from their schemes and attract other like personality's.

We understand that there are many people in dire health situations

We recognize that many people are in looking to remain healthy while many are in dire health situations and looking for some instrument of hope and healing thus they might turn to food supplements, weight loss or diet or exercise programs, but not every product or program is scientific or biologically worthy and healthy or biologically combatable therefore predisposing people to adverse reactions.

The need to require clinical substantiated documentation

Most of the testimonies used by the unscrupulous purveyors of food supplements, diet or exercise programs cannot be clinically substantiated (you will note that we have attempted to provide references to the statements made but in this present world in this adversarial world there will be those who think differently). What we can say is that from our clinical interventions we have found sufficient documentation to what we say as well as have had positive clinical results sufficient to encourage us and our patients to continue to pursue use of them but again that may vary depending on the individual as well as the approach they and or their health care provider takes and we respect that.

Many contained illegal and banned chemicals (Prohormones) that adversely react with prescribed medications, other food supplements and predispose those who ingest them health problems especially involving the brain, lungs, liver, kidneys and over 23,000 reputed emergency room visits yearly.

Prohormones – what are they?

Prohormones in effect have steroid capabilities and often are used to lose weight and/or build muscles. Most are sold by independent distributors, at health food stores and in physical fitness centers. Even though physical fitness centers, locker rooms and parking lots or other off sight places. Many who do so deny selling prohormones or they do so under false food supplement labels and often from back rooms.

For example athletics are prohibited from using muscle enhancing products but you can get around that prohibition by using testosterone products that are either undetectable or small amounts of the chemical spread out over longer periods of time therefore indictable. Similarly we have yet to attends a fitness club/organization that hasn't had either employees or members who off are selling

steroids (of course off sight in the parking lot, etc. Prescription drugs are rampantly available without having to purchase them in a legalized facility. Similarly those clubs rent space to chiropractors, Physical therapists and other health adjuncts that business is to promote themselves and their services/products under the guise that they are employs of the clubs/organization.

The Importance of Scientific Credibility and Personal Integrity

When it comes to credibility these days as everyone is a moving target where whatever reason some people do things to create disputes, fake information, attempt to dis-credit anyone they chose and that holds true thought the health industry. *Why is that?*

People are people and are like some political organizations in that they will attempt to put it down anyone who disagrees with them and that holds true in the area of health including drugs, surgery as well as diet and food supplements.

In fact they might be very sincere but very often are sincerely wrong and no one will recognize that they are coming from the dark side and thus have perverted mind-set therefore unless we do our own research (which most people don't have the time or interest) involved it checking out those people's derogatory statements that are either patently false or taken out of context.

Do your own research but be cautious in what your research says.

And do everything you can to maximize success and minimize failure but keep in mind that everyone has particular belief systems which tend to unduly influence their opinions. This is particularly true with diets, exercise and food supplements.

Sometimes a little knowledge is detrimental especially to those who think that they are experts and testimonials and enthusiasm does not make those people or their statements truthful or obtaining the miracle results they promote.

Keep on learning

Even after 50 plus years of practice we still don't know it all and continue to learn and in reality the more we learn in fact in part teaches us how little we know.

But one of the biggest problems with diets and food supplements is that people in their quest for health often run off into health food stores, pharmacy's and the internet and purchase food supplements in hopes that they can find some magic elixir when in all probability they not only are wasting their time and money but predisposing themselves to worsening health problems.

If fact we don't blame or look down on those that do so because even if they might be at times miss-guided at least they are searching in the positive but the fact remains that the major reason for manufactures and retail distributors is to make

money therefore there will always be a major emphasis on seeing to it that people purchase their products.

Destroyed For a Lack of Knowledge

There is an old statement that says we're destroyed for a lack of knowledge and it's true but sometimes in people's quest for knowledge leads people into false knowledge and there is a preponderance of false knowledge/half-truths in the realm of natural health. This is especially so in that health food stores, and other businesses as well as independent and unlicensed sellers of food supplements have the hype of their products but little to no broad spectrum science based information that is fundamental to the scientific legitimacy of people purchasing and ingesting their products.

Do we worry about those people?

No most are very sincere people and you can't fault them for wanting to make money from the selling food supplements but in the long run the mass majority of them will stop doing so simply because the hype runs out and sales dry up.

Does anyone make lots of money from working in a health food store selling health club or being a being involved in a pyramid selling food supplements?

Yes the people who own the health food stores/health club facilities and those at the top of those food supplement pyramids.

Logically people should never be judged for looking for cure(s) of a health issue and/or prevent disease and increased longevity and that is good but we live in a world that has many deceivers which predisposes those people into vulnerabilities of deception thus they run off into health food stores, pharmacy's, the inter net, etc. and become involved in programs that do nothing much but waste their money and put them on a slippery slope to health issues.

The Deceptions of Crack Pots

This is not saying or implying that all that manufacture or distributors of diets or food supplements are unscrupulous or that the products they sell are not potentially good for the body.

But very often what happens is people at the end of the business pyramid become excited about making money through selling getting others involved in buying/investing money in distributorships and there is nothing inherently wrong with making money but very often the manufactures and people who hold key positions (top of the pyramids in leadership are by and large the only people who make much money – not the low level sellers of the products. What the people at the low of the pyramid end up with is debt and lots of un-sold inventory.

Health Clubs/Wellness Centers and Retail Outlets

It's great that some people are involved in physical fitness centers but one (if not the most) common vehicles of them (owners) making a profit is increasing services, exercise equipment, weight loss programs, food supplements and diagnostic tests that are poor quality at excessive profit margins as well as:

Getting people to sign long term contracts with the goal that peoples initial enthusiasm will decrease and those lifers will quit or decrease their involvement. In fact if everyone became a regular attendee those facilities couldn't hold all of them therefore they depend on lifers dropping off in utilization of the facility.

Similarly the owners know that to keep generating additional income they must add more and more chargeable services and that may be fine but if one looks at the percentage of personal value to the client/member very often the only ones really profiting are the owners or the persons that they are renting (and a percentage of the money they generate) for the office/clinic space they rent to those independent service providers.

Let's talk about calcium.

Calcium is an electrolyte (inorganic Cation mineral) especially related to the health of bones, blood, skin, muscles, heart, teeth, protein absorption, bone metabolism, nervous system function and drawing fats through the intestinal wall.

Low and elevated calcium concerns

Elevated calcium may be due to excessive intake of Vitamin D, hyperparathyroidism, parathyroid adenoma and bone cancer. Lowered levels may be due to diarrhea, malnutrition, intestinal alkalosis, Rickets, tetany, Osteomalacia, vitamin D deficiency, sprue, celiac disease, pneumonia, pregnancy, hypoparathyroidism, high fat intake and pancreatic inflammation. Serum calcium is greatly affected by serum proteins which are the vehicles that transport calcium and other electrolytes, enzymes, antibodies, hormones, etc.

Following are the primary forms of calcium listed by quality and absorbability.

Microcrystalline Hydroxyapatite – it touted as possibly the best form of calcium, most easily and readily absorbed, promotes increased bone density, assists in arresting bone loss, best absorbed by poor calcium absorbers, a

complete bone food, and contains the widest variety of essential electrolytes (minerals) and amino acids (proteins).

But as far as the FDA is concerned about the validity of Nutri Dynes research and that from their perspective there are no credible scientific studies to substantiate that claim which Nurture Dyn disagreed.

But as we have observed in our clinical practice patients who decided to ingest the Microcrystalline Hydroxyapatite variety reported that their results of taking it compared to the results they experienced when taking other forms was better therefore we chose to attempt to recommend the Microcrystalline Hydroxyapatite based variety.

Citrate - Moderately absorbed, not a complete bone food. Does not supply adequate levels of calcium needed by the body.

Orotate - not well absorbed, not a complete bone food, contains insufficient levels of absorbable calcium thus forcing people to take large quantities to reach maximum dosage.

Lactate - Moderately absorbed, derived from the fermentation of molasses, starch, sugar or whey and/or contains milk and/or yeast byproducts. Potentially dangerous to people with dairy, yeast, sugar or whey allergies.

Gluconate - Not well absorbed, derived from corn sugar thus dangerous to persons with corn allergies, usually combined with calcium carbonate making it difficult to absorb.

Carbonate - The most common form of calcium sold in discount drug and health food stores because it is the cheapest to produce generating greater financial profits to sellers. Not a complete bone food is mal absorbed, difficult to absorb by older people, has an antacid affect which interferes with absorption, is used as agricultural fertilizer.

Bone Meal - Poorly absorbed, taken from cow's bone and can contain high levels of toxic metals (arsenic and lead) and disease.

Dolomite - Inexpensive, poorly absorbed, high in toxic metals and contributes to Alkali Syndrome.

Bones more roles than people realize:

1. 206 bones comprise the human skeleton
2. Give shape to the body and are anchoring points for muscles, ligaments and tendons.
3. Are affected by the foods we eat and weight bearing exercise,
4. The marrow produces blood cells.
5. Store calcium and phosphorus
5. Play roles in regulating blood glucose
6. It's speculated that they play significant roles men's fertility.
7. Their growth is effected by testosterone produced by the testes in males and estrogen produced by the ovaries in females.
8. As men age testosterone decreases sometimes lower than his estrogens predisposing him to enlargement of the breasts.
8. There are relationships between the sex organs and bones.
9. The protein, osteocalcin that is produced by bone forming cells. Osteoblasts bind to receptor cells in the testes. If osteocalcin is deficient men are predisposed to loss of bone growth/health as well as infertility – this is not the case with females.
10. The principal hormone that stimulates testosterone is called luteinizing hormone – another protein manufactured in the brain which works like a dimmer switch for testosterone
11. Osteocalcin also plays roles in regulating blood glucose. It stimulates the pancreas to produce insulin which in turn acts to regulate blood glucose.

All forms of calcium contain heavy toxic metals; therefore its source is important.

Because the Food and Drug Administration does not regulate or require the same research test analysis as drugs, anyone can produce minerals, vitamins herbs, enzymes, and homeopathic remedies without federal or state oversight. Food supplement manufacturers who submit their products for independent laboratory analysis are the only manufacturers who can list their products as Pharmaceutical Quality. All others are classified as Food Grade and no one has any regulatory control over them and it cannot be guaranteed that the ingredients listed on the label are in fact in the product, or that the chemical ratios of the ingredients are in biochemical balance.

Factors influencing Absorption of calcium and other minerals - The following factors affect the absorption of calcium and other electrolytes:

- Age - the older the individual the higher the propensity toward poor absorption.
- Acidity - of stomach and proximal end of small intestine (pH of 5 or below).
- Alkalinity - of distal end of small intestine (pH of 7.0 or above).
- Type of calcium - Microcrystalline Hydroxyapatite being the most readily absorbed.
- Other vital elements in the calcium product.
- The ratio of other minerals in that they must be in proper biochemical ratio for them to be absorbed.
- Amount of and regularity of weight bearing exercise in which the individual is involved.
- Degree of the individual's hormone levels.
- Health of digestion - poor digestion, poor absorption.
- Status of amino acids (proteins). Minerals does not float freely in the blood but rather are absorbed and chelated/chemically bond in the small intestine to amino acids who then transported by the amino acids to the various tissues in the body.

When is the best type of calcium to ingest?

Only 25-30% of the calcium taken will be absorbed at any given time, even products containing Microcrystalline Hydroxyapatite but as people enter their so-called golden years their intestinal absorption of vitamins, minerals, carbohydrate, fats, proteins, hormones and herbs tends to decrease. In the situation of calcium it is believed that Microcrystalline Hydroxyapatite is the most absorbable.

What time of the day is the best time to take minerals?

In most situations of minerals they should be taken at intervals throughout the day (morning, noon and evening), either before, during or after a meal. If one is taking a prescribed medication they should consult with the nurse or physician who prescribed the medication before taking calcium or any other mineral, vitamin or homeopathic remedy.

Multilevel Marketing

Because money can be made western-oriented societies are becoming more health conscious, food supplement, weight loss, diet and physical exercise programs have proliferated into a multibillion-dollar industry. This is not saying that it is wrong,

but where money is to be made there are going to be people and organizations that cut corners and become involved in fraudulent schemes, some of which are multilevel/pyramid in nature.

As you might well expect in the nearly combined 70 years that we have been licensed health care providers, we have been approached by many people who wanted us to become involved in multilevel marketing ventures and upon investigation we found the majority not to be reputable or if they were selling food supplements they were also not GMP Certified. *Does that make them bad people selling bad products?* Not necessarily so but it does raise a red flag that questions the scientific validity of the product and the integrity of those selling them.

✓

Why so many foods supplement manufacturer or retail outlet does not have their products independently analyzed?

- ❖ Yes, it can increase their costs in producing thus cause price competition.
- ❖ Are the ingredients listed on the label really in the food supplement,
- ❖ Are the ingredients actually in proper biochemical ratio – or really compatible to the human body,
- ❖ Do the products contain inorganic toxic metal, hormones, antibiotics, pesticides and/or herbicides and are potentially toxic insipient?
- ❖

Nutraceutical Vs Vitamin Products

There will be times where you will see the mention of nutraceutical food supplements which are in fact natural food supplements that also contain nutrition elements of phytochemicals.

Nutraceuticals are products derived from food sources that provide extra health benefits, in addition to the basic nutritional value found in foods. Example: lycopene in tomatoes provides health benefits in addition to the vitamins found in the tomato but tomatoes (as are eggs, okra, peppers, goji berries, sorrel, paprika, tomatillas) are members of the Nightshade family

What does that mean?

Unknowingly some people have hypersensitivity to Nightshade foods which are alkaloids and lectins (Peanuts). Thus when they ingest them their gastrointestinal tract become irritated (the normal acid/alkaline pH) cause not only intestinal discomfort but increased intestinal permeability which allow toxins with in the intestinal tract to gain entrance in to the blood predisposing them to them to autoimmunity issues, arthritis, fibromyalgia, muscle/joint discomfort, interruption of the metabolism of vitamin D and calcium of which both are needed for health.

Other than avoiding ingestion of them is there anything else that can be done?

Yes if you're going to ingest potatoes, okra, and peppers make sure that the skin has been removed,

Is there any simple way find out if a person who has health issues could be related to ingesting nightshade foods?

Yes go on a 5-7 day illumination program.

Receive a Touch For Health Applied Kinesiology Muscle Response Test.

Undergo an IgG and IgGA4 Food sensitivity Blood Test.

Natural Vs Synthetic

Many nutritional food supplements that are sold as "natural" aren't really natural because many are in reality totally synthetic and/or contain some natural elements.

The product may be promoted as natural, organic, clean and pure or state that their products are certified by some organization but more often than not investigation either proves not to be the case and/or the evaluation is self-serving promotion but still contain some natural nutraceutical, vitamin and/or mineral, but other components in the product are synthetic. The issue is in fact false advertising and the product is not GMP certified as natural and they get away with saying so because there either is no State or Federal oversight.

Not all food supplements are bio compatible in humans or animals

If a food supplement is or is not natural/containing organic substances and the way the manufacturer put the ingredients together was not bio-compatible the life force or innate molecular energy within those ingredients are going to be inhibited and or totally inert as far as contributing to the health of the person ingesting them. What we may have today in food supplements, diets and weight loss programs are not only bio-incompatibilities, but initially or accumulated potentially harmful effects on the people involved in them and billions of dollars that do not much more than coat the pockets of those who manufacture and distribute those products.

The importance of Wholistic information and credible data

Wholistic information may at times include detailed descriptions of the ingredients found in vitamins, minerals and homeopathic remedies which allows you to see what the manufacture contends is in the products as well as gives you access to the "References" of the scientific research data involving administration of those products.

Even though the vitamins, minerals, homeopathic remedies and nutraceuticals are not technically drugs, we feel that people not only have a right to know what's truthfully in a product, but also have access to the results of research that has gone

into the use of those products. Sadly unsubstantiated trust is often miss-used and deceiving.

Understanding the differences between IUs and Milligrams

Vitamins A, D, E and K) are listed on the vitamin label in IUs - International Units and the government has established parameters of daily needs. Vitamins A, D, E and K are fat-soluble which means they must be in a fat-environment and acid pH for them to be digested, absorbed and assimilated. One then can take on toxicity within their body if they consume excess levels of A, D, E or K. It should also be remembered that proteins tend to be destroyed in an acid pH therefore proper digestion and assimilation in an alkaline pH more about that latter – see proteins.

Milligrams – Mgs. What are they and their importance to you?

All other vitamins (C and the B complex) are water-soluble which are normally metabolized by the body quite quickly and are listed in on labels in Mgs. This means that science has proven that they dissolve in a water environment and are usually metabolized much faster than the fat-soluble vitamins. In normal health the body will either metabolize them and/or excrete them and it that becomes the case it should prevent toxic build up.

Mycellized Food Supplements – What are they and their importance to you?

When a food supplement uses the term Mycellized it means that the manufacture has altered the molecular structure of a vitamin (most commonly fat soluble vitamin – A, D, E or K) has been broken down into micelles (tiny soluble molecules) making it possible to be digested and assimilated much easier than a whole or non-Mycellized food supplement. Again before one believes what the manufacture says they should seek proof that in fact the product is Mycellized.

Minerals / Colloidal Minerals

Minerals are naturally (but not necessarily taken from clean land) occurring, inorganic substances having either a positive (+ - Cation) or negative (- Anion) electrical attraction or charge, a definite chemical composition, structure, color, and hardness.

Colloidal minerals are believed to be better absorbed than regular minerals because in the manufacturing process they have been downsized to a smaller molecular size and chelated.

They in fact play significant roles in assisting the electromagnetic status of the body as it is in fact an electromagnetic organism. Many prescribed medications alter the electro static state of the body therefore when that's known by the prescribing

physician periodic monitoring of those minerals is called for. Thus it is important what types and combinations of electro static harmony.

Achieving internal biochemical harmony

Because of mineral electro static nature's minerals do not so much function independently but rather in biochemical rations thus potential harmony with other minerals. For example calcium's ratio with potassium is 3-1 and if the ratio of calcium and potassium is different/out of biochemical harmony) they will not be capable of playing the roles in the body.

What does that have to do with the foods and/or the food supplements we ingest?

If there is an imbalance of minerals were ingesting they will biochemically incompatible thus either be potentially harmful to the body and/or set forth a cascade of either immediate and/or accumulated dysfunctions resulting in diseases. When it comes to ingesting food supplements more often than not the manufactures of food supplements will include minerals but they are not in correct biochemical ratios therefore either un-acceptable by the body and either excreted and/or cause health issues.

Heavy Metals Effects on your kidneys

The kidneys: If functioning normally the kidneys contain nephrons (microscopic filters) that have innate thresholds within them and when working well they in part not only separate good (Biogenic) and bad (Biotitic) substances and assist the body in retaining the good ones and eliminating the bad or unnecessary ones; In that process they play major physiological roles in keeping the good substances as well as play roles in eliminating the biotitic substances.

Minerals such as calcium, iron, potassium, sodium, or zinc, are essential to the nutrition of humans, animals, and plants but that does not mean that the soil or plants are free of potentially harmful toxins.

Chelation – what is it and it important to your health?

In order for vitamins and minerals to be absorbed they must be chelated (chemically bound or attached to one another and proteins/amino acids primarily in the proximal end of the small intestine. When a food supplement manufacture of a vitamin or mineral product that they have chelated they subtext “ate” but it does not mean that the manufacturer has been truthful. An only product that are GMP Certified and for example state that a mineral is chelated is truly chelated. Again the issue is does the label of the product tell the truth.

Enzymes – The Importance of them being coated

When in proper internal balance enzymes have a catalytic nature in that enhance the microbiome and cytosolic transcription of accelerating internal biochemical reactions but unless coated with a protective coating they are predisposed to being destroyed as they pass from the esophagus into the acid pH environment of the stomach.

There are many enzymes in the body. They are protein molecules that act as catalysts to help other biochemical molecules fulfill specific internal biochemical reactions. For example, most people recognize that the pancreas synthesizes insulin, but it also synthesizes pancreatic Lipase, to assist the body in digesting fat; protease, to assist the body in digesting protein; and Amylase to assist the body in digesting starch/carbohydrates.

N-Acetyl L-Cysteine (NAC)

Is an amino acid, which helps to promote the normal viscosity of mucus? Studies have shown individuals have been supplemented appropriately without side effects when given NAC. (6, 7)

Enzymes basically need an alkaline pH (within the intestines) to fulfill their role in digestion. Many enzyme manufacturers either don't coat the enzymes they manufacture/include and/or when they do often coat the enzymes with inert coatings that in digestive reality offer little to no protection of the acid pH of the stomach. Again one cannot over emphasize the importance of all food supplements being GMP Certified. Why? Simply because some food supplement manufacturers with sacrifice scientific integrity for financial profit thus the importance of the food supplement being GMP Certified.

Protomorphogens (PMG) and their possible relationship to your health

A term that discusses glandular cytosol (protein) extracts from animals where the hormones within those tissues are removed. It is not DNA, RNA or a nucleoprotein, but is believed to contribute to the body's synthesis of nucleoproteins or other proteins.

Those who sell PMG's believe that the products ingested will go directly to support the organ(s) within the patient's body. As true as that possibility might be, one has to question if in the manufacturing of the product really has been coated with an outer protective cover and if so, the acid pH in the stomach will destroy the proteins molecular structure and prevent it having any value to the person.

Again if the label on the bottle does not say that it is GMC certified, it is highly unlikely that a protective layer is covering the product making the product of no biochemical value to the body.

Homeopathy - Ayurvedic Medicine Its potential importance to your health

Homeopathy (sometimes today referred to as Ayurvedic medicine) is a method of treatment which its advocates believe stimulate the body's own innate healing processes through the ingestion of herbs. In the Western contemporary sense it is based on the 1790 discoveries of Dr. Samuel Hahnemann although he didn't publically admit, looked into the works of the ancient Chinese who used herbs in liquid and pellet forms for treating disease. The concept is that "like cures like," or the "law of similar." Basically it involves ingesting mixtures/ of herbal /botanicals compounds

Although he did not give credit to the Chinese, he postulated that when consuming large doses of various herbal substances, primarily extracts of plants and minerals, he could induce specific adverse symptoms in a human body that would counter conditions within the body. He then used these same substances, diluted to minute doses, to evaluate the symptoms caused by the substances in a large dose. Thus, "like cures like." Dr. Hahnemann then embarked upon classifying extensive varieties of these natural substances, as the Chinese had done many centuries ago, according to the symptoms they produced at concentrated levels in healthy subjects. This makes up what is known today as the homeopathic pharmacopoeia which at its basis is Chinese Herbology of which we include in our protocols have had similar success.

The science of Herbology

Even though many herbal products come from other countries than China the use of herbs goes back to the original creation but every society since then has to varying degrees boasted of the medicinal herbal properties and values of the collection of powerful botanicals.

The Chinese system of plant based-health care instructs on how to combine, prepare and use plants and other natural substances to produce safe and effective products that may promote health and support healing. While hierologists would like us to believe that herbal (Ayurvedic Medicines) is the most widespread of method healing in China, the drug approach is used more than publically admitted. Why? Because the Chinese have found that many of the homeopathic remedies do not cure the mass majority of the health problems their society encounters.

Also China is in all probability one (if not the number one country where the air, land, water is most polluted and when it comes to food supplement manufacturing the most un-regulated.

The potential harm of taking herbs

Some of the promoters of herbs and homeopathic remedies often neglect to mention that fact as well as the potential adverse effects of consuming and/or combining herbs and homeopathic remedies. More and more malpractice suits are being filed as a result of harm caused by the incorrect combination of drugs, herbs and or botanicals. *What does that say?* Herbology (Ayurvedic/Homeopathic Medicines) should be viewed as a serious and sometimes risky avenue to explore, especially without professional advice of those who are Board Certified and licensed by state licensing agents. *Are we saying that herbs and homeopathic remedies are bad?* No, but rather that ingesting them without credible professional counsel can predispose people to other health problems. That being a possibility it is very important that you not be swayed by testimonials, but rather seeks the counsel of a licensed health care provider who is credentialed by a state licensing board.

Caution

In many instances the company's manufacturing herbal compounds will not publish the potential adverse reactions from ingesting them and when some do so that minimizes the potential adverse reactions.

What does that tell us?

It tells us that in all probability their goal is to sell products.

How about looking up herbal remedies on the internet?

Good idea but a wise person looks also at legitimate science based Sources Company's well known to be open about the potential good as well as possible adverse effects –if there are any adverse effects...

THE ABSENCE OF SYMPTOMS DOES NOT INDICATE THE INTERNAL PRESENCE OF WELLNESS

How Does Diagnostic Testing Relate To Food Supplements?

In the process of reading through this book periodically you will see references to some diagnostic tests – such as Touch For Health Applied Kinesiology Muscle Response Testing. (TFHAKMRT), Chem Screen, CBC, Hair Mineral/Toxic Metal

Analysis, Urine Toxic Elements, Hormone Analysis, IgE and IgG4, Amino Acid Analysis.

The Sham of Preventative Health Care

Many of those who use celebrity's endorsements and the terms alternative health care, holistic, preventative health and wellness are making something look and sound like preventive health.

Certainly it's a good idea not to smoke tobacco products, chew snuff, minimize overweight, be involved in some physical exercise, minimize the intake of refined sugars, saturated fats, soda pop and on and on, but unfortunately very few utilize CBC and Blood Profile/Chem Screening in assessing the internal biochemical nature of people they see but many times when the Clinical Parameter results of the laboratory tests are normal Homeostatic evaluations will show Subclinical issues. Interestingly very often that is also true when vitamin and mineral tests are performed in that clinically they are within the Clinical parameters but not the Homeostatic/Subclinical ranges.

Often enough is not enough

People often think that if they are eating healthy and supplementing their diet with one a day multiple vitamin and mineral then they are fulfilling their body's needs but often that is not true therefore they have greater needs therefore increased intake of those food supplements. Similarly there are people who are taking food supplements that are beyond their body's needs.

The importance of knowing your Clinical and Homeostatic (Subclinical) Perspectives of the results of laboratory tests

Fact is the most accurate method of determining the internal biochemical status of one's body is a CBC and Blood profile that are analyzed from both the Clinical as well as Homeostatic (Subclinical) perspectives.

Very often when blood profiles and CBC and other orthodox laboratory tests are performed they technicians/computers that analyze the samples they are looking to see if the results fall within the established Clinical (Red light) parameters and that's fine but they do not do so from a Homeostatic or Subclinical (Yellow light/Warning) perspective.

Including evaluations from the Homeostatic perspective offers insight into possible early warning signs of possible future related health problems.

Looking at the internal biochemical activities of your body

Doing so shows the primary internal way to see what is biochemically taking place inside the body which if alterations are revealed can go a long way to stop them and

stave off future health problems. Secondly all diseases take their origin in blood cells therefore the biochemical functions of cells first shows up in changes in the chemical output of cells. Where or how does one determine early cellular dysfunction? Through the use of CBC and/or Blood Profile tests analyzed from both the Clinical as well as Homeostatic perspectives.

What about full body scans? Not a bad idea, but early detection (microscopic) cellular dysfunction will not be seen by the full body scan and if it does show some organ pathology it is very often too late or well advanced.

Clinical Vs Homeostatic Laboratory

Clinical and Homeostatic Test Results are terms you may see used when analyzing test results. All USA laboratories have established Clinical parameters for reporting results of “markers” that are ordered by the doctor (Cholesterol is a marker). While most markers are similar, some may vary by laboratory and the gender and age of the patient. Any marker that is above or below/outside the established parameter is indicated in some way – H-High, L-Low, both of which are like a red light at an intersection - warning the doctor who ordered the test that something within that particular area of the test is out of the normal range and may indicate pathology.

Homeostatic:

Laboratories do not evaluate the tests in what are referred to as homeostatic parameters, but much can be learned by doing so. The Homeostatic (Subclinical) range is like a yellow light at an intersection - warning us to be cautious and look more closely at the item from a cautionary perspective. If the marker is within the normal clinical parameter, but is approaching the low or high range, it is considered homeostatic. High (H) and low (L) Clinical markers indicate some form of pathology whereas Homeostatic ally low or high markers indicate possible future sickness.

These tests provide a broad internal microscopic landscape of an individual’s biochemical nature. Knowing the internal health of one’s body as well as the foods to which they might be toxic (biocidic) and those that are healthy (biogenic) puts them in better internal biochemical harmony. In effect we are creating the probability of the foods and food supplements we ingest working in homeostasis with them.

Going beyond typical medical lip service. Very often the doctor or PA who ordered the test will say that the results were normal and from a Clinical perspective that may be true but not true when also evaluated from a Homeostatic perspective

therefore there then could be markers that are like yellow lights at an intersection and something should be done now before the issues becomes Clinical.

If in fact a person is really prevention/wellness-oriented then regular a periodic CBC and Blood Profile, Hair Mineral and Urine Toxic Metal Analysis and 24 Hour urine Hormone Analysis (at minimum) would be the tests to order which is the accepted screen tool of accessing the major organ functions and electrolytes. But once you find a MD or D. C. who will order those tests (at a reasonable fee) the results will come back in the Clinical Range. In other words medical science has established Clinical parameters and if any are high or low there will be either an “H” or “L” printed next to the marker (test performed).

Know who you are contemplating dealing with.

But as important as those Clinical results are it is also important that you find an M.D. or D.C. who knows what the Homeostatic parameters are as well. *Why?* Because the Clinical ranges in essence do not evaluate indicators of potential Homeostatic Highs or Lows.

Thus if we are really oriented to preventative health then we should be sensitive to chemical ranges that are close to being low or high therefore being pre-proactive in doing things that could possibly prevent Clinical issues from taking place.

Examples –Note: The values that laboratory’s utilize may vary and at times change but the concept remains the same.

Cholesterol Clinical Parameters: 140 - 200

Cholesterol Homeostatic Parameters: 150 - 180

Glucose Clinical Parameters: 65.00 – 110.00

Glucose Homeostatic Parameters: 85.00 - 100.00

Hemoglobin: Clinical Parameter: 12.00 – 16.00

Hemoglobin: Homeostatic Parameter: 40.00 – 47.00

In many situations when time is taken to evaluate the blood findings from a homeostatic parameter, very often changes in the person’s lifestyle and/or offering appropriate food supplement options will assist the individual’s body to correct whatever internal biochemical deviations may be involved. That may also be the case involving many clinically high and low issues. This is not saying that every clinically high or low issue should be addressed by lifestyle or food supplements, but rather the patient should be referred to their medical doctor or some Board Certified specialist or Chiropractic Physician.

Iron, Folic Acid and vitamin B12.

Iron, folic acid and Vitamin B12 are important in your body and as you look at the following be aware that in our doing so we are not advocating any particular product.

There are three known forms of iron

Ferric iron - Plus three (Ferric/Trivalent) is the most difficult to absorb by the body —this type of iron is less soluble than ferrous iron when the acidity in the stomach is low. It has to be converted to ferrous iron (Fe^{2+}) so that it can be dissolved and absorbed in the small intestine.

Ferrous iron—Plus two (Divalent). Ferrous iron is more soluble and easier to absorb than ferric iron. It is frequently used in iron supplements in the chelated forms including ferrous sulfate, ferrous gluconate, and ferrous fumarate. As iron as ferrous bis-glycinate and/or iron peptonate.

Carbonyl iron—Carbonyl iron is a pure form of iron that is widely used as a food additive and has been studied for the treatment of iron deficiency anemia.

Like all other forms of iron when ingested, it requires a gastric acid pH to become soluble. When the person's gastric acid pH is correct it assists the body to convert the carbonyl iron to ferrous iron, and once this happens, it is absorbed in the same manner as ferrous iron.

Because carbonyl iron is dependent upon gastric acid for absorption, it is less toxic and better tolerated than other forms of iron. As iron as ferrous bis-glycinate and/or iron peptonate.

Why do we cite that information?

1. Because many multiple vitamin/mineral food supplement products contain iron, vitamin B12 and folic acid and that might be well and good but when they do is the Pharmaceutical Quality and in what form is the iron - Ferrous, Ferric or Carbonyl and are they chelated (have the suffix "ate" at the end of the iron listed on the label?

Understanding CVA's (Cardiovascular Accidents

It has been reported that deficient levels of iron in the blood can predispose people to CVA's. This is possibly related to the person's blood clotting and if a clot occurs fragments of it can become dislodged and travel in the person's blood into the brain causing a CVA. When a medical doctor finds that a person's blood is too thick they may prescribe a blood thinner as well as monitor the patient's serum iron, cholesterol and other markers in the patient's blood.

Blood thinners - Aren't blood thinners bad?

It all depends on the drug and dosages prescribed and if the patient follows the information of when to take them.

You would not believe the number of people we encounter who will either not take the prescribed drug or not take it according to the doctor's prescription. The question then is does the person want to predispose themselves to CVA or not.

How about utilizing food supplements for high cholesterol?

That's a possibility but if one does so they are advised to consult with their medical physician and regularly monitor their serum cholesterol. Similarly the same holds true if the person has some other health problem (Like atrial fibrillation) that could predispose them to CVA.

Monitoring Platelets

Anyone is utilizing blood thinners needs to see to it that their platelets are regularly assessed and platelets are usual and customary assessed in CBC blood test.

Understanding low hemoglobin

Very often when a person has low hemoglobin it is often misdiagnosed as low iron when in fact there may be a below normal hemoglobin but also deficiencies of vitamin B12, B6 and Folic Acid are also related causes. (*See also Ferritin, Transferrin and TIBC.*)

Diagnosis: Most common tests for iron and hemoglobin is through the blood (high or low) as well as a hair mineral biopsy and Urine Toxic Elements in gives a reflection of the iron tissue storage in the body and complementary to serum iron and hemoglobin test results.

Ferritin

Ferritin is a blood cell protein that contains iron. A **ferritin** test helps the physician understand how much iron your body is storing. If a **ferritin** test reveals that your blood **ferritin** level is lower than normal, it indicates your body's iron stores are low and that there may be an iron deficiency.

Transferrin *TIBC*-Total Iron Binding Capacity (Saturation)

When the physician orders a **transferrin marker** he finds the amount of **iron that** is available to bind iron - how much serum iron is bound. It is the value of serum iron divided by the total iron-binding capacity within that person's body.

Parameters of Iron and Ferritin (Laboratory may differ slightly)

Intake in healthy adult's 18-20 mgs per day

Iron - Clinical Parameters 40-180 mcg/dl

Ferritin - Clinical Parameters 20 - 288 ng/ml

Homeostatic Parameters Ferritin 85.99 – 120. (Note: the parameters may vary in laboratory reports)

Iron deficiencies anemia

Most certainly many people have health issues related to deficiencies of iron therefore are predisposed to iron deficiency anemia and either need blood transfusions of iron and or iron food supplementation. But rather than just taking one iron supplement they are often better off taking not only different types of iron but also at different times of the day. Both contain iron but the formulas are different thus making it possible for the body to better absorb iron and utilize.

What are Urine Toxic Elements?

Urine Toxic Analysis of elements in urine provides diagnostic information on potentially toxic elements such as lead, mercury, cadmium, nickel, beryllium, arsenic and aluminum. A separate analysis for urine mercury is available and complimentary to Hair Mineral Biopsy testing and Chem Screen and CBC Blood testing. Urine element analysis provides (1) diagnostic confirmation of toxic element levels, (2) quantitative monitoring of element detoxification treatments, and (3) assessment of the efficiency of renal resorption of essential elements (magnesium, calcium, sodium and potassium).

Specimens can be collected for variable time frames, depending on the primary purpose and nature of the test protocol.

Urine element analysis is an invaluable noninvasive tool for the diagnosis or confirmation of toxic element burden and monitoring of detoxification therapy. For diagnosis of the presence of certain toxic element burdens, a provocation test is recommended. A provocation test involves urine collection following oral or intravenous administration of chelating or complexing agents that mobilize elements from otherwise slowly exchanging

tissue pools. For example, non-provoked levels of cadmium and lead may not be indicative of deep tissue stores and only reflect ongoing or very recent exposure. Collection periods for provocation tests are dictated by the half-life of the specific complexing agent. For example, the average biological half-life of EDTA varies between 2 to 4 hours. Therefore, an EDTA provoked urine sample could be collected for up to 12 hours, representing about three half-lives of chelator activity in circulation.

It is problematic to use urine element analysis to assess nutritional status or adequacy for essential elements. Whole blood and packed red blood cell element levels are better indicators for essential element status. However, elevated levels of magnesium, calcium, sodium, and potassium in urine may be indicative of renal wasting conditions and provide early warning of renal dysfunction.

The difference between Hair Mineral and Urine Toxic Metal Analysis

Hair analysis gives a picture of minerals (Good and toxic) in a person's body for the past six months whereas Urine Toxic elements shows toxic elements being excreted from the body – a reflection of toxic elements that the body is excreting.

You and peptones. *What are Peptones?*

Peptones are extracts of proteins (amino acids), peptides. They are most often produced through enzymatic digestion or acid hydrolysis of natural products, such as animal tissues, milk, plants or microbial cultures.

If you don't monitor you can't correctly manage your health

If in fact we are really prevention-oriented the periodic CBC and Blood Profile would be the thing to order. If a person's health insurance won't pay for a CBC and Blood Profile, try to find a doctor who will order the tests at a reasonable fee and if he/she doesn't know how to include a Homeostatic analysis, search until you find one who does.

What Works – Being In Charge of Your Health - From A- Z

You will freely have access to more than to 200 of the most common health conditions, diets, food supplements, medical as well as nutritional therapies from a whole person perspectives.

Little Knowledge Can Be Harmful

Sometimes a little knowledge is detrimental especially to those who are intellectually stubborn, un-teachable or think that they are experts thus have a limited concept of a subject.

Even after 50 plus years of practice we still don't know it all the answers to health care but we still have a desire to continue to learn but not at the health expense of people physical or mental freedoms of choice.

But one of the biggest problems with diets and food supplements is that people in their quest for health literally run off into health food stores, pharmacy's, health clubs, health food stores/restaurants, alternative health care providers offices and the internet and purchase food supplements in hopes that they can find some magic elixir when in all probability they not only are wasting their time and money, laden with have used bottles of food supplements, exercise equipment collecting dust, receipts for uu-used prepaid health club memberships and in many situations with worse predisposing health problems.

Science based interventional and transformational health care

One of our goals in to be True North oriented. In other words relate to people like we would want to be cared for if we were in the same or similar situation. From that perspective our particular training involves the belief that when possible some health conditions can be solved without drugs or surgery through natural alternatives.

Drugs and surgery have their place

Our specialty is natural health care but that is not saying that we do not believe in surgery or drugs as they have their place and should be utilized when proven necessary. Even though we practice natural health care we have many collaborative relationships with all medical specialties and we are grateful for the wonder things drugs and surgery accomplish

We have many friends who are medical doctors and allied medical personnel and have the highest respect for them and their expertise. We ourselves have had medical interventions with drugs and surgery's that have been of great value to our health and wellbeing. There in fact are many people needlessly suffering with health issues that could be helped with nutraceuticals as well as drugs and surgery but they for whatever reason they chose not to follow good science based advice or have the diagnostic tests suggested.

Teachable and the Unteachable

Some people are True North oriented others just as some are teachable while others are not. But the more true north and teachable a person is the greater the likelihood

that when people respond in positive ways to good and appropriate health care advice they increase the probability of responding in positive ways..

From the perspective of humility we can say that our observations of the lives of those who sought health care consulting, appropriate diagnostic tests and followed the treatment recommendations that their history, examination and diagnostic indicated and followed through with the options that we presented they profited from doing so.

But sadly those who rejected our counsel refused appropriate diagnostic tests or did go through the diagnostic tests their condition suggested but refused to take the appropriate treatment recommendations that the results of their diagnostic tests suggested they continued to suffer with their ailments and continued on a road to further loss of health and wellbeing.

The danger of falling into the “Wellness” trap

You can't help but see medical as well as nontraditional health care facility's using the term :”Wellness and that's legal but very often they are nothing but either a cover up of traditional health care and/or some person/facility that offers some aspect of wellness.

Sometimes some people won't let the truth set them free

As you might suspect we encounter all kinds of people and perhaps the most disgusting ones are those who are so deep and radical into natural health that they do science base data has consistently proved to be stupid but as sad as it is you can't change them in that they are blinded by their own dark sided nature. In all honesty one of the reasons we do preliminary consultations with perspective patients is that we want to make sure that they have some strong possibility of having a good and positive fit in Our Clinic. Thus we realize that sometimes people will not benefit from being patients in our clinic and for their benefit we want to avoid that.

The truth doesn't guarantee that it will set people free.

When we speak of the truth we are not doing so from a religious perspective but coming in to truths in all aspect of life can be found in pursuing True North and when a person adapts that orientation the more the door to light put only those who move in the light of truths will find freedom and again the more a person operates in True North opens to them and the dark side departs from inhabiting them.

One board certified health care provider may not have all the answers but there is knowledge and wisdom in diversity

This is not said lightly or egotistically or to look smart or good but most other board certified health care providers will say the same. Certainly some people's health

situation is dire but those that have some degree of freedom of choice and respond in positive ways have a much higher degree of experiencing better health when they look at the options their condition offers and take appropriate board certified health care recommendations.

Costs of Alternative Chiropractic Interventional Health Care

Because the comparative costs of Chiropractic care are radically less, and often more effective it affects the high cost of not just medical care but all the support needed to keep it running. Interesting many times the cost of a visit to a Chiropractic Physician is less expensive than the deductibles and copays that insurances company's require therefore many Chiropractic patients chose to pay for care out of pocket therefore not just saving themselves money but alternative natural health care rather than in effective medical care.

Wise and Collaborative

We also want to make it as clear that if you are taking any prescribed medications and are considering some diet and/or food supplement, you should consult your medical doctor and seek her/his counsel.

It would never be our intention to be anti-medical because orthodox medicine has many valuable things to offer. Sometimes people get into situations where they need prescribed medications and surgery that is lifesaving and we are thankful that those opportunities exist. It is foolhardy to expect medicine to be perfect because everything can be improved upon and that's one of the purposes of this book – giving you the most up-to-date keys not just to health and wellness but also to long life and good health. Medical doctors know both the potentially positive as well as potentially negative side effects of drugs and there is a constant questioning of whether a patient's condition outweighs the potential of negative side effects. Very often people bring in some very serious health issues and the doctor has to decide what to do about them, keeping in mind what Medicare, Medicaid, and other health insurance organizations will or won't consider reimbursable even though it may be more effective and less financially expensive.

Example

If documentation supports the need for Chiropractic care and the Doctor of Chiropractor follows the Medicare/Medicaid, insurance guidelines they say that they will consider paying for care but if the care is considered maintenance, wellness or preventative care payment will be denied. *What's the principal?* If in fact the health organizations involved in administering Medicare/Medicaid believed that the care was for wellness or preventative care they will refuse to pay for the services rendered.

Much of the current spin about some health care practitioners practicing preventative care is superficial and of little value to their patients. For example everyone is grossly overweight knows that they should lose weight therefore does not need some medically oriented health care provider to tell them to lose weight and which foods tend to increase the propensity of overweight.

The Future

In spite of all the spin about alternative medical oriented health care what does that forecast regarding the health of people in the future?

More sick people, more hospitalizations and more health care expenses. In effect, less isn't always more, other than in the pockets of those writing restrictive health care laws and those administrating them, Fact is health insurance companies are in business to make profits for their owners therefore they will continue to construct policy's that pay less and less for health care as well as increase copays and deductibles therefore keeping more money in their pockets.

The Body – An Electro Magnetic Being

The energy/in the human body (a bio magnetic being) is the life force or innate energy that keeps tissues, cells, organs, bones, systems, etc alive and in homeostasis.

If there is some issue such as curvature, malalignment/subluxation (lose of juxtaposition/alignment) with one or more vertebrae)s or other issue in the spine there is going to be Quantity Interference with the life force flowing correctly to the body and dysfunctions (Quantity Interference) will occur.

Your health - The brain, spinal cord and spine

Even though we all have similarities, we also have individualities and that is particularly so when it comes to the brain, spinal cord and spine itself because the spine houses and acts like the switchboard of the nervous system

And through those intervertebral foramina (windows) pass nerves, arteries, veins, lymphatics and acupuncture meridians that emit and were housed in the spine and depending on the degree of their life force, flow from the spinal cord out through the intervertebral foramina.

Four Major Circulatory Systems In The Body

Most people are aware of there being the circulatory systems of the arteries, veins and lymphatic but not the meridian system through which an energy flows. And along that system are acupuncture points and Tigger (pressure) Points/Zones which are basically different from the typical ingredients (Markers) that flow through

artery's, veins and lymph systems which typically can be measured through blood studies giving an idea of internal functions.

Determining the status of the Neurolymphatics Circulatory System

Because it is an energy that flows in and through the meridians there are no typical ingredients within as there are in the arterial, venous and lymph systems.

How then does one determine the status (that energy)?

Through Touch For Health Applied Kinesiology Muscle Response Testing. Correctly applied it offers the ability to determine and Quality as well as Quantity interference within the body that is different from what typical traditional blood tests (Markers) reveal but very often it either confirms what typical blood tests reveal but more importantly gives signals (muscle response markers/weaknesses or strength) that the blood tests don't therefore giving better insight to any present Clinical based health issues as well as impending Homeostatic markers that as yet have not become Clinically present.

Quality and Quantity interference

Other than the nerve the SA Node (Sino Auricular node) in the heart) stimulate no other organ or cell can function optimally when there are dysfunctions (Quality and Quantity Interference) in the spine, muscle skeletal system and some form of the manifestations will occur immediately or later in the form of pain, sickness, disease (Quantity Interference), etc.

When the brain and spine are in homeostasis (correct alignment) the probability of better health will be evident because the brain and spine are free of quantity interference and proper nerve and blood supply to tissues will be as it normally should be.

The Role of Acupuncture/Acupressure

One of the services we provide is State Board Certified acupuncture treatments. Acupuncture has been practiced in China for many centuries' and has evolved into an alternative worldwide therapy. It is based on the belief that the human and animal body's contains meridians-a circulatory system (the fourth circulatory system) of pathways that is designed to determine if there is any internal interruption of Chee and if that is the situation Boarded certified practitioners in Acupuncture seek to unlock chi "Chee"/Life Force/Energy through which that energy flows to specific organs

In effect when correctly applied Acupuncture effects the electromagnetic status in the body through meridian therapy (acupuncture) via the insertion of needles (tiny wires) and/or using a Pao (and electrical stimulator), laser or cupping areas that

specific examination reveals possible circulatory interference with the goal of re-stimulating the flow of energy (Life Force) in those effected meridians.

Meridian/Auriculotherapy

As we have previously noted there are meridians/pressure points/trigger point/reflex points throughout the body (especially ears, hands, feet) which can be for example treated in the ears needles, laser light and also tiny metal seeds all of which treat the same designated areas but have different applications therefore should never be treated by anyone other than a hare provider who is Board certified by a State licensing agency.

What are those seeds?

They are tiny like is size made of different metals imbedded in a small bandage like material that when correctly applied to specific meridians (Shen Men Master Points Field) through which “Chee/Life force flows.

Where are those points located?

Throughout the body (for example the ears, hands, feet) but most often they are treated in the meridians in the ears which like all other meridians through the central nervous system (sympathetic/parasympathetic) effect every organ and cell in the body therefore there function in the body.

Caution – Be Very Careful In Who You seeks Alternative health Care Services from

You might assume that many people come to our clinic – many who have tried food supplements, Chiropractic, massage, Kinesiology, acupuncture and even Meridian/Auriculotherapy with varying results.

Does that indicate that those therapies weren’t viable?

No necessarily so in that there are different applications of those therapy many of which were either, illegal, limited in their possible applications while others were (sad to say) incorrectly applied.

This is particularly so in the realms of selling food supplements, people who say that they are chiropractors, worked in a chiropractic office, went to some massage, school, took some unlicensed course in Kinesiology, acupuncture and even Meridian/Auriculotherapy. **How is that?** Very often questioning of those patients indicated (and continues to be true) that one or more of those therapy’s was partially correct but when they told us that later they found that the persons that dispensed those treatments were in fact dispensed not by State Boards who Certify and Credential those therapy’s. What some of those people later proved to be as having

read about the particular therapy on the Internet and set about starting a business of providing those services?

When it involved selling food supplements in retail stores, health clubs or lay persons involved with some pyramid food supplements company, shame and illegal chiropractic, massage, Kinesiology, acupuncture and even Meridian/Auriculotherapy we found that not only were they not State Board Certified and licensed by the state Board that licensed people to dispense those therapy's but from what patients told us is that the services were minimal and apparently were from the perspective of Cookie Cutter application.

What does is Cookie Cutter therapy mean?

It means that instead of basing the treatment on accepted medical standards in that the practitioner:

1. Took little to no past or present person or family medical history, no questioning regarding past or present prescribed medications of food supplements, no routine examinations pertaining to the symptoms the patient was suffering with, no accepted and routine pre sanitary measures.
2. What the therapist did was moved very quickly into the treatment that lasted no more than a few minutes and would leave the patient un-attended while for example the acupuncture wires were in the patient and after the wires were removed no sanitary cleaning of the wire wound was implements.
3. Also those therapists demanded cash for care and refused to attempt to bill the patients' health insurance for the treatments.
4. Interestingly when those patients asked for those therapy's in our clinic the majority responded quite favorably.

Why was it that we are better than the previous therapists they had gone to?

Not necessarily so in that we do not hold ourselves to be better than any other State Board of our certification but routinely we did not rush those patients, followed what our state Board of certification requires.

Does Chiropractic spinal manipulation, massage or physical therapies have any influence on the meridians?

Yes in that chiropractic spinal manipulation and pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential to influence and regulation of the Tin/Yang/life force/innate intelligence/chi in the body.

Many Chiropractic Subspecialty's

There are many forms of Interventional Chiropractic spinal care but all influence the Quality and Quantity of the functions of the brain, spinal cord, nervous, blood vascular and digestive and eliminatory systems.

Because of the many specialties in Chiropractic care some of which are spinal manipulation, metabolic therapy, rehabilitative exercises others that incorporate other adjunctive services such as Meridian/Auridotherapy, Acupuncture Touch For Health Applied Kinesiology Muscle Response Test/Treatment or the use of Pso.

Is one better than the other?

In spite the promoters of those specialties basically they all have similar results but under varying names that the promoters tag in their attempt to stand out from others.

Do we practice meridian therapy in our clinic?

Yes

Does the application of those meridian seeds cause the recipient to experience pain?

No in that they do not penetrate the skin thus is painless.

How long do the seeds last?

The seeds don't lose their effectiveness but sometimes when ear wax is secreted they may not continue to stick to the skin therefore need replacement.

Are those seeds expensive?

It all depends the fee that the doctor chooses to charge patients the seeds as well as her/his time in deciding where they should be applied.

How quick does a person experience results?

It varies to immediate other times hours or the next day, weeks or months but when not immediate they usually report some nerve distribute along the related meridian- a indication that some internal healing process in going on.

What influences the body's response time?

One does not know for sure but sometimes it takes the body varying lengths of time to manifest relief.

References:

R.C. Niemtow, MD, PHD, MPH.

Address correspondence to:

R.C. Niemtow, MD, PHD, MPH

9800 Cherry Hill, Road
College Park, MD
E-mail: nServ@aol.com

Terry Olsen. Auriculotherapy Manual: Chinese and Western Systems of Ear Acupuncture. Amsterdam, The Neithslands, Elsevier, 203: 72

Terry Olsen. Auriculotherapy Manual: Chinese and Western Systems of Ear Acupuncture. Amsterdam, The Neithslands, Elsevier, 203: 321

Terry Olsen. Auriculotherapy Manual: Chinese and Western Systems of Ear Acupuncture. Amsterdam, The Neithslands, Elsevier, 203: 165

Weber M. Laser –needle therapy: an innovation in acupuncture. Naturamed. 2002; 17 (10):33-41

Cho ZH, Wong EK, and Fallon, J. Neuro-Acupuncture, Los Angles, USA; Q-puncture, Inc., 2001

Do we sell Auriculotherapy seeds?

No.

Who do we purchase them from?

We purchase them from manufactures that provide scientific proof that the seeds are 24 carat gold, silver or platinum

Diagnostic Opportunity's - To See Opens The Door To Knowing

Some of the diagnostic (but not limited to) X-Rays, Allergy Testing, Blood, Urine, Hormone Analysis Stool Analysis, Mineral, Amino Acid and Toxic Metal Analysis, Whole Body Health Analysis, Wight Loss, Stress Reduction, and pursing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT and treatment and *Electromagnetic Analysis (EMA)*, etc.

What is Kinesiology?

It is a broad term that in some variety of ways involves incorporating all aspects of the body including anatomy, physiology, neuroscience, biomechanics nutritional status through muscle response/rebound testing where utilizes muscle response as diagnostic testing for not only muscles skeletal issues but treating of muscles other health conditions in the body.

Do We Utilize For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) In our Clinic?

Yes it is one of the non-force painless treatment options we offer and our training of it dates back to 1967.

Utilized In Many Venues

Not only is TFKAKMRT utilized in health and wellness issues in the realm of athletics in that those who are professionally trained in the utilization of rehabilitating sport muscle skeletal injury's and or balancing and strengthening muscle skeletal components so as to facilitate injured muscle skeletal injury's and or improve their performance. This is especially so in individual sports specialties but it is different that Applied Kinesiology Muscle Response Testing (AKMRT).

What is Touch For Health Applied Kinesiology Muscle Response Testing (TFHAKMRT)

Is a system developed and pioneered by Dr. John and Matthew this where a licensed health care provider trained in muscle testing and Bio Electro Magnetic Analysis (BEMA) uses muscles as a vehicle to determine interruptions in a person Electromagnetic nature (Flow of Electromagnetic energy and meridians (13) share a lymph vessel or acupuncture points through which it flows bodily functions?

Present day systems take their origin in Chinese medicine where muscles are interpreting centers that are tested to determine if muscles are strong or weak therefore assessing the possibility that the meridian connected to an organ is healthy or not and those practitioners usually know food supplements that are related to the weakness and dysfunction of the related organ and prescribe nutraceuticals that are relative to assisting the life force with the patient's body recover from ailments and/or enhance health.

One of the sub specialties in the Chiropractic Profession

The majority of those who practice pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) are Doctors of Chiropractic and some lay persons who have taken the Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT who have taken advanced training. When that issues (s) are found those practitioners rebalancing of the tone/energy in and weak or overly dominant muscles that were revealed during testing.

Is there any potential problem with acupuncture or meridian therapy?

Yes in that there are many of offering those services are:

1. Not Board Certified by State Licensing agency's thus do not follow science based care and

2. Very often they take no adequate medical history, fail to perform credible physical examinations thus treat from a Cook Book perspective therefore are predisposed to making mistakes therefore endangering the patient and predisposing patients to inadequate response.

The body being an electromagnetic being it is understandable that the entire body is dependent and effected by the brain, spinal cord and nervous system as well as the foods eat air we breathe, digestion and eliminations.

3. As we said earlier vitamins, minerals, herbs, carbohydrates, fats and proteins are vital to not just health in general but they have potential effects on the brain, spinal cord nervous systems that regulate all functions and systems in the body and that then is the component we have regarding the forthcoming discussion of food supplements. It may be fine to have good internal biochemical functioning's but without the brain, spinal cord and nervous systems functioning properly then there will be disharmony Disease (Quaintly Interference).

Electro Magnetic Interference in the body

Every cell in the body is designed to contain many constituents including magnetic energy (electromagnetic energy) which produce bioenergy (magnetic fields). The electromagnetic energy affects all other constituents within every cell and function within the body's including minerals, fats, carbohydrates, proteins, hormones and herbs that may be in those cells.

The body is in fact and its electromagnetic nature flows with energy (life force/innate, Chi) that takes its origin in the brain passed through the spinal cord and exits the spinal cord through the intervertebral foramina of the spine giving its energy to ever tissue in the body of which Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program can assist in determining as well as potential recovery.,

The Role of Minerals

As mentioned previously minerals have electro charges (either a cations- positive or Anion negative) which play significant internal roles that affect the biochemical activates of the cells, nerves and acupuncture meridians thus influencing the health of people. Everyone then has a magnetic field/nature - positive (health) or negative (disease).

This is particularly important not only in the potential bioavailability of a mineral containing food supplement but its health potentials in the body.

Internal Interference

Even though sometimes we feel healthy but the fact remains that we are under the constant bombardment of radiation the not only surrounds the exists in the universe

but that is generating by some of the electro static creations of humans thus causing interference with the body's energy (Life Force) and the roles of Innate Intelligence. There not only varying degrees of radiation around us that in effect cause disruption and interference of that flow of that energy (similar to disruption of our DNA/RNA and the chromosomes and mitochondria (Power houses of our cells) nerves, arteries, veins and lymphatics, enzymes, hormones) predisposing people to disease.

Are there ways to measure the biomagnetic/homeostatic status of people?

Yes and there are specialists who are trained to do so through instruments but one of the most current potentially effective noninvasive methods is the utilization of Touch For Health Applied Kinesiology Muscle Response Testing which is discussed in greater detail in this book and most regularly used in some of the offices of Doctors of Chiropractic program is of potential recovery. , *Many* of those practitioners utilize massage trigger point therapy, meridian therapy/acupuncture.

What is Magnetic Therapy?

One of the ways to change the body's internal bioenergy is through external application of magnets that contain various level of emery – Gauss which is either positive or negative. Therefore when a person purchases a magnet is has a gauss and one side is positive and the other negative.

What is gauss?

Gauss/Grams is multiplied by the weight of the permanent energy (positive and negative/North and South Poles) within the magnet thus give a good indicator of the power/energy within the magnet – the higher the gauss the more powerful it is as well as its potential effectiveness.

The Importance of determining if the body needs positive or negative gauss

Depending on the health problem the magnetic energy specialist will determine what application (Positive or Negative) the body needs.

Who are those specialists?

For the most part they are those trained in Touch For Health Applied Kinesiology Muscle Responses testing and treatment. But because it is not regulated by the Government there are those out there who sell and treat people with magnets.

Do Drugs Have any Effects on Magnetic Energy?

Yes in that in many ways drugs affect the magnetic nature of people.

Is there any concern about purchasing magnets?

Yes in that very often the gauss is so minimal (less than a thousand) that it is unlikely to produce any desired effects on the body

Secondly when one is not sufficiently schooled in the physical use of magnets it is possible that they could place the magnets in the wrong place or use the positive side when it should be the negative or vice versa.

Are there any places on the body that magnets should never be applied?

Yes including the brain, eyes, heart, ovaries, testes.

Types of foods and their effect on DNA/RNA

There are many types of food but all food involves one of three categories - fats, carbohydrates and proteins but not all carbohydrates, fats or proteins are high quality or have high degrees of cation and ions that effect the bioactivities (life force and Innate Intelligence) in the body. In nature there is oxygen, enzymes, vitamins, minerals, antibodies, hormones and herbs. Depending on one's genetic nature (DNA Profile) and their lifestyle, what they consume enters the alimentary tract and hopefully is properly digested, assimilated and carried by their blood to various tissues. Thomas E. Edison said "The doctor of the future will interest his patients in care of the human frame and nutrition" (much of which today is administered in and through the Chiropractic profession) and more than ever science is proving both he and Hippocrates to be accurate.

Do not stop taking any prescribed drugs or replace them with food supplements without consulting the doctor, Physician's assistant who prescribed them.

We also want to make it as clear that if you are taking any prescribed medications and are considering some diet and/or food supplement, you should consult your medical doctor and seek her/his counsel. It would never be our intention to be anti-medical because orthodox medicine has many valuable things to offer. Sometimes people get into situations where they need prescribed medications and surgery that is lifesaving and we are thankful that those opportunities exist.

Board certified health care providers are human therefore not perfect.

It is foolhardy to expect medicine to be perfect because everything can be improved upon and that's one of the purposes of this book – giving you the most up-to-date keys not just to health and wellness but also to long life and good health.

Whole Person Health and Wellness

The original Nutritional Guide (no longer in print and now out of date) focused almost exclusively on food supplements relative to many health problems and was

primarily written for health care providers and from a nutrition perspective. This edition of “Vitamins, Minerals and Herbs - The Encyclopedia of Natural Whole Person Health, Wellness and Long Life expands on that material by bringing into focus information on other a much broader perspective as it relates to the entire human being rather than just food supplements.

Who are the principal practitioners of Natural Whole Person Health, Wellness and Long Life?

They are those Doctors of Chiropractic who practice Interventional health care.

What does that mean?

Even though there are many subspecialties in Chiropractic, the original basis of Chiropractic was and continues to be that Doctors of Chiropractic are highly trained first in the relationship of the brain, spinal cord, spine and nervous system as vital components to natural health thus total human physiology.

It begins with the Brain

In simple terms, the brain could be viewed like the major power plant in a city that generates and send electricity via the main power line (the spinal cord) to homes and businesses. The electricity in the human body is the life force or innate energy that keeps tissues, cells, organs, bones, etc., alive. If there is some issue such as curvature, malalignment/subluxation or other issue in the spine there is going to be quantity interference with the life force flowing correctly to the body and dysfunctions will occur and pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential recovery diagnosis and recovery through the uses of GMP Certified Pharmaceutical Quality food supplements, physical exercise, etc.

Finding What Works and Doesn't Work

As Post Graduate Chiropractic educators, international authors and researchers we are going to share what we have learned and found to work and doesn't work that can be potentially valuable.

The science-based information we share here will never fulfill your quest for wholeness if some existing issue in the spine is left to persist. Even though we all have similarities, we also have individualities and that is particularly so when it comes to the brain, spinal cord and spine itself because the spine houses and acts like the switchboard of the nervous system, the arteries, veins, lymphatics and acupuncture meridians that are housed in the spine and depending on the degree of their life force, flow from the spinal cord out through the intervertebral foramina. No cell or organ can function optimally when there are dysfunctions in the spine and

some form of quantity interference will occur immediately or later in the form of pain, sickness, disease, etc. When the spine is in correct alignment the probability of better health will be evident because the spine is free of quantity interference and proper nerve and blood supply to tissues will be as it normally should be.

Do all health care providers who sell food supplements all sell GMP certified Food Quality Food supplements?

No in that from the advertisements we see and our evaluations of the food supplements that the majority of the new patients that consult with us.

Certainly we don't know all health care providers but based on our conversations and the promotional observations of many of them NO in that the food supplement that they advertise and sell have no proof of those food supplements being GPM Pharmaceutical Certified Food Quality.

Intestinal Detoxification/ Cleansing

Many people either are not aware that there are toxins within their body or regularly go on cleansing and/or detoxification programs to regain their health, others to stay healthy and yet others to lose weight. This may be beneficial for some, but one has to find what works for each individual and be sure that the detoxification and/or weight loss program is as safe as possible and as you pursue the information in this book you will see a discussion of intestinal detoxification cleansing.

Is there some Key?

We all have biological similarities or Genomic natures as well as Genomic differences and by first having a CBC and Blood Profile, an IgE and IgG4 Food Sensitivity and Applied Kinesiology Muscle Response tests, the likelihood of successfully enjoying healthy detoxification and/or weight loss is increased. When laboratory tests are performed traditionally laboratory report the markers in the Clinical Range but as important as that is they should always be evaluated in the Homeostatic Range as well.

What about the ketogenic diet – is it good or bad?

Sometimes it works well for some people, other times not. No doubt its promoters contend that it has been effectively used for 50 years to promote weight loss, but again one has to be very careful of getting involved with the ketogenic diet. Good advice is to study it, consult with your medical doctor and/or a Doctor of Chiropractic. If one is going to go on a ketogenic diet it is vitally important that they do as much as reasonably possible to follow it and that includes monitoring one's urinary ketones. The body tends to burn fat for energy, but if what is burned is beyond their healthy ability of the body it will burn proteins and that is bad.

NOTE:

1. If you seem interested in this program consult with you're a health care provider who is Board certified in this subject

2. Even though the product labels of the food supplements we mention have recommendations they are not ours but the manufacture that based on their research makes those recommendations

If you order some food supplement they usually have recommended daily dosages and we do not feel it is our right to make dosages recommendations as we do not know you therefore have no medical history or have any diagnostic tests that would be usual and customary for the basis of your particular needs.

3. Most certainly the urine should be monitored throughout the day for levels of ketones being watchful of excess levels and abnormal changes in one health.

Disclaimer

As you will at times see us repeat certain facts and that is the case as we move into discussing health conditions, there possible causes, diagnosis and diet and nutritional supplementations to them it is important that we are not in any way attempting to make a diagnosis or propose a treatment. What we share is for informational purposes with the goal of giving our view point to them from an alternative health perspective. If someone choses to order a food supplement from Nutri Dyn **Midwest they are doing so on their own and we whole heartedly state the FDA's requirement that** *"The opinions and statements we give have not necessarily have not been evaluated by the Food and Drug Administration. The information provided here also is not in any way intended to diagnose, treat, cure, or prevent any disease.*

2. The conditions and food supplements that we mention are based on our experience and are for information. They are not intended to make a diagnosis or treatment but rather offer some information on education and choice.

Let's talk about and vitamins and minerals and physical exercise

You might think why are they talking about exercise in a book on vitamins, minerals and herbs? We are because a fundamental fact about minerals and vitamins is that there absorption from the intestines into the blood is significantly related to physical exercise. In other words if someone is going to properly digest and absorb the nutrients they eat and digest and enhance that process through physical exercise. Bio individuality based physical exercise has major influences on metabolism and metabolism is influenced by physical exercise influences how our body digests assimilates and in the situation of fats, proteins, carbohydrates, vitamins and the

minerals we ingest and that being the case we are going to look at exercise and its potential influences on our health. Lastly if you're not interested just push your computers

The Feet The Foundation of the Human Frame

Even though this is not a book exclusive to physical exercise it is important to us that you recognize that we believe in physical exercise when appropriate. This is particularly so in that a body (when physically possible) has to experience some form of consistent physical exercise for it to function well over a life time. The adage "Something Un-Used Goes to Waste" is true of the body in that as important in it regain and/or maintain proper healthy. This is particularly true with bones, muscles, ligaments and tendons are created to be in juxtaposition (alignment) for them to functioning harmoniously. As a matter of fact when it relates to bones, muscle, ligaments and tendons our IT (Innate Intelligence) knows the juxtaposition (normal alignment and posture) of our bones and the roles of our muscles, ligaments and tendons in keeping our bones in proper alignment therefore from a biomechanical perspective that Innate Intelligence utilizes physical exercise in that process thus based on our pursuit of physical exercise we assist every organ and cell in obtaining the proper nutrients we ingest therefore depending on our involvement with physical exercise we influence the potential of a long life and good health or not of the entire human body.

Reference: Chiropractic Economics September 22, 2017

Foot Orthotics Recommendations As An Adjunct To Spinal and Muscle Skeletal Issues

People with certain types of spine, spinal disc, nerve, muscle, tendon, circulatory, heel, Achilles tendon and joint problems benefit from wearing specialized custom made shoe inserts (orthotics). These soft and flexible devices are designed to assist in stabilizing the foundation of the feet, ankles, Achilles tendon, calf, knees, pelvis and spine, thereby reducing normal forces and stresses while enhancing the functional and structural relationships in the body.

Following is some pertinent information regarding shoe inserts as they relate to health as well as illustrations of related problems.

Understanding Human Biomechanics:

1. The joints, muscles, tendons and ligaments of the body function most efficiently when they are in physical and biochemical balance. During standing, walking and running, our bodies are subjected to natural forces

and postures that can inflict mechanical and biochemical stress and strain throughout the interrelated chain of joints, muscles, tendons and cellular activities. When foot imbalance is present, there is a negative impact on the feet, Achilles tendons, calves, thighs, knees, hips, pelvis, spine, spinal discs, and nerves (sciatic). Some people must have these abnormal forces reduced before they can achieve improved spinal function.

Foot Pronation/Supination or leg length Deficiency

Many peoples have not only back problems but thigh, knees, leg and foot problems that unbeknownst to them are related to either and/or one leg being shorter than the other, issues within their pelvis or some issues in their feet (pronation, supination, fallen arches or malalignments in the bones of their feet or knees). That being a probability it is advisable for them to consult with a Doctor of Chiropractic who has training in dealing manually with those muscle skeletal issues but also by making standing (weight bearing impressions of the person feet for personalized and customized corrective shoe orthotics. We have experimented with many shoe orthotics and consistently found those made by Foot Levelers to be the best and a recent study “Shoe Orthotics for Treatment of Chronic Low Back Pain conducted National University of Health Sciences published in the Archives of Physical Medicine and Rehabilitation was shown that a combination with chiropractic care and shoe orthotics made from weight bearing impressions of the feet to dramatically reduce low back pain. Similar studies and years of experience have also proved the same.

Improper Balance and Function Of The Feet Can Lead To:

1. Excessive rotation of the tibia (leg) and femur (thigh bones), stressing the knee and twisting the pelvis and spine.
2. Tilting of the pelvis due to leg length deficiencies, which places tension on muscles, heel, Achilles tendons and other tissues, eventually resulting in chronic back and other health problems.
3. High levels of heel-strike shock from breakdown of the body's natural shock absorbers. The shock wave is then carried along the kinetic chain, resulting in painful symptoms up to the head, slowed recovery of leg and spine injuries, and aggravation of other muscular conditions.
4. Misalignment (subluxations) of vertebrae and a functional scoliosis, which can develop into painful, chronic spinal disc, nerve, circulatory arthritic conditions.

Possible Benefits Seen With Orthotic Use:

1. Properly fitted orthotics support the foot to control excessive pronation and supination, preventing unwanted stress on the feet, Achilles tendons, calf's, thighs, spinal disc, nerves and circulatory system and other aspects of the body.
2. Limiting functional hypermobility of the foot and leg helps Science based Chiropractic adjustments hold longer and increases the effectiveness of care.
3. Use of orthotics represents a long-term, yet cost-effective, intervention for many types of functional and structural musculoskeletal problems. Many people receiving chiropractic care, physical therapy, massage do not gain maximum benefit because no one has taken the structural status of their feet and leg lengths into consideration.

How Custom Designed Orthotics Work

1. Wearing custom fitted orthotics inside shoes is similar to placing a shim beneath the leg of a wobbly table; it adds support to eliminate unwanted motion in the entire structure.
2. Flexible orthotics encourages optimal Achilles tendon, muscle and nerve function by guiding the foot through a more normal pattern with each step taken.

About Specialized Chiropractic Orthotics:

1. The laboratory we use creates custom-made, flexible orthotics to match each patient's unique postural needs.
2. The combination of flexible yet supportive and durable construction materials ensures that the orthotics will both guide the foot, Achilles tendon, calf, thigh, hips and lower back when walking and provide support for the foot during long periods of standing.
3. Unlike some previous orthotic technologies which use inflexible materials to force the foot into a theoretically ideal position and which may result in muscle atrophy and abnormal nerve proprioception, the orthotics we use allow controlled, supported movement of the dynamic human body. Many foot, Achilles tendon, calf, thigh, hip and lower back problems are not corrected through traditional therapy because the feet were not examined in relationship those problems. On other occasions when shoe inserts were purchased in a retail store or made by a health practitioner they were not custom made or the foot issues not correlated with weight bearing lower back and pelvis X-rays.

Getting In Harmony with Innate Intelligence

Call it (II) what you want but when we're alive there is an internal intelligence that is designed to carry out the functions of our body and we influence it based on how we care for our body. When we're healthy we logically don't give much attention to the internal aspects of our health. For example the functions of our heart but when some health issue becomes evident we do. When it comes to the muscle skeletal aspects of our body and the spine and spinal cord and nervous system Innate Intelligence knows what those aspects of our body are designed to be and IT constantly is at work trying to either heal or maintain health. Sometimes things occur where IT needed some assistance and in our case Interventional Chiropractic is one of the services we provide but regardless if its chiropractic care, surgery or drugs that are needed the things we physicians do rely on the body (II) accepting those interventions. In the situation of Interventional Chiropractic Care we use no drugs therefore rely on the natural healing through spinal manipulation diet, nutrition, exercise etc.

Physical Exercise and Metabolism

Another very important factor related to physical exercise is that it plays significant internal biochemical roles in not only digestion and assimilation of carbohydrates, proteins, fats hormones, elimination and stimulation of our immune system but minerals and vitamins but their potential deposition in not only cells and organs but bones, muscles and ligaments. Thus that bears future discussion especially regarding minerals

Minerals – The Roles of Balanced Weight Bearing Exercise

When it comes specifically to healthy bones, muscles and ligaments and overall health weight bearing physical exercise plays significant roles in the deposition of minerals into them.

If the minerals we ingest, digest and assimilate are to play the roles they're designed to in our not only our bones but millions of other actions in our body then we need to look at the roles of them and weight bearing exercise. *What does that mean?* It means that for minerals to be deposited in our bones they must be accompanied with some form of consistent weight bearing exercise.

What is the most significant method of weight bearing exercise?

For those physically able walking is generally the simplest least expensive and cost effective method for peak performance, increasing physical endurance and breakthrough in better health and well recovery from health issues and into greater levels of wellbeing and optimal health is found in the body in utilizing minerals and

other vital health functions... If a person is unable to walk perhaps lifting weights is an alternative. If they are so physically incapacitated so as to be unable to walk or lift weights then it is important that some other person help them become involved in some physical exercise program.

The Importance of Moderation - Rhabdomyolysis

Even though this is not a broad spectrum physical exercise discussion it is important to us that you recognize that we believe in physical exercise but rather potentially the very basic exercises most people can involve themselves in with potentially the greatest personal physical values. But there are many types of physical exercise and not all are appropriate or possible to all people and many exercise programs today predispose people to Rhabdomyolysis. *What is Rhabdomyolysis?* It is a serious internal health condition that results from over physical exertion. Symptoms can involve muscle aches and cramps, fatigue, nausea, rupture and bleeding of artery's, veins and increased darkening of the person's urine.

The Dangers of Over Physical Exertion

Where does over exertion (going beyond the normal healthy limits of the body) accomplish? Usually long distance running, being involved in exercises such as Spin classes workouts, high physical intensity exercise programs, use of Statins, nervous system stimulants, anti-hypertensives, antipsychotics, pain suppressants.

Adrenal Exhaustion

On top of each kidney rests and adrenal gland which is designed to secrete corticosteroids and exercise typically causes that to occur but there are limits to the amount of physical exercise people place on them.

Every person's synthesis of the corticosteroids varies and the adrenal glands (like all organs) have limitations/thresholds therefore when a person has reached that threshold hypoadrenalism (adrenal exhaustion) occurs thus predisposing their body to untold health consequences. This then is very common in those who are ill as well as those that involve themselves in exercise that is beyond the adrenal threshold.

When people have been prescribed corticosteroids the adrenal glands begin to reduce their secretion of the corticosteroids therefore when a person begins decreasing the amount of corticosteroids they generally will be advised by the medical doctor who prescribed them to gradually as it takes time for the adrenal glands to begin to reestablish their secretions and of course some people's adrenal glands do not do so from an optimal homeostatic perspective.

Common Symptoms of adrenal exhaustion include:

Fatigue, Drop in blood pressure when going from a sitting or lying down posture to an upright posture, light headedness, dizziness, heart palpitations, muscle/skeletal aches and pains. Loss of body hair, increased skin pigmentation. Drop in sitting/recumbent blood pressure when getting up to a sitting or standing position.

Preventing exercise related damage of the body

It is highly possible that people who are involved in running, and other prolonged physical exercise might in fact over time be causing damage to their body through unrecognized petechial internal hemorrhages that leads to scarring and plaque buildup not only in muscles but other tissues and organs. . This includes those who run behind a child's stroller, wear back packs or have pony tails in that running behind a stroller, wearing a back packs or having a pony tail throws off the biomechanics of the runner and those with pony tails causes whiplash to the muscle skeletal system but all organs and particularly so the cardiovascular and trauma to the head and neck. You cannot continually be involved in excess physical stress to any area of the body without it suffering health initial or the accumulated deleterious consequences on the body and that includes the cardiovascular system.

Anaerobic and Aerobic Metabolism- Body Physiological Efficiency

From an internal physiological perspective physical exercise has the ability to cause the body to internally enter either into anaerobic or anaerobic phase each has different metabolic capabilities. In part this is based on the amount time and speed and length of time at which the body is forced into increased physical endurance and after it reaches a certain level of metabolism it is designed to function in either the aerobic or anaerobic phase - each having different effects on the potential metabolic effects on every function in the body.

Knowing Your Bio Physical and Bio Physiological Individuality

Knowing or not who you are physically and philologically affects your entire whole person thus your present and future health.

We all bio have bio physical and bio philological individuality's (metrics) thus as potentially valuable as physical exercise can be the abilities of the body vary based on the persons DNA, age, gender, present and past health, injuries, diet and we need to recognize those limitations.

Note: We are logically assuming that you have no major health concerns or contraindication and if you have any that you have the permission of your attending physician before embarking on any exercise program. We likewise recommend that prior to exercising that you evaluate one blood pressure (sitting and standing) the radial pulse, heart rate and oxygen. In our clinical setting we utilize an oximeter that

accomplishes those markers but there are many other similar devices (Fit Bits) which can be purchased in health and drug stores.

3 Trillion Different DNA's

At present those studying human DNA estimate there are at least 37 trillion different DNA's in human beings and that in all probability more will be discovered and tagged with individual like Bar Codes. Every cell that has more than one cellular structure has not only a different function but a different DNA.

For example the heart has different types of muscles and within them is myocytes that are designed to work together but each has a different DNA but both have needs for never innervation and blood supply. Superficially they all have identical similarities or 20,000 protein coding genes (NY Times 08/22/17). All have similar but based on the persons DNA has unique needs for oxygen, fats, proteins, carbohydrates, vitamins, minerals and herbs and when a person consumes adequate levels of those substances the innate intelligence within the body not only knows where the blood is designed to transport them but deposit them in the persons correct/individual DNA but one has to question that with the trillions of different DNA's in the body how much effectiveness do the typical milligrams and International Units of most multiple vitamins, minerals and herbal remedies ingested by many people could influence those DNA's. The answer may be found in not only eating organ foods but persistent addition of GMP Certified alternative and nontraditional tests that reveal the need for supplementation of compensating vitamins, minerals or herbs.

The Problem

It there is some hereditary alteration on the persons DNA and RNA or if there have been deficiency's (recognize or unrecognized) of oxygen, fats, proteins, carbohydrates, vitamins, minerals and herbs some infection or injury and they survive but those issues are not solved them over time those abnormal accumulative effects can surface in some form of disease or illness. That being the case sometimes it takes a longer time for the body to respond as well as larger dosages than listed on products labels.

Mega Dosing With Food Supplements.

Certainly Food Quality GMP Certified food supplements list the names of the ingredients as well as dosages based on the daily recommendations but one can question if they have a chronic problem or one that is hereditary could food supplements band possibly help them. Generally speaking yes in that the ingestion of food supplements may not cure the chronic problem or change their DNA but

most certainly it's logical to believe that somehow the food supplement could have good effects of the problem.

Gaining Value Out of Aerobic Exercise

In essence the person is depending on oxygen and glucose in the aerobic exercise program. They then are not only influence our DNA and RNA when we exercise but every cell and organ with the body. When we fail to exercise us because the body to undergo dis-use atrophy and the body's in essence begins to internally age.

Beginning Is Half Accomplished

Before a person begins exercising they are encouraged to determine their resting pulse rate and the person's particular aerobic parameters which are principally based on age, height, weight present and past health and injuries.

This can be accomplished with check your radial (wrist) or carotid pulse and recoding it for a minimal of 15 seconds and then multiplying it by 4 giving you resting pulse rate. Assuming that it is normal for you age, height and weights (and have no contrary health problems) the goal should be to gradually increase the pulse rate (therefore increasing the oxygen in the blood) to the aerobic training rate and maintain it for at least (if not more) for a minimum of fifteen minutes without any notice of physical problems. In the process (it is a process so take your time in gradually increasing the length of time you exercise). At the beginning your pulse should monitored every 15 minutes.

What are the potentials values of aerobic exercise?

If the person gradually works up the time involved in some exercise program over time and in moderation *they* will be inclined to be healthier, more energetic, peaceful, sleep better and that includes the cardiovascular and pulmonary systems which normally will show a response of your aerobic pulse holding steady while in the aerobic phase and may predispose their body into advancing into the anaerobic pulse/cardiovascular efficiency/ rate.

What is supposed to be internally taking place in the body during the aerobic phase?

It is improving the functions of your pulmonary and cardiovascular and toxin eliminations thus effecting all other systems in the body, elimination of toxins through perspiration, and increase overall stamina and health.

Where does your energy to do so come from during aerobic exercise?

In aerobic exercise in effect people are utilizing glycogen (blood glucose stored in muscles (glycohemoglobin) for the energy needed in that form of exercise. If there

is accompanied weight loss it usually is relative to water (therefore consistency hydration is important loss) and burning calories. And like any other form of exercise one should study what there aerobic exercise program is specific to them and to begin with a gradual incorporation of it. Again everyone is physically different therefore what suits one person doesn't necessary suit everyone else. (The Internet has many of those Aerobic Fitness Charts).

Anaerobic (without Oxygen) Exercise

Assuming that the person has reached aerobic (utilization of oxygen and blood glucose) efficiency and desires to move into anaerobic efficiency they then by increasing the demand of physical exercise they predispose their body to entering into the anaerobic dimension of physical exercise –they still breathing and in need of oxygen but their body is now utilizing also fat for the energy your body needs. Again the first thing to do is determine your resting aerobic pulse rate as well as your anaerobic parameters which are principally based on age, height, weight present and past health and injuries. By continuing to exercise you create the probability of encouraging your body to go into the anaerobic dimension where their pulse rate goes higher than the aerobic rate into what is determined to be there parameters of anaerobic efficiency.

In effect all systems within the body go into over drive in that even though they are prolonging their exercise the body shifts into a more modulated/acclimatized rhythm.

Utilizing fat for sustained energy

In effect the person is predisposing themselves to achieving better internal health and there will continue to be loss of water but additionally they will be burning more calories but as they deplete there glycogen their body begins utilizing fat for the energy needed. And as depot (stored) fat decreases lean body mass increases in that the protein in muscles and organs replaces fat where fat formerly existed – that being one of the answers why the mass majority of aerobically fit people tend to be lean. How often you exercise (aerobically and or anaerobically) is your business but traditionally no less than 2-3 times a week. Hopefully your exercise program is not based on common sense, age, past and present health history. If in fact your exercise program causes injury's or sustained muscle/joint pains then in all probability you are over using your body.

Fat, Hormones and Exercise

On average the human body needs fat but generally no more than 30 % and the ration of low density fat and high density fat is 20% 80%.

Why is fat so important?

Primarily in that our body stores energy (4 calories per gram) in it but another importance of fat is that it is the primary substance from which our body synthesizes hormones. Therefore people who have deficiencies of fat stored in their body and/or have inadequate intake of the EFA's (Essential Fatty Acids) are going to be predisposed to hormones related health issues - many of which they do not relate to deficiencies of fat.

Fat, Cholesterol and Hormones

One of the major products that hormones are synthesized from is cholesterol (fat) and this becomes ever more important when a women or man's serum cholesterol is below normal parameters.

When the body synthesizes hormones it does primarily through two classes – female/male hormones and the steroids (See our Book Hormones).

Exercise and Hormones

When it comes to exercise, hormones and the women's menstrual cycles, otcotomy, hysterectomy, physiological gender changes and menopause female as well as male in that men do go through hormone changes). Fact is if they do not participate in physical exercise and/or are involved in physical exercise that decreases fat and their serum cholesterol then there body is predisposed to decreased of synthesis of hormones thus predisposing themselves to hormone related problems. Similarly people who are thin tend to have low levels of fat and as we said fat plays many important roles in good health therefore predisposed to hormone deficiency's. This begins a cascade of possible other health problems including degenerative muscle skeletal problems, excessive physical and mental aging, degenerative bone disease (Osteopenia/Osteoporosis), cancer and Compromization of the immune system, etc.

Appetite and Exercise

There exits data that postulates that physical appetite is decreased decreases appetite. This is in part related to the hormone acylated ghrelin which tends to increase with physical exercise thus minimizing appetite.

Physical Exercise and Brain Activity

Research has shown that physical exercise increases acetylcholinease an enzyme involved in neural transmission, stimulation of the immune system, and the amount and activity of the glial cells in the brain which assist in contributing to the synaptic connections between nerve cells and that includes the brain and nervous system. Physical exercise is important but when it goes beyond the body's thresholds then problems are going to eventually occur some of which are permanent.

The Importance of Essential Fatty Acids

Speaking of essential Fatty Acids (EFA's) there are two major types of EFA's: omega-3 fatty acids (found in cold-water fish such as salmon, mackerel, halibut, and herring) and omega-6 fatty acids (found in commonly used cooking oils, such as sunflower oil, safflower oil, corn oil, and soybean oil). Omega-3 fatty acids are highly concentrated in the brain and appear to play a particularly important role in cognitive and behavioral function.

People who are on low fat diets or predominantly eating animal or hydrogenated fats might serve themselves well by considering the addition EFA's to their daily intake of food supplements.

For further information go to "Find" and enter "Essential Fatty Acids" (Please don't confuse them with Essential Oils which is discussed in this book).

Types of Physical Exercise

Returning to our discussion of physical exercise in that we now are going to look at the types of physical exercise and as we do so it is important to recognize that the muscle skeletal system has certain physical capacity's which are affected by peoples DNA, age, gender, present and past health, injuries. But basically most muscles, ligaments, tendons, bones and articulations and they have varying degrees that they are capable of and it varies in all humans thus we need to find out what not only our physical limitations are but the exercises that best suit our biomechanical nature and that being the case one should never force articulation that is limited. It is also important that you recognize that that when it comes to most athletes we are not talking about average human beings.

Note: If you are a patient of a Doctor of Chiropractic, physical therapist being treated for a spinal or some other muscle skeletal problem and either has never been given and appropriate home self-help rehabilitative exercises or once was given some appropriate home self-help rehabilitative exercises but the doctor never regularly reviewed or updated them then you should recognize that he/she is skipping a vital component in your treatment plan.

Classifications of Physical Exercise

Following are the four basic classifications of exercise. Regardless where there are performed, what type of equipment might be utilized (if any), who the instructor/coach might be (if you have one) if music is accompanying (and it's always loud and up beat) all exercise involves one of and/or a combination of one solo programs or group programs or more of the following:

Isotonic – Includes muscle/joint movements which allow free and unrestricted movement of specific muscles and joints. The primary value is increasing muscle/joint flexibility.

Note: before any physical exercise is pursued one should pursue general stretching of all muscles and joints. Doing so increases blood flow, flexibility and acclimates their body to forth coming physical exertion and give them an idea of where their body is physically.

That being the case we offer traditional well as complementary diagnostic testing, consultations and natural treatment options. This is especially so in that our training involved the study the human frame, nervous, blood vascular, digestive, eliminatory systems, diet and the possibility of incorporating science-based natural alternatives that are less likely to cause adverse reactions and when compared to medical drug therapies are considerably less expensive.

Sometimes it is best to hold the pressure for 10-15 seconds, relax and then repeat the same repletion's and over time increase the number of routines and repletion's.

Isometric – involves some form of resistance against fixed object. In other words after they have completed their isotonic routines (always precede isometric before any other type of exercise) then you can safely (usually) could set some type of resistance and go through isometric routine. During the isometric phase it is usually best to hold the pressure against the fixed object for 10-15 seconds, relax and then repeat the same repletion's. Your body will tell you how many repetitions it is best for it and it will vary therefore some days more and others less.

Isokinetic – Is a combination/modification of isotonic and isometric where you are performing an exercise routine that involves a modification and combination of isotonic and isometric in that you're utilizing a fixed object that is semi movable/gives way to less resistance when pressure is applied, a weight is lifted.

Super Slow

A subcategory of isokinetic form of exercise that usually involves lifting weights/and/or utilization of exercise equipment that offers flexibility as well as restriction. In essence it is a modified isometric and isokinetic exercise where it involves some form of holding the pressure for 10-15 seconds where the muscles involved are held to maximum prolonged and concentrated contraction and then relaxed and repeated. This form of exercise is common amongst many people who lift weights.

Important Exercise Considerations

Statistics indicate that cancer is related to the following: 50% of those who live a sedentary life, 30 % to the environment and 20% to people DNA.

What does that tell us about decreasing any potential avoidance of cancer?

1. It tells us that when people chose to become involved in physical exercise at least 30 minutes a day 5 days a week they decrease the incidence of becoming afflicted with cancer
2. That the more a person does to avoid environmental toxins and pursue a diet rich while also increasing their intake of vitamins, proteins, refined carbohydrates and saturated fats and the more the decrease the incidence of cancer. ,
3. As much as at present there are few innovations regarding a person's DNA we still can positively influence known defects in our DNA through physical exercise and seeing to it that they supplement their diet with vitamins, minerals essential proteins, complex carbohydrates and unsaturated fatty acids that they are more likely to decrease the incidence of cancer

Discussion:

Certainly some people are physically unable to exercise while others do not have the means to acquire food supplements and/or avoid saturated fats, essential proteins or refined carbohydrate but by majority there are millions of people who can involve themselves in regular physical exercise, supplement their diet with hopefully GMP certified Pharmaceutical Quality food supplements.

Plan Your Program and Work Your Exercise Program

Where does that process begin?

Before a person begins exercising they are encouraged to determine their resting pulse rate and the person's particular aerobic parameters which are principally based on age, height, weight present and past health and injuries.

If you are contemplating becoming involved with a diet, exercise program and are taking prescribed medication (s) we advise you to consult with the physician who prescribed the drug. Likewise be aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care.

Be Yourself – Not Trying To Be Someone Else

1. Any time you see a person walk into a gym and never go through some series of isotonic stretching exercises you will know that they are not only foolish but are eventually going to hurt themselves.

Similarly if you see people not concentrating on their exercise routine while going through some routine you have a pretty good indication that not only are they de-valuing the potential benefits of the exercises but are missing important steps that the exercises should include. Certainly having some professional conversation with a coach/instructor is acceptable but not any casual conversation.

Therefore like anything done well exercise is exercise and that's what we should concentrate on.

2. Stay Away from Show offs- Show Offs- Frankly there are a high propensity of physical expressions of egotism (Show offs) in many who attend gyms and many use those facility's as looking for dates with other attendees. They might look physically good but in all probability they are a very shallow and immature person.

3. Always loosen up with some gentle stretching and when it involves walking or running it is important to find you own biomechanical cadence.

4. Your DNA Is Not The same As Other People - Everyone has varying DNA therefore their body and when it involves walking and running it's important to recognize has its own biomechanical ability's and that includes walking and running. That being the case one should find their biomechanical gait and move in that parameter when walking or running or any other form of exercise.

5. Make sure your body is feeling well - that there are no indications of chest pain, light headedness, headaches, shortness of breath or dizziness. Likewise some days you're not going to want to exercise or physically feel up to exercising and that's fine.

5. If there is a history of some form of exercise bothering any muscle or articulation avoid challenging it or wait to see if other exercises eliminate that discomfort

6. Pain is one of the alarms of the body. Respect is and avoids doing things that cause or aggravate it

6. If your taking prescribed medications or have surgically implanted devices consult with the doctor who prescribed them. Our nervous system is related to the brain and spinal cord, motor and sensory and afferent and efferent never that carry nerve impulse from the brain through the spinal cord and spinal column to every organ cell in the body therefore if we are going to be in accord with our body we need to learn how it functions and listen and respond in positive ways to it.

7. Always before beginning your exercise take your pulse and determine your oxygen level. And if they are in normal parameters periodically monitor them and always stay within your aerobic and/or anaerobic fitness ranges. Never try to think you can speed up or lower a pulse rate in healthy parameters by forcing the body to speed up or slow down.

8. If you are exercising alone make sure you have some emergency alert device with you. NEVER RUN ALONE

9. Preferably always have some other adult person with you during your exercise routine who will be cognizant of your physical nature

10. Warm Up, Go Slow and Take It Easy. If it's your desire and you're physically capable gradually increases your routines to comfortable physical tolerance. You might be capable to grin and bear pain but in effect exercising in pain does more harm than good.

11. Flexibility is far more important duration and muscle strength. Certainly some people are involved in occupations that require physical strength but flexibility is always a precursor to building physical strength.

In our experience the most difficult injury prone and most difficult to treat are stubborn and un-teachable people who are muscle bound (weight lifters) people. Why is that? Because the closed mind is a mind that is vulnerable to making mistakes and excessively strong muscles lose flexibility and lack of muscle ligament flexibility predisposes them to injuries. But people are people and it's a waste of time to continue to change there thinking or habit patterns.

12. One of things we constantly confront in our clinical practice is patients skipping pre-stretch and going right into muscle strengthening routines or over exercising and eventually they hurt themselves.

The Potential Values of Physical Flexibility Stretching Exercises

Flexion, Extension, Lateral Flexion and Circumduction

Flexion – forward bending

Extension – backwards bending Right

Right Lateral Flexion (Bending)

Left Lateral Flexion (Bending) \

Right Circumduction (twitting/rotating the head and neck around – incorporating flexion rotation to the right into extension then lateral flexion and rotation

Cervical (neck)

When performing the cervical (neck exercises) we recommend:

1. Being in a sitting position.
2. If there is a history of head or neck problems, headaches, light headiness or dizziness one should

Not pursue those exercises. We recommend that they consult with a medical or preferably a Interventional Chiropractic Physician regarding those issues and be open minded to not only a postural and related physical examination but at minimum X-Rays of at minimum the cervical thoracic spine.

Hormone Producing Glands and Physical Exercise

One of the many inter things that physical exercise influences are hormones in that exocrine and endocrine hormone producing glands effected and that's potentially good and bad. Good in that homeostatic exercise can have positive effects but if the exercise is beyond the normal isokinetic nature of a person it can decrease and/or over stimulate the person's hormones producing glands.

The Relationship of the Feet and Health

As important as most people believe their feet to be many fail to see that they are the foundation of the body therefore the way the feet go so goes the body. With that one could look at the feet and the foundation of the body and the legs and thighs as stills upon which the frame work of the body is based.

Tracking

But as true they are in fact the foundation of the body and their condition (how they tract) effects not only them but the legs, hips, pelvis, spine, posture and head but the nervous system and every organ, issue and cell in the body. *Why do we bring that up?* Because our feet greatly affect our body/s biomechanics as the feet go so goes the body therefore many biomechanical issues in fact are related to biomechanics issues in the feet and they are greatly influenced by our innate biomechanical nature.

The Most Common Tracking Related Problems

Loss of asymmetry – personal physical equality,
Diminished maximum physical performance not only involved the muscle skeletal systems but all other systems in the body,
Pronated (turned out) feet
Supinated (turned in) feet
Leg length deficiency
Pelvic distortions
Spinal curvatures
Abnormal alterations of the one or more of the three (3) normal lateral curves of the spine
Predisposition to acute muscle skeletal injury's
Predisposition the chronic muscle skeletal problems
Predisposition the degenerative bone problems
Loss of normal exercise value

The Feet Have Story's To Tell

Very often people needless suffer with health problems that unbeknownst to them have their origin in the feet that could very well be eliminated with examination of the feet and making weight bearing costumed shoe inserts and that being the case anytime a person goes into a Doctor of Chiropractic's office for spinal care and the Chiropractor neglects including examination of the feet you may be missing a very important component of your health issue and that included the trigger zones in the feet.

What are Trigger Zones?

Throughout the body is what are referred to as acupuncture meridians and within them are pressure point or trigger zones which some refer to as neurolymphatics circuits/channels/circulation in the body. Essentially they are pressure points/circulatory channels that when massaged or needles or electrical impulses are applied are related to muscle and other areas influence functions in the body (including the feet and hands) and some chiropractic physicians specialize in the area of treatment.

Where are they located?

They are located throughout the body with a preponderance of them in the hands, and feet.

Now Onto Health Problems

As we do it is important that you keep in mind the following and this is especially so in that you or someone close to you may have one or more of these health issues and may have tried various typical orthodox medical remedies with little to no success. That being a possibility some of the information we're about to share might be somewhat compelling to have one or more of the diagnostic tests we discuss and/or try one or more of the dietary considerations discussed and/or food supplements discussed. Doing so isn't necessarily wrong but it is important to keep the following in mind: We repeatedly discuss through the remainder of this book.

1. If you're contemplating making any dietary changes or ingesting any of the food supplements discussed make sure that you check out those ideas.
2. If you're contemplating making any dietary changes or ingesting any of the food supplements discussed and you taking prescribed medications do not stop taking the medications and be sure to discuss the dietary changes and food supplements with the physician who prescribed them.
3. In anticipation of discussing the proposed dietary changes or food supplements and you're planning on purchasing the through Nutri Dyn Midwest either download the information from Nutri Dyn Midwest web site and send it to your medical doctor prior to your next appointment. She/he has every right to know what your contemplating and should be given time to review them prior to your visit.
4. As dire as your health situation might be and/or as much as you might want to try any of the GMP Certified food supplements it is vitally important not to allow yourself (or anyone else) to think that the food supplements listed or changes in diet are in any way listed as a cure or prevention of a disease.
5. Do not fall into the trap of thinking that the FDA has investigated any of the diets or food supplements as they in all probability have not

6. Even though we continually update this book when it comes to the listing of references or study's they are as accurate as we read them but there could be newer information available since this book was written.

7. Take very seriously all we have written about the potential differences of GMP Certified Food Quality food supplements and Food Grade food supplements. And if you compare them make sure you are comparing the same ingredients.

8. Keep in mind that generally speaking GMP Certified Food Quality food supplements are considered higher quality therefore potentially more biocompatible to the human body than Food Grade food supplements therefore the initial costs might be more but that if the GMP certified Food Quality food supplements may in fact be less expensive because not only may you get better results but have less numbers of supplements to ingest.

9. Keep in mind that it never has been nor ever will be our intention to sell you food supplements or to in any way make you think that any of the dietary changes or food supplements discussed had any intent on making a diagnosis, treatment, cure or prevention of disease.

With that lets begin and as you do keep in mind the book is designed in part to be an encyclopedia – a digital reference book that has unlimited opportunity of discovery for long life and good health. Therefore the word “Find” is important and if you encounter some other health subject type in “Find” and see what this book might have to say about it.

Lastly if you have any questions or desire us to consult with us about any health subject or review some laboratory finds contact us and we will attempt to accommodate you.

Nutritional Options

As we move further into our discussion of health issues please keep in mind the following”

The nutritional options we discuss are taken (with permission) directly from Nutri Dyn 2017 Product Catalog and we have been assured by Nutri Dyn Midwest that they do not violate and requirements of the FDA including that they are not presented as a medical food, indicate cure, prevention or a diagnosis or treatment.

Automobile Accident and Other Personal Injury's

Vast numbers of people are involved in automobile and other personal injury's many of which cause immediate muscle and joint pains while others initially seem fine but sometimes weeks or months latter health issues take place. In those situations many of those people have signed off with their insurance company or take some cash settlement from their insurance company therefore releasing the

insurance company from future expenses that might occur as a result of the injury's sustained in an automobile accident or other personal injuries.

Being the spine and muscle skeletal specialists as we are we seeing many people for evaluation of initial injury's as well as those who seem fine but want to make sure that they did not incur some injury that as yet has not surfaced as symptoms.

No Out of Pocket Expenses To Those involved in Automobile Accidents or Personal Injury's

As mentioned previously we do not expect patients involved in automobile accidents or other personal injury's to pay out pocket expenses

Acid Reflux — Gastroesophageal Reflux Disease GERD / Heartburn / Reflux Esophagitis

Gastroesophageal reflux disease (GERD) is a disorder in which contents of the stomach or small intestine repeatedly move back up into the esophagus (tube connecting the throat to the stomach). This regurgitating action is called reflux. Reflux causes heartburn, and although most people have an attack of heartburn at some point in their lives, persistent reflux and severe heartburn may indicate GERD.

Normally when a person swallows, the muscular walls of the esophagus move in waves to push the food down into the stomach. Right after the food enters the stomach, a band of muscle (the lower esophageal sphincter) closes off the esophagus. If the muscle fails to close tightly enough, the stomach contents can back up into the esophagus causing heartburn and other symptoms of GERD. Substances in the digestive juices from the stomach (namely, acid, pepsin, and bile) can damage the inner lining of the esophagus, causing inflammation ulcers (open sores) and, possibly, precancerous changes to cells (called Barrett's esophagus).

Signs & Symptoms

Heartburn—a burning sensation under the sternum or breast bone in the chest—is the primary symptom of GERD. Heartburn often occurs after a meal and worsens at night, when you are lying flat. It is more likely to occur following a heavy meal or if you bend, lift, or lie down just after eating.

Other symptoms of GERD include:

- Regurgitation of food during eating, soon after eating and/or hours after eating or physical exertion.
- Belching
- Nausea and vomiting
- Chronic cough, wheezing
- Sore throat, hoarseness or change in voice, difficulty swallowing
- Back and Chest pain - Heartburn should not be confused with chest pain related to cardiovascular issues and should be evaluated by a medical practitioner.

GERD is common in infants and young children, but is generally mild. If an infant has the following symptoms, however, call a physician as soon as possible:

- Ongoing coughing
- Wheezing, gasping
- Severe vomiting
- Frequent burping

Causes

GERD can often be traced (but not exclusively) to the malfunctioning of the Lower Esophageal Sphincter (LES). The LES is a muscle responsible for opening and closing the lower end of the esophagus, which it accomplishes by relaxing and contracting at appropriate times.

The LES may weaken or lose tone, allowing the contents of the stomach to escape back up the esophagus. Any of the following may compromise the LES:

- Low gastric secretion of hydrochloric acid (HCl) in that the (lower esophageal) sphincter responds to acid in a dynamic fashion designed to increase sphincteric pressure” (Gut. 1969 October; 10(10): 852–856. PMID: 11552999). “Acidification of the gastric cardia has been shown to increase lower esophageal sphincter pressure...this phenomenon of local reflex excitation may be another contributing mechanism to the barrier against gastroesophageal reflux” (Surgery. 1989 Apr 10; 95(4):529-34. PMID: 2928955). “...transient lower esophageal sphincter relaxations may represent a potential new target for the pharmacological treatment of gastroesophageal reflux disease.

Other Factors

However, that other factors, such as low lower esophageal sphincter pressure, the presence of a hiatal hernia and impaired esophageal peristalsis, are also of great importance” (Aliment Pharmacol Ther. 2002 Jan;16(1):17-26. PMID: 1185607).

- Pregnancy
- Obesity
- Hiatal hernia - A condition in which a portion of the stomach protrudes through an opening in the diaphragm where the esophagus normally fits snugly and passes into the stomach.
- Recurrent or persistent vomiting
- Nasogastric tubes are inserted through the nose and into the stomach for a variety of medical reasons.
- Smoking cigarettes

Medications including:

Calcium channel blockers (a class of meds used for high blood pressure such as amlodipine, diltiazem, felodipine, nifedipine, nisoldipine, and verapamil), anticholinergic drugs (including benztrapine, biperiden, dicyclomine, hyoscyamine, isopropamide, and scopolamine), iron pills, non-steroidal anti-inflammatory drugs (NSAIDs including aspirin and ibuprofen), potassium, dopamine (for Parkinson's disease), sedatives, bisphosphonates (alendronate and risedronate for osteoporosis), and beta blockers (such as atenolol, labetalol, metoprolol, nadolol, pindolol, and propranolol, for high blood pressure or heart disease).

What are Beta Blockers?

In the situation of heart issues they are a category of drugs that are designed to prevent stimulation androgenic receptors in the heart thus decrease stimulation of the heart its rhythm and treat angina and decrease blood pressure.

Risk Factors

- Heavy meals
- Lying down or bending after a meal
- Eating immediately prior to exercise
- Prior esophageal surgery
- Esophageal stricture (narrowing of the esophagus)
- Cigarette smoking

- Alcohol intake
- Psychological stress
- Digestive disorders

Children with the following conditions are at particular risk for GERD:

- Neurologic impairment very often related to poor posture, and back problems.
- Food allergies
- Scoliosis
- Frequent vomiting
- Cystic fibrosis
- Digestive disorders

Diagnosis

GERD is generally not difficult to diagnose when one consults with physicians who have specialized training in it.

But an over-view generally involves noting ones symptoms, what you eat and drink, medications you are taking, and your lifestyle are usually enough to make a clear diagnosis. If the diagnosis is unclear to your doctor, one or more tests may be performed:

- Upper endoscopy, called esophageal gastroduodenoscopy (EGD), which involves the insertion of a tube down your throat into the esophagus to look for signs of reflux, inflammation, ulcers, or other changes in the esophagus.
- A barium swallow, which involves visualization of the esophagus through a series of X-Rays following the swallowing of a substance called barium. This looks at the movement of the esophagus and whether any fluid comes back from the stomach into the esophagus.
- Manometry measures the pressure of the sphincter muscle; if low, this is consistent with GERD.
- Consider having a whole person Chiropractic physical, orthopedic, neurological, postural and spinal evaluation which would better enable you to learn your individual biochemical nature.

The relationship of the brain, spinal cord and spine

The brain, spinal cord and spinal column in effect act like the switchboard of the nervous system. The arteries, veins, lymphatics and acupuncture meridians are also housed in the spine and depending on the degree of their life force/internal energy, flow from the spinal cord through the intervertebral foramina. No cell or organ can function optimally without proper nerve and blood supply and all have their origins within the spine and spinal cord. Of course the primary source of care for the spine and nervous system is the Doctor of Chiropractic – who is recognized in society as spinal and nervous system practitioners.

Laboratory Diagnostic tests including:

1. Touch For Health Applied Kinesiology Muscle Response Testing
2. Chem Screen and CBC – gives a profile of the major chemical activities of the body or an individual profile of your internal biochemical activities.
3. Hair mineral toxic metal analysis
4. IgG and IgG4 Sensitivity Tests gives assess to how our genomes react to things we eat and to which we are exposed. Make sure that the results are evaluated from both the Clinical as well as Homeostatic perspectives.

Lifestyle

Making changes to or avoiding certain habits can go a long way to relieving or preventing your symptoms of GERD. The following are typical suggestions for people with GERD and consider the following:

Considerations

Avoid behavior that does not allow food to easily move down into and through the stomach. This includes bending, lying down, or participating in jarring exercises soon after a meal.

Don't eat heavy meals.

Avoid acidic foods and drinks. These include caffeinated beverages, decaffeinated coffee, and orange juice.

Avoid alcohol, chocolate, spearmint, and peppermint. These can relax the low esophageal sphincter.

Avoid carbonated beverages.

Avoid eating fatty foods (especially foods that are high in saturated fats in the skin of chickens, ducks, and turkey) including full-fat milk, which also may relax the lower esophageal sphincter tone.

Lose weight if you are overweight.

Quit smoking.

When possible and the physician who prescribed those types of medications and are that provoke symptoms. These include smooth-muscle relaxants such as calcium channel blockers (including amlodipine, diltiazem, felodipine, nifedipine, nisoldipine, and verapamil, which are used for high blood pressure), anticholinergic drugs (including benztropine, biperiden, dicyclomine, hyoscyamine, isopropamide, and scopolamine), iron pills, non-steroidal anti-inflammatory drugs (NSAIDs including aspirin and ibuprofen), potassium, dopamine (for Parkinson's disease), sedatives, Acid Reflux 9 bisphosphonates (alendronate and risedronate for osteoporosis), and beta blockers (such as atenolol, labetalol, metoprolol, nadolol, pindolol, and propranolol, for high blood pressure or heart disease). If you experience more frequent symptoms at night, you may be relieved by:

Raising the head of your bed about six inches.

Avoiding bedtime snacks. "In a study published in The American Journal of Gastroenterology, the researchers found that eating dinner within three hours of going to bed was associated with a sevenfold increase in the risk of reflux symptoms."

Stress may worsen symptoms. Therefore, relaxation, such as yoga, tai chi, and meditation are worth considering as part of your whole, comprehensive treatment plan.

Proton Pumps – What are they?

Are cellular membranes capable of moving protons across cellular membranes?

What are protons?

Protons are positively charged electrical particles with a nucleus of hydrogen atoms that some prescribed drugs (proton pump medications) are designed are designed to reduce/inhibit gastric acid production thus the main aim of drug treatment is to control the acidity of the stomach. There are several different types of medications used for GERD (**Gastroesophageal Reflux Disease**), and each works in a different way. Over-the-counter antacids are designed to neutralize the stomach acids; histamine H2 blockers interfere with the production of acid; and proton pump inhibitors suppress molecules in the glands responsible for the release of acid.

If you are taking any prescribed medication and are thinking about any alternative avenues is sure to first consult with the medical physician who prescribed them.

Potential Drawbacks of drug therapy for GERD

Anti-reflux drugs are like a double-edged sword. They may be very effective in suppressing gastric acid secretion, but strong inhibition of gastric acid (HCl) secretion can at the same time cause an array of digestive problems.

This is because people who are taking these agents do not secrete adequate gastric acid and enzymes for digesting food that is present in the stomach. This, in turn, causes indigestion, bloating, flatulence, constipation, esophageal candidiasis, plus possible side effects affecting other organs. These side effects are more severe when a high protein diet (high content of meat, cheese, dairy products, and beans) is consumed, since protein digestion is initiated in the stomach and is essentially the only type of enzymatic digestion that occurs there.

Proton Pump Inhibitors (PPIs) in infants

Proton pump inhibitors (PPIs) are drugs given to crying infants with the thinking that the discomfort of gastroesophageal reflux (GERD) explains the babies' tears, do not decrease crying or irritability, according to a systematic review. J Pediatr. Published online December 30, 2014.

Nutritional Supplementation Considerations for Acid Reflux —Gastroesophageal Reflux Disease / GERD / Heartburn / Reflux Esophagitis

NOTE: As successful as many former GERD suffering people report positive life changing responses to the following, they are not offered as diagnosis, treatment or a cure-all. We highly recommend that you consult with your family physician and/or a physician who is licensed and board certified in GERD before embarking on these considerations.

Dietary Considerations

If an IgG and IgG4 food sensitivity tests indicate the Mediterranean Diet is an option

NOTE 1: If the Acid Reflux / GERD / Heartburn / ulcers in general (gastric and/or duodenal ulceration) is complicated/associated with Helicobacter pylori (H. pylori), see separate nutritional support protocol for Gastritis / H. Pylori Infection / Ulcers (duodenal and gastric).

NOTE 2: If the decision is made to discontinue a medication for Acid Reflux / GERD / Heartburn by the patient, it may be best to suggest the patient start implementing the "Nutritional Support Protocol" while titrating off the prescription medication, allowing for overlap and giving the Nutritional Support a chance to work. Again your physician should be consulted.

Nutritional Formula Description & Supplementation Rationale

If you are contemplating becoming involved with a diet, exercise program and are taking prescribed medication (s) we advise you to consult with the physician who prescribed the drug. Likewise be aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care.

Additional considerations:

Keep in mind that almost always, individuals with GERD/acid reflux are low acid/hypochlorhydric and actually need gastric acid support for digestion but other factors may be involved therefore a physician with expertise should be consulted.

Many of those products contains high potency, patented zinc-carnosine complex formulated to provide relief of gastric discomforts that are designed to support the healthy ecology, natural defenses, and integrity of the gastric mucosal lining. They are:

Reported to relieve gastric discomforts such as occasional heartburn and indigestion, upset stomach, mild nausea, bloating, belching, and burping.

Promote a healthy gastric bacterial balance.

Provide antioxidant protection for gastric mucosal cells.

Help in contributing to the maintenance of the integrity of the protective gastric mucosal lining by supporting healthy mucus secretion.

Some research indicates that zinc-carnosine may protect gastric mucosal cells without altering prostaglandin metabolism.

Gastro-supportive benefits demonstrated in over 20 published studies.

Same raw material used successfully by healthcare practitioners in Japan since 1994.

Interventional Chiropractic Care

Being that the brain, spinal cord and spine play significant roles in the function of every organ and system in the body it is possible that there may be issues in the spine that are contributing to people suffering with GERD therefore consulting with a Chiropractic Physician may prove to be of health recovery from GERD.

Acne (Acne Vulgaris; Cystic Acne)

Acne is a skin condition that causes pimples or "zits." This includes whiteheads, blackheads, and red, inflamed patches of skin (such as cysts). Types:

Acne is an inflammatory disease most commonly seen in teenagers. It affects areas where sebaceous glands are largest, most numerous and most active.

Mild cases consisting of few residual signs except possibly dilated pores, and the development of the comedo, or blackhead, may progress through more pathological stages of ruptured sebaceous ducts, pustule formation, atrophy and scarring, to more extensive lesions involving the shoulders, trunk, and upper arms. In extreme cases the inflamed nodules and infected cysts canalize and become infected sacs. Bacterial and chemical irritation of the tissues occurs—with destruction and displacement of epidermal cells—and eventually, intense scarring and deformity.

The role of androgenic hormones in acne

The effect of the androgenic hormones (males and females have androgenic hormones are synthesized by the adrenal glands) on the pilosebaceous follicular apparatus is considered to be the basic cause of acne. It is not seen in eunuchs, but it can be induced in them by androgen therapy. Acne is so common at puberty that it may almost be considered a physiological disturbance. It affects more than 80% of teenagers.

Symptoms

Inflamed spots or elevations either on or under the skin. Blackheads form when the oil combines with skin pigments and gets trapped. Blackheads may suggest the need for better hygiene, or magnesium and vitamin A and if you are considering dietary supplementation of vitamin should be considered – again this is not a prescription but something that should be discussed with your nutritionally oriented Interventional Doctor of Chiropractic.

Why the mycellized form?

As we made mention previously when a food supplement label states that the product is Mycellized it means that the manufacture has altered the molecular structure of a vitamin (most commonly fat soluble vitamin – A, D, E or K) has been broken down into micelles (tiny soluble molecules). What does that accomplish? It makes it possible for the body to digest and assimilated the fat soluble vitamins much easier than a whole or non-Mycellized food supplement. Again before one believes what the manufacture says they should seek proof that in fact the product is Mycellized and if that is the case more likely than not the label will also say GMP certified... In both the situation of adults and children a mycellized product should be easier to digest and absorb.

Chronic numerous whiteheads may suggest B-1 deficiency or absorption problems.

Consistent raised spots on the outside of the arms and sometimes even the thighs, resembling "chicken skin," may suggest the need for magnesium, vitamin A, and/or essential fatty acids—or

the need to avoid food compounds that inhibit the absorption of these nutrients, such as trans-fatty acids found in margarines and hydrogenated oils, such as cottonseed oil and palm kernel oil.

Very often a CBC and Blood Profile and an IgE and IgG4 Food Sensitivity test is helpful in identifying and biocidic food sensitivity's that may be under lying contributing factors to skin and other health problems. But if you are considering those tests be sure that you consult with a nutritionally oriented Doctor of Chiropractic.

Consider: Food allergies, allergies to facial creams, soaps, shampoos, makeup, and excessive intake of refined sugars. Certain foods may aggravate (chocolate, fruit juices, carbonated beverages, caffeinated beverages, milk products).

Excessive long-term seafood or other high iodine foods may also bring on acne bouts in some people. The most important contributory factor in this condition is diet. "The Western Diet is associated with an increased incidence of acne." Arch Dermatol 117:193-95, 1981. Certain foods appear to aggravate, or induce the onset of inflammation. Chocolate, certain grains, various proteins, cola drinks, and milk have been implicated. Above all, sugar and foods heavily laden with refined sugar, processed, packaged, and chemical containing foods are responsible for much distress during the adolescent years. Refined, devitalized foods upset the endocrine balance and produce stress. South Med J 69(6):732 &734, 1976. Some people get acne in response to stress or foods such as caffeine, refined sugars, and alcohol.

Possible Contributing Factors

- Diet
- Hypochlorhydria
- Low fiber intake
- Bowel toxicity
- Alcohol
- Anxiety
- Stress
- Environmental toxins
- Endotoxins
- Food sensitivities (especially egg, wheat, soy, peanut, chocolate, milk, potato)

Combined IgE and IgG4 Food Sensitivity, 24 Hour Urine Hormone Analysis would assist in determining if the cause of the skin problems are undergirded by internal biochemical malfunctions.

- Each pore opens to a follicle. A follicle contains a hair and an oil gland. The oil released by the gland helps remove old skin cells and keeps your skin soft.
- When glands produce too much oil, the pores can become blocked. Dirt, bacteria, and cells build up. The blockage is called a plug or comedone.
- If the top of the plug is white, it is called a whitehead.
- If the top of the plug is dark, it is called a blackhead.
- If the plug breaks open, swelling and red bumps occur.
- Acne that is deep in your skin can cause hard, painful cysts. This is called cystic acne. Acne is most common in teenagers, but anyone can get acne, even babies. Three out of four teenagers have some acne.

Hormonal changes may cause the skin to be oilier.

Acne tends to run in families. It may be triggered by:

- Hormonal changes related to puberty, menstrual periods, pregnancy, birth control pills, or stress. That being a possibility a 24 Hour Urine Hormone Analysis is indicated.

In addition to

1. The 24 Hour Urine Hormone test
2. Having a Touch For Health Applied Kinesiology Muscle response Analysis
3. Having IgE IgG4 Food Sensitivity,
4. Blood Profile and CBC test and are available through a Doctor of Chiropractic.

- Greasy or oily cosmetic and hair products
- Certain drugs (such as steroids, testosterone, estrogen, and phenytoin)
- High levels of humidity and sweating
- Poor diet — research shows that diets high in refined sugars may be related to acne.

Symptoms

Acne commonly appears on the face and shoulders, but it may also occur on the trunk, arms, legs, and buttocks.

- Blackheads
- Crusting of skin bumps
- Cysts
- Papules (small red bumps)
- Pustules
- Redness around the skin eruptions
- Scarring of the skin
- Whiteheads

Self-care

Possible steps one can consider taking to help acne:

- Clean your skin gently with a mild, nondrying soap. Remove all dirt or make-up. Wash once or twice a day, including after exercising, however, avoid scrubbing or repeated skin washing.
- Shampoo your hair daily, especially if it is oily. Comb or pull your hair back to keep the hair out of your face.

What NOT to do:

- Try not to squeeze, scratch, pick, or rub the pimples; although it might be tempting to do this, it can lead to skin infections and scarring
- Avoid wearing tight headbands, baseball caps, and other hats
- Avoid touching your face with your hands or fingers.

1. Avoid greasy cosmetics or creams; take off make-up at night; look for water-based or "noncomedogenic" formulas (Noncomedogenic products have been tested and proven not to clog pores and cause acne). Fact is when there are skin problems they for the most part are reflective of toxins that are the result of some internal biochemical irregularities. It's fine to look at the outside but even more important at what is going wrong on the inside of the body predisposing the person to skin problems.

2. Avoid the temptation of shoot-gunning oneself with vitamin-mineral and homeopathic remedies as doing so can predispose oneself to failure and adverse reactions.

Lifestyle / Nutritional Support Strategies

Provide expert skin cleansing advice. The troubled complexion should be cleaned twice a day to remove the heavy oils that can block your patients' pores. Ordinary soaps and cleansers remove these heavy, greasy skin secretions poorly; consider a natural chemical-free cleanser to remove these oils and helps restore health to troubled skin.

Ensuring adequate rest. A good sleep shuts down the oil production factory in the sebaceous gland, healing the skin. Your efforts to promote restful sleep will assist skin healing.

Eliminating harmful habits. When an unusual concentration of blackheads and pimples erupts in one area, look for a cause. Usually the patient is rubbing, scratching, or touching this area, soiling the skin and grinding heavy skin secretions into the pores.

Dietary therapy. Meals heavy in fat, especially the saturated fat found in certain meats and snack foods, promote profuse skin oil production. Skin blemishes increase markedly. As you review your patients' diet, and your suggestions about how to avoid these fatty foods greatly aids their skin care. A diet low in saturated fat not only creates the possibility of improving the health of the skin and also improves the health of the heart and other organs.

Specific nutritional supplementation based on diagnostic tests may well accelerate healing of skin and eliminate many of the deficiency reasons for acne.

Detoxification Program. Considering a detoxification program is always a good idea."

•• "Systemic toxicity/impaired detoxification can be associated with and/or exacerbate symptoms of acne." ANSR—Applied Nutritional Science Reports. 2005.

Nutritional Supplementation Considerations for Acne (Acne Vulgaris; Cystic Acne)

Acute Management (2-6 months): As possible beneficial as the following might be one serves them self well if they first consult with your medical doctor or Doctor of Chiropractic who is nutritionally and functionally medicine oriented. Likewise keep in mind that the information discussed is not in any way meant to be a diagnosis, treatment promises cure or prevention.

Topical Acne Support:

•• **Colloidal silver, tea tree essential oil, or coconut oil** — Consider topically application to blemishes twice daily after cleansing the skin. It contains potent anti-microbial, anti-fungal, and anti-viral properties; clinically reported to accelerate healing of acne lesions and minimize infection.

Dietary Considerations

•• Anti-Inflammatory Diet that should be based on the fact that the skin issues are in part related to an antigen/antibody fight going on inside the person's body which the IgE and IgG4 and Applied Kinesiology Muscle Response Tests offer insight into.

References

•• Acne, rosacea, and related disorders. In: Habif TP, ed. *Clinical Dermatology*. 5th ed. Philadelphia, Pa: Saunders Elsevier. 2009: chap 7.

•• Acne, rosacea. *Nutritional Influences on Illness - A sourcebook of clinical research*. 1993.

Nutritional Formula Description & Supplementation Rationale

Note: It is important that any food supplement you might considering be GMP Certified. Pharmaceutical Quality.

Acne Rosacea

Rosacea is a long-term disease that affects the skin and sometimes eyes. It is manifested as redness and pimples. It is most common in women and people with fair skin, and usually starts between age 30 and 60. In most cases, rosacea only affects the face.

Symptoms Can Include:

- Frequent redness of the face, or flushing
- Small, red lines under the skin
- Acne
- A swollen nose
- Thick skin, usually on the forehead, chin, and cheeks
- Red, dry, itchy eyes and sometimes vision problems.

No one knows what causes rosacea but very often it is related to hormone imbalances, food hypersensitivity's and vitamin mineral imbalances. You may be more likely to have it if you blush a lot or if rosacea runs in your family.

Rosacea Can Affect Quality of Life

Rosacea can affect more than the skin and eyes. Because rosacea is a chronic (long-lasting) skin disease, it can reduce a person's quality of life. Many people report problems at work, in their marriage, and with meeting new people.

Signs, Symptoms, & Subtypes

Because rosacea has so many signs and symptoms, scientists created 4 subtypes of rosacea. Some people have more than one rosacea subtype at the same time.

Subtype 1: Facial redness, flushing, visible blood vessels

Signs & Symptoms:

- Flushing and redness in the center of the face
- Visible broken blood vessels (spider veins)
- Swollen skin
- Skin may be very sensitive
- Skin may sting and burn
- Dry skin, roughness, or scaling
- Have a tendency to flush or blush more easily than other people

Subtype 2: Acne-like breakouts

Signs & Symptoms:

- Acne-like breakouts, usually where the skin is very red
- Acne-like breakouts tend to come and go
- Oily skin
- Skin may be very sensitive
- Skin may burn and sting
- Visible broken blood vessels (spider veins)
- Raised patches of skin called plaques (plaks)

Subtype 3: Thickening skin

Signs & Symptoms:

This subtype is rare. When it does occur, the person often has signs and symptoms of another subtype of rosacea first.

The signs of this subtype are:

- Bumpy texture to the skin
- Skin begins to thicken, especially common on the nose; when the skin thickens on the nose, it is called rhinophyma (rye-NOfie-ma)
- Skin may thicken on the chin, forehead, cheeks, and ears
- Visible broken blood vessels appear
- Pores look large
- Oily skin

Subtype 4: In the eyes

Signs & Symptoms:

Some people get rosacea in their eyes, and the eyes may have one or more of the following:

- Watery or bloodshot appearance
- Feel gritty, often feels like sand in the eyes
- Eyes burn or sting

- Eyes are very dry
- Eyes itch
- Eyes sensitive to light
- Blurry vision
- Visible broken blood vessels on an eyelid
- Cyst on the eyelid
- Person cannot see as well as before

Surveys and studies report that living with rosacea can cause:

- **Feelings of frustration and embarrassment:** In surveys conducted by the National Rosacea Society, 41 percent said their rosacea caused them to avoid public contact or cancel social engagements.
- **Worry:** People worry that their rosacea will get worse or cause scars. People worry about side effects from medicine used to treat rosacea.
- **Low self-esteem:** Surveys conducted by the National Rosacea Society found that almost 70 percent of people living with rosacea said that the condition lowered their self-confidence and self-esteem.
- **Work-related problems:** Surveys conducted by the National Rosacea Society found that when rosacea is severe, 70 percent of people say the disease affects their interactions at work. Nearly 30 percent say that rosacea causes them to miss work.
- **Anxiety and depression:** Living with a skin condition that flares unexpectedly can cause people to believe you have a drinking problem. This can cause anxiety and depression. In some cases treatment seems to improve a person's quality of life. Studies show that when people have fewer signs and symptoms of rosacea, their quality of life may improve but one should never embark on a non-drug approach without the counsel of the physician who prescribed those medications as well as a physician who is also well versed in the protocols of natural alternatives.
- Mc Aler, M., et al. "Complementary and alternative medicine use in rosacea and psoriasis patients." Presented as a poster (P562) at the 65th Annual Meeting of the American Academy of Dermatology. February 2007; Washington, DC.
- Schwanke, J. Herbal therapy for rosacea. *Dermatology Times*. November 2006; 50.

Diagnostic Considerations

Because there is a possibility that acne rosacea could be related to food allergies and vitamin mineral imbalances it is recommended that those people consider the following diagnostic tests:

1. Blood Profile and CBC
2. 24 Hour Urine Hormone Analysis
3. IgE and IgG4 Food Sensitivity Test
4. Touch For Health Applied Kinesiology Muscle Response Test

Dietary Considerations

Anti-Inflammatory Diet

ADD / ADHD (Attention Deficit/Hyperactivity Disorder).

Attention deficit / hyperactivity disorder (ADHD) is the most commonly diagnosed behavioral disorder of childhood, estimated to affect between 3% and 5% of school-aged children.

Core Symptoms

The core symptoms of ADHD include inattention, hyperactivity, and impulsivity. Although many people occasionally have difficulty sitting still, paying attention, or controlling impulsive behavior, these behaviors are so persistent in people with ADHD that they interfere with daily life.

Generally, these symptoms appear before the age of 7 years and cause significant functional problems at home, in school, and in various social settings. One- to two-thirds of all children with ADHD (somewhere between 1% and 6% of the general population) continue to exhibit ADHD symptoms into adult life. Diagnosis is difficult (usually requiring more than one visit) but essential, as early treatment can substantially alter the course of a child's educational and social development.

Signs & Symptoms

A person is considered to have ADHD if he or she demonstrates symptoms of inattention, hyperactivity, and impulsivity for at least 6 months in at least two settings (such as at home and in school).

The signs and symptoms listed below are typically seen in children with ADHD and usually appear before age seven. (In order to diagnose ADHD in adults, psychiatrists must determine how the adult patient behaved as a child.)

Symptoms of Inattention

- Fails to pay close attention to details or makes careless mistakes
- Has difficulty sustaining attention in tasks or play activities
- Does not seem to listen when spoken to directly
- Does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace
- Has difficulty organizing tasks and activities
- Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort
- Loses things necessary for tasks or activities
- Is easily distracted by extraneous stimuli
- Is forgetful in daily activities sometimes to the point where they become anosognosic – can't remember decisions they made.

Symptoms of Hyperactivity and Impulsivity

As we look at some of the cardinal signs of possible ADHD please keep in mind that those who have ADHD are not bad people but rather peoples who genetic structures are not typical of most people

- persistently fidgets with hands or feet or squirms in seat
- Leaves seat in situations where remaining seated is expected
- Runs or climbs excessively in inappropriate situations and has difficulty playing or engaging in leisure activities quietly. (In adolescents or adults, may be limited to subjective feelings of restlessness)
- Acts as if "driven by a motor"
- Talks excessively –ego expression urge – the need to be recognized
- Blurts out answers before questions are completed
- Has difficulty awaiting turn
- Interrupts or intrudes on others.

Causes

Like most complex neurobehavioral disorders, the cause of ADHD is unknown. Genetic factors as well as that affecting brain development during prenatal and postnatal life are likely involved. Brain scans have revealed a number of differences in the brains of ADHD children compared to those of non-ADHD children.

For example, many children with ADHD tend to have altered brain activity in the prefrontal cortex, a region thought to be the brain's command center. Irregularities in this area may impair an

individual's ability to control impulsive and hyperactive behaviors. Researchers also believe that hyperactive behavior in children results from excessive slow-wave (or theta) activity in certain regions of the brain. Other studies indicate that ADHD may be caused by abnormally low levels of dopamine, a neurotransmitter involved with mental and emotional functioning.

Possible Missing s

As you might correctly imagine we have had the opportunity to talk with untold numbers of parents of children diagnosed with ADHD and our hearts go out to them. All too varying degrees have sought medical help and have tried many prescribed medications and other therapies with little to no positive results. What we want to say is that very seldom having many of those parents of children with ADHD pursued the following tests or therapies. Why is that? Several reasons the most prominent being that either they were not aware of those tests or therapy's or when they became aware and consulted traditional medical personnel about they pursuing those tests and therapy's those traditionalists discouraged them by saying that doing.

Traditional Vs Non Traditional Health Care

As potentially valuable as medical traditionalists are they have varying degrees of tunnel vision and no room for alternative tests or therapy's. They in fact are often very sincere people but in some degree sincerely wrong resulting in people continuing to be frustrated and plagued with ADHD.

Tests to Consider

Touch For Health Applied Kinesiology Muscle Response Analysis

Chem Screen,

CBC,

IgE and IgG4,

Hair Mineral Toxic Metals Analysis and

24 Hour Urine Hormone Test.

Neurotransmitters Analysis

The Touch For Health Applied Kinesiology Muscle Response Test can reveal electromagnetic disruptions that often are contributing factors to ADHD.

The Chem Screen and CBC – gives a profile of the major chemical activities of the body or an individual profile of your internal biochemical activities. Three excellent tests to assess how our genomes react to things we eat and are exposed to involve the IgE and IgG4 Sensitivity Tests and Bio Individual Responses to foods and environment.

The Hair Mineral Toxic Metal Analysis gives us a biopsy of minerals and potential toxic metals that may be found in the body. The 24 Hour Urine Hormone Analysis gives the statue of the female/male hormones as well as the person's corticosteroids and the Neurotransmitter Analysis gives a reflex ion of the levels of neurotransmitter all of which can be direct or causal relationships to the ADHD.

What if the doctors a parent/guardian of a person with ADHD refuses to consider ordering some or all of the above diagnostic tests?

Find a doctor who will order the tests and has clinical experience in analyzing the tests and treating them.

What goes around eventually again comes around but often repacked. What are we saying?

We are saying that some of the information, tests and treatments being promoted today are in reality not new but repacked re-incarnations of information, tests and treatments promoted many years ago. The ones that we share herein are those that we and others have found to stand upright through the tests of time. What does that have to do with you? Hopefully that if you learned of

them previously that it will re-confirm what you learned as well as perhaps not only add to that knowledge but give you greater insight and health value today. Any way what you already know will enable you to process through this quicker.

Interventional Chiropractic Spinal Care

Even though there are many subspecialties in Chiropractic, the original basis of Chiropractic was and continues to be that Doctors of Chiropractic are highly trained first in the relationship of the brain, spinal cord, spine and nervous system as vital components to natural health.

In simple terms, the brain could be viewed like the major power plant in a city that generates and send electricity via the main power line (the spinal cord) to homes and businesses. The electricity in the human body is the life force or innate energy that keeps tissues, cells, organs, bones, etc., alive. If there is some issue such as curvature, malalignment/subluxation (lose of juxtaposition/alignment) with one or more vertebrae(s) or other issue in the spine there is going to be quantity interference with the life force flowing correctly to the body and dysfunctions will occur.

ADD / ADHD (Attention Deficit/Hyperactivity Disorder). Risk factors

- Heredity: Children with ADHD usually have at least one first-degree relative who also has ADHD and one-third of all fathers who had ADHD in their youth have children with ADHD.
- Gender: ADHD is four to nine times more common in boys than in girls (some experts believe that the disorder is underdiagnosed in girls, however).
- Prenatal and early postnatal health: Maternal drug, alcohol, and cigarette use; exposure of the fetus to toxins, including lead and organophosphates, polychlorinated biphenyls (PCBs); nutritional deficiencies and imbalances; learning disabilities, communication disorders, and tic disorders such as

Tourette's syndrome

- Other behavioral disorders, particularly those that involve excessive aggression (such as oppositional defiant or conduct disorder).
- Nutritional factors: S.A.D. Diet (Standard American Diet), allergies or intolerances to food, food coloring, or additives.

Diagnosis

The names and symptoms for ADHD have changed frequently since the turn of the century. What is now referred to as ADHD has been described in the past as Minimal Brain Dysfunction, Hyperkinetic Reaction of Childhood, and Attention Deficit Disorder. (ADD) With or Without Hyperactivity. The name ADHD was adopted in 1987 by the third revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R).

Traditional Medicine is good but sometimes closed to new ways of treating health problems

Traditional; medically oriented diagnosis is largely dependent on specific observed behaviors. The first step in establishing the diagnosis of ADHD is to determine whether the individual meets the diagnostic criteria as defined in the DSM-V. The DSM-V's symptomatic criteria were developed for children; there are no specific criteria for ADHD in adults. In these cases, physicians will often determine the psychiatric status of the adult patient as a child and make a retroactive diagnosis of childhood ADHD. Since most of the characteristic behaviors of childhood ADHD occur at home and in the school setting, parents and teachers play an important role in providing information to establish the diagnosis.

Diagnostic Criteria:

Either (1) or (2)

1. Six (or more) symptoms of inattention that persist for at least 6 months to a maladaptive degree inconsistent with the child's developmental level
2. Six (or more) symptoms of hyperactivity-impulsivity that persist for at least 6 months to a maladaptive degree inconsistent with the child's developmental level Some inattentive or hyperactive-impulsive symptoms that caused impairment were present before the age of 7 years. Some impairment from symptoms present in two or more settings (such as at school/work and home).

Clear evidence of significant impairment in functioning.

Symptoms not secondary to another psychological disorder (such as mood disorder, anxiety disorder) although most children with ADHD have symptoms of both inattention and hyperactivity-impulsivity some tend to demonstrate symptoms from one cluster or the other. These specific subtypes of ADHD are based on the predominant symptom pattern exhibited for the past 6 months:

- ADHD, Combined Type: if both A1 and A2 criteria are met
- ADHD, Predominantly Inattentive Type: if A1 is met but A2 is not
- ADHD, Predominantly Hyperactive-Impulsive Type: if A2 is met but A1 is not

Progressive Preventive Care

There are no targeted prevention programs for ADHD. Nevertheless, the following steps may be taken to help reduce the risk of neurobehavioral disorders including ADHD:

Minimizing exposures to potential neurotoxins (such as lead, heavy metals, pesticides, herbicides) in the environment Screening children for high levels of lead in the blood and treating this immediately. Obtaining comprehensive healthcare before, during, and immediately following pregnancy (optimal vitamin, mineral and essential fatty acid status). Addressing psychosocial stressors in the lives of all children.

Toxicity

“Children with levels higher than the median of detectable concentrations (organophosphates) had twice the odds of ADHD.” *Pediatrics* (doi:10.1542 / peds. 2009-3058) PMID: 20478945
“Proposed ADHD environmental risk factors include prenatal substance exposures, heavy metal and chemical exposures, nutritional factors, and lifestyle/psychosocial factors.” *Curr Psychiatry Rep.* 2011 Oct; 13(5):333-44. PMID: 21779823

Maternal Mercury Exposure and ADHD

"There is a growing body of literature suggesting that exposure to toxins in the parents being transferred to the fetus even before birth, may predispose children to an increased risk for behavioral disorders." *Arch Pediatr Adolesc Med. Published online October 8, 2012* Occupational Solvent Exposure During Pregnancy and Child Behavior at Age 2: "Many women who work during pregnancy are occupationally exposed to toxicants. The developing central nervous system is highly vulnerable to neurotoxicants such as solvents. Although the neurotoxicity of solvents to adults is well established, very few studies have examined their effects on children's behavior following prenatal exposure. Children prenatally exposed were more likely to have higher scores of attention deficit/ hyperactivity and aggression, and dose–response relations were observed." *Occup Environ Med.* 2013; 70(2):114-119. This does not take into consideration the father as he too could have excess levels of neurotoxins that have adversely affected his DNA this passing those possibility's on to his children.

Diagnostic considerations

The importance of an IgG and IgG4 food and environmental hypersensitivities cannot be over emphasized. Similarly the importance of seeing to it that the patient's diet is biochemically suited for the individual with consideration of it being rich in micronutrients essential for normal brain development, particular in young children. Many children with nutrient deficiencies demonstrate significant cognitive and behavioral problems that are written off as normal. Likewise be aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care.

Magnesium

Sometimes the child has magnesium deficiency predisposing them to the following symptoms: irritability, decreased attention span, and mental confusion. Mild magnesium deficiency is not uncommon in normally nourished children, and some experts believe that children with ADHD may be exhibiting the effects of mild magnesium deficiency. In one study of 116 children with ADHD, 95% were magnesium deficient. In a separate study, 75 magnesium-deficient children with ADHD were randomly assigned to receive magnesium supplements in addition to standard treatment or standard treatment alone for 6 months. Those who received magnesium demonstrated a significant improvement in behavior, whereas the control group exhibited worsening behavior. The Department of Family Medicine, Pomeranian Medical Academy, states that dietetic factors can play a significant role in the origin of ADHD and that magnesium deficiency can result in disruptive behaviors. When dealing with autism spectrum and other neurological disorders in children it is important to know the signs of low magnesium: restless, can't keep still, body rocking, grinding teeth, hiccups, noise sensitive, poor attention span, poor concentration, irritable, aggressive, ready to explode, easily stressed.

Caution: Even though that might be a possibility the parents should never give the child magnesium without first have in serum and hair mineral biopsy performed.

•• Starobrat-Hermelin, B., & Kozielc, T. The effects of magnesium physiological supplementation on hyperactivity in children with ADHD. *Mag Res* 1997; 10(2):149-56.

Vitamin B6

Adequate levels of vitamin B6 (pyridoxine) are required for normal brain development and are essential for the synthesis of essential brain chemicals including serotonin, dopamine, and norepinephrine. A preliminary study found that pyridoxine was slightly more effective than methylphenidate (the most commonly used stimulant) in improving behavior among hyperactive children but this does not mean that if the child is taking Methylphenidate (or any other prescribed medication) that the parents should stop administering any prescribed medication.

Iron

It is sometimes common that children and adolescents, particularly in lower socioeconomic groups may have iron deficiency. Normal levels of iron in the blood are necessary for optimal brain function. Symptoms of iron deficiency include decreased attention, arousal, and social responsiveness thus serum and hair analysis of the child's iron should be pursued.

If the Chem Screen or hair mineral analysis indicates low levels of iron supplementation may be a consideration such as: Iron Glycinate which has been historically used in pregnancy and nursing because of their advantages over other sources of iron. (The "iron glycinate" and "iron peptonate" forms of iron are the least likely to cause stomach upset, constipation, diarrhea or discolored stool.) and perhaps in capsule form that could be opened and mixed in food, etc. for those who cannot swallow tablets.

Zinc

Is well known to be important in that one of its roles in the body involves regulation the activity of neurotransmitters, fatty acids, and melatonin, all of which are related to the biology of behavior. Two separate studies found that children with ADHD have significantly lower blood zinc levels than children without ADHD. Another study indicated that ADHD children with mild zinc deficiency may be less likely to improve from a commonly prescribed stimulant than children with adequate zinc levels.

Melatonin

Although melatonin supplementation probably has no direct effect on the primary symptoms of ADHD, it may be effective in managing sleep cycle disturbances in children with a variety of developmental disorders, including ADHD.

Essential Fatty Acids

In the right biological situations fatty acids can possibly play a key role in normal brain function. Since the body cannot synthesize essential fatty acids (EFA), they must be provided in the diet. There are two major types of EFA's: omega-3 fatty acids (found in cold-water fish such as salmon, mackerel, halibut, and herring) and omega-6 fatty acids (found in commonly used cooking oils, such as sunflower oil, safflower oil, corn oil, and soybean oil). Omega-3 fatty acids are highly concentrated in the brain and appear to play a particularly important role in cognitive and behavioral function. Specific enzymes convert EFA's (such as alpha linolenic acid [ALA]) into other substances known as long-chain polyunsaturated fatty acids (PUFAs). PUFAs, including Eicosapentanoic acid (EPA) and docosahexaenoic (DHA) are also essential for normal brain function.

Some researchers believe that individuals with ADHD may have difficulty converting EFA's to PUFAs and may be deficient in both of these substances. In two recent studies, researchers reported the following findings in hyperactive boys compared to boys of the same age who were not hyperactive:

- Lower blood levels of PUFAs and omega-3 fatty acids
- More allergies and other health problems associated with EFA deficiencies
- Less likelihood of having been breastfed (breast milk contains PUFAs)
- Boys with lower levels of omega-3 fatty acids had more learning and behavioral problems (such as temper tantrums and sleep disturbances) than boys with normal omega-3 fatty acid levels.

DHA and ADHA

“A subgroup of children and adolescents with ADHD, characterized by inattention and associated neurodevelopmental disorders, treated with omega 3/6 fatty acids for 6 months responded with meaningful reduction of ADHD symptoms.” *J Aten Disord.* 2009 Mar;12(5):394-401. Epub 2008 Apr 30. PMID: 18448859

Dietary Restrictions—Additives and Allergies

In 1975, Benjamin Feingold, a practicing allergist, proposed that artificial colors, flavors, and preservatives, as well as naturally occurring salicylates (found in many fruits and vegetables) were a major cause of hyperactive behavior and learning disabilities in children. According to his observations, eliminating all of these substances dramatically improved ADHD symptoms in 50% of children, and reintroducing them one at a time caused the symptoms to recur.

Although the original Feingold diet was based on his clinical experience, a number of well-designed studies have found an association between certain dietary constituents and poor behavior in children. One such study assessed the effects of food coloring on behavior in 34 hyperactive children and 20 children with no behavioral problems. All children were maintained on a color-free diet and were randomly given one colorless capsule containing either lactose (placebo) or

tartrazine (yellow food coloring) at varying doses each morning for 21 days. Twenty-four of the 54 children became more irritable and restless after taking tartrazine, whereas all of the children behaved normally when given placebo.

Similar Study

In a similar study of 26 children with ADHD, behavior improved on days when certain foods (corn, wheat, milk, soy, oranges, and food coloring) were eliminated from the diet. Behavior worsened on days when these same foods were re-introduced to the diet. Notably, most of the children who demonstrated an improvement in behavior with these restrictive diets in both of the studies described also had a history of allergies (such as asthma and allergic rhinitis). Eggs, peanuts, and fish are foods believed to carry a high risk of causing an allergic reaction. Some researchers speculate that eliminating these foods from the diet may improve symptoms of ADHD in certain children.

Nutritional Supplementation Options for ADD / ADHD (Attention Deficit/Hyperactivity Disorder).

NOTE: Regarding dosing for children

As we look at ADD / ADH and some on the supplement options regarding them it should be kept in mind that as positive as the following information can be (that also holds true for every condition in this book) some people are allergic to fats (including EFA and DHA) therefore one should be very cautious in putting their child or themselves on EFA, DHA or any other food supplement but we can't over-emphasize the recommendation of consulting with a board certified health care provider who has proven expertise in these options before embarking on utilizing them. Likewise be aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care.

How does one determine an allergy?

Touch For Health Applied Kinesiological Muscle Response Testing (AKMRT), a Chem Screen with CBC, Iron, B6, Zinc, IgG and IgG4 Food sensitivity Test and Hair Mineral Toxic metal Analysis, a 24 Hour Urine Hormone, Neurotransmitter Analysis.

Dietary Considerations

- Low-Allergy Organic Diet - "A strictly supervised restricted elimination diet. Based on the results of an IgG and IgG4 is a potentially valuable instrument to assess whether ADHD is induced by food. The prescription of diets on the basis of IgE and IgG4 blood tests should be encouraged." *The Lancet, Volume 377, Issue 9764, Pages 494 503, 5 February 2011.*

Interventional Chiropractic Supervised Care and Specific Massage - Correcting spinal issues (some of which are asymptomatic) by Chiropractic manipulation of spinal subluxations, relaxation, chiropractic supervised specific massage techniques and acupuncture have been shown to reduce anxiety and activity levels in Chiropractic children and adolescents with a variety of behavioral issues.

Mind / Body Health Care

Mind/body techniques such as hypnotherapy, progressive relaxation, and biofeedback are particularly well suited to children and adolescents and there is no other profession than Chiropractic that is more trained in Mind-Body Health Care.

Children tend to readily accept hypnotic suggestion and the visual process of biofeedback works well for children of this generation because many are accustomed to computerized graphics. Through these techniques, children are often able to learn coping skills that will stay with them for

the rest of their lives. These treatments allow children to gain a sense of control and mastery, increase self-esteem, and decrease stress. Many researchers believe that hyperactive behavior in children results from excessive slow-wave (or theta) activity in certain regions of the brain. In EEG biofeedback, or neurofeedback, an individual is provided with information regarding his or her brain activity. The subject is then trained to suppress slow wave activities while enhancing faster brain waves, over a period of usually 40 or more sessions.

Neurofeedback

The belief is that these children can be trained to consciously modify and permanently change this underlying abnormal electrical brain activity associated with ADHD.

In one study of 23 hyperactive children and teenagers, those who successfully decreased their theta activity after 2 to 3 months of intensive neurofeedback training showed significant improvements in behavior and attention. In a similar study of 18 children and adolescents with ADHD, those who attended 40 neurofeedback sessions over a 6 month period demonstrated a significant improvement in IQ scores and a substantial reduction in inattentive behavior compared to those who did not attend the neurofeedback sessions. A larger, more recent study found that a combination of 40 behavioral treatments (neurofeedback and metacognitive strategies, a technique designed to help individuals consciously monitor how they learn and remember things) significantly improved ADHD symptoms, academic performance, and IQ scores among children and adults with ADHD. The combined treatment also dramatically reduced the need for medications; 30% of the participants were taking stimulant medication at the beginning of the study compared to only 6% at the end of the study. To be most effective for ADHD, however, these mind/body techniques should be incorporated into an overall comprehensive treatment plan that is tailored to the particular individual.

Traditional Chinese Medicine

Qi Gong. Although no published studies have evaluated qi gong as a treatment for ADHD, preliminary evidence from unpublished research suggests that weekly qi gong breathing techniques may improve attention and reduce disruptive behaviors in school-aged children.

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

- 1. Go to www.nutri-dyn.com**
- 2. Click on Create Account**
- 3. Click on Patients**
- 4. Complete the short form and type in the following Account Number 100160**
- 5. Click submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Adrenal Fatigue / Adrenal Insufficiency / Hypoadrenalism

As sad as it is the official "standard medical opinion" is that Adrenal Fatigue is not a real medical condition. Like many other claims there are no scientific facts to support the theory that long-term mental, emotional, or physical stress drains the adrenal glands and causes many common symptoms. But, "Adrenal Insufficiency" is considered a real disease diagnosed through blood and Applied Kinesiological Muscle Tests.

Symptoms Associated with Adrenal Insufficiency

A person with adrenal insufficiency may be dehydrated, confused, losing weight, suffer with fatigue, back and joint pains and hormone problems. He or she may feel weak, tired, or dizzy, and have low blood pressure which is often worsened when getting up from a recumbent position. Other symptoms include stomach pain, nausea, vomiting, and diarrhea.

The role of corticosteroids and adrenal insufficiency

Many people suffering with hypoadrenalism have been on corticosteroids for other health issues which may have helped minimize those issues but they are basically telling their adrenal glands that they are no longer needed causing them to reduce synthesizing adrenaline and many other corticosteroids - setting up the possibility of other health issues and that being the possibility there are diagnostic tests that can give insight to that possibility.

Objectively/ Functionally Checking for Adrenal Fatigue / Adrenal Insufficiency

- The "Ragland Postural Blood Pressure Test" may be helpful in diagnosing adrenal dysfunction / "sub-clinical Hyponatremia" The **Ragland Test** is a simple functional test that can be done to see if one has a possible problem with their adrenal glands, (Hyponatremia).

How to perform Ragland test: Place a digital blood pressure measuring cuff on your wrist, lie on your back for 3-5 minutes, and then take your blood pressure. Stand up and immediately take your blood pressure again. If the **systolic** (the first number) doesn't rise at least 4 to 10 points, suspect Hyponatremia. If the pressure drops, you have even more functional evidence of possible Hyponatremia.

CAUTION: If your blood pressure drops noticeably, you may also feel a little faint upon standing therefore close observation is called for.

Pupil Dilation Exam — (Equipment required: flashlight and a mirror). Look into the mirror and shine the flashlight into the pupil of one eye. It should contract. If after 30 seconds, it stays the same or dilates, you most likely have adrenal fatigue.

Pain when pressing on adrenal glands (located over kidneys) or noted in the lumbar spine (lower back).

Other Important Diagnostic Options

- The adrenal glands, like all other organs have a direct relationship with the brain, spinal cord and spine and having the spine and nervous system evaluated by Chiropractic Physician is a vital component in the diagnosis and treatment of ADD / ADHD.
- Pursing a Touch For Health Applied Kinesiological Muscle Response Testing (AKMRT), Chem Screen, Hair Mineral/Toxic Metal, Amino Acid, CBC and IgE and IgG4 food sensitivity as well as blood and 24 Hour Urine Hormone tests. In particular a full screen hormone analysis offers the opportunity to evaluate not only the female and male hormones but the corticosteroids which in particular are related to Adrenal functions.

Allergy. Modifying the Allergy / Sensitivity Symptom Response. 5 Facts You Probably Don't Know About Allergies - Tom Sult, MD

Allergies—that sneezy, itchy throat, eye-watery, stuffy/runny nose, just-let-me-go-to-sleep-until-it-goes-away feeling. Allergies plague more than half of Americans, with 54.3% between the ages of 6 and 59 testing positive to allergens. With so many of us suffering through the symptoms, you'd think we'd be experts on them by now, but, according to the National Health and Nutrition Examination Survey, we don't know as much as we think. If you're suffering from allergies or from a cold that just doesn't seem to go away, these gems from the Mayo Clinic may clarify things for you:

- Many people don't recognize that they have an allergy. Allergy symptoms often mimic symptoms of a cold. Both illnesses can cause coughing or a stuffy or runny nose, but a cold may also cause a fever or aches and pains. An allergy won't do that. Colds last 3-14 days, while allergies can last as long as you remain exposed to the allergen. So, if every spring, you get that cold that just won't go away, it might actually be an allergy.
- Allergies can occur all year, particularly in the autumn as well as in the spring. Different plants pollinate in the fall and with changing weather patterns, therefore, some allergy sufferers are more likely to be affected in the fall. So, if your annual cold hits just when the tree leaves start to drop, you may have an allergy. The Asthma and Allergy Foundation of America keeps track of the fall and spring allergy capitals each year, showing that Jackson, MS had the highest pollen count in fall 2013, while Wichita, KS had the highest count in spring 2013.
- Family history of allergies increases the likelihood of getting them. Allergies, along with asthma and eczema, are an overreaction of the immune system, and this trend can run in families. If you and your children seem to be sick all spring with colds, it's possible that you all have allergies.
- The most common allergy triggers are dust mites, rye, ragweed, and cockroaches. About 25% of Americans are allergic to each one, but most surveyed were not aware that cockroaches were a common trigger. Perhaps because of their stigma, cockroaches are not often mentioned when we discuss allergy triggers, and without discussing it, the cause of symptoms can be overlooked.
- Although most allergy sufferers believe their symptoms are controllable, 80% feel that allergies disrupt their lives. This may be due to another statistic from the survey: 49% of allergy sufferers wait for symptoms to occur before taking action, as opposed to using preventative methods.

Allergy — Modifying the Allergy / Sensitivity Symptom Response:

An allergy is a reaction of your immune system (antigen/antibody reaction) to something that does not bother most other people. People who have allergies often are sensitive to more than one thing.

Substances that often cause reactions are:

- Pollens
- Dust mites
- Mold spores
- Pet dander
- Food(s)
- Insect stings
- Medicines
- Toxins

Scientists believe both genes and the environment have something to do with allergies. Normally, your immune system fights foreign invaders (germs) and is your body's defense system. Most allergic or antibody/antigen reactions are responding to a false alarm. Allergies can cause a runny

nose, sneezing, itching, rashes, swelling, or asthma. Symptoms vary. Although allergies can make you feel bad, they usually won't kill you. However, a severe reaction called anaphylaxis is life-threatening. *NIH: National Institute of Allergy and Infectious*

The relationship of the Immune System and allergy's

When the immune system is healthy it controls how your body defends itself - if you have an allergy to pollen, your immune system identifies pollen as an invader or allergen.

Two categories Fixed and Delayed. In both types of allergy's your immune system overreacts either immediately or later on Delayed (Cyclic) by but regardless of the type the body in one way or others produces antibodies called Immunoglobulin E (IgE) which is involved in what is referred to as Immediate/Fixed allergy.

Acute reaction as opposed to the IgG4 (a sub class of IgE) which is related to a Delayed or Cyclic reaction. Normally the immune system is designed to react with antibodies other than IgE, IgG either through IgG, IgA, IgM or IgD and or the subclass of the whole IgG molecule. The ALCAT Food Safe Allergy Test can detect both IgE (Fixed) and/or IgG4 Delayed or Cyclic antibody/antigen inflammatory reactions in the body.

Cancer treatment and allergies. As sad as it is we have too much personal and professional experience cancer but hopefully what we share will be of some help to you. Certainly we have had collaborative professional relationships with Oncologists and various medical treatments for many forms of can but this is not implying that people diagnosed with cancer should avoid medical treatment.

One should keep in mind that very often those people who are receiving Chemo therapy for cancer are predisposed to weaken immune systems therefore regular monitoring of their blood is important.

The Importance of Diagnostic Thoroughness

Regardless if it is an immediate or delayed reaction, these antibodies travel to cells that release chemicals, causing an allergic (antigen/antibody) reaction. This reaction usually causes symptoms in the nose, lungs, throat, sinuses, ears, lining of the stomach, hypo/hypoadrenalism or on the skin. In healthy people each type of IgE and IgG4 has specific "radar" for each type of allergen.

Some people are only allergic to cat/dog dander because they only have the IgE antibodies specific to cat/dog dander, while others have allergic reactions to multiple allergens because they have many more types of IgE and IgG which are immediate antigen/antibody reactions. IgG4 are cyclic/delayed and often occur at varying lengths of time after the encounter. It is not yet fully understood why some substances trigger allergies and others do not, nor why some people have allergic reactions while others do not. A family history of allergies is the single most important factor that puts you at risk of developing allergic disease.

Types of Allergic Disease

Approximately 50 million Americans suffer from some form of allergic disease, and the number is increasing. There are several types of allergic disease:

Allergic rhinitis may be seasonal or year-round. The seasonal allergy, often called "hay fever," typically occurs in the spring, summer, or fall. Symptoms include sneezing, stuffy or runny nose, and itching in the nose, eyes, or on the roof of the mouth. When the symptoms are year-round, they may be caused by exposure to indoor allergens such as dust mites, indoor molds, or pets.

Allergic conjunctivitis occurs when the eyes react to allergens with symptoms of reddening, itching, and swelling. Atopic dermatitis, or eczema, often results from allergen exposure to your skin. Symptoms include itching, reddening and flaking or peeling of the skin. Symptoms begin in

childhood for 80% of those with atopic dermatitis. Over 50% of those with atopic dermatitis also develop asthma.

Urticaria, or hives, is characterized by itchy, red bumps that can occur in clumps and be either large or small. Hives are often triggered by certain foods or medications.

Asthma is a chronic lung disease characterized by coughing, chest tightness, and shortness of breath and wheezing. Up to 78% of those with asthma also have allergic rhinitis. The role of allergy in asthma is greater in children than in adults. When you experience asthma symptoms, your inflamed airways become narrowed, making it more difficult to breathe. If you have allergies, inhaling allergens may cause increased swelling of your airway lining and further narrowing of your air passages. Asthma may also occur as a result of respiratory tract infections or exposure to irritants like tobacco smoke.

Food allergies may have severe and possibly life-threatening reactions if eaten. The most common triggers are:

- Cow's milk
- Eggs
- Peanuts
- Wheat
- Soy
- Fish
- Shellfish
- Tree nuts.

Food, medications, insect stings, and exposure to latex can trigger anaphylaxis. Anaphylaxis is a serious allergic reaction that comes on quickly, causing mild to severe symptoms that affect various parts of the body.

Sinusitis and otitis media are other common allergic diseases often triggered by allergic rhinitis. Sinusitis is a swelling of the sinuses, which are hollow cavities within the cheekbones around your eyes and behind your nose.

Otitis media, or ear infections, is the most common childhood disease requiring physician care. If not properly treated, it can affect a child's speech and language development.

Diagnostic Options

- Spine and nervous system evaluation by an interventional-based Chiropractic Physician.
- Pursue a Chem Screen, CBC, Hair mineral Toxic Metal Analysis, 24-Hour Hormone Analysis and IgE and IgG4 blood tests –Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT),ALCAT/Food Safe Allergy Tests.
- Skin Scratch Test - the skin (often the back of the shoulder) is scratched and individual allergens are placed on the scratches and the tester waits to see if a wheal/swelling occurs which is then graded. The Skin Scratch Test only reveals fixed or IgE allergies, not delayed or IgG4 allergies.

Nutritional Supplementation Options for Allergy —Modifying the Allergy / Sensitivity Symptom Response

People with hereditary related allergies may not be able to change their DNA but it's possible that if the find precipitating factors and eliminate them they may find better health. Likewise be aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis,

treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care. One of the goals then is to minimize the ingestion of foods which their Food Safe Allergy Test shows they have hypersensitivities to as well as assist their immunoglobulins in the neutralization and opt ionization of bacteria, viruses and other environmental pathogens. Neutralization means that the antibodies have bound to an antigen and hopefully assist in naturally preventing the antigen from finding its target.

References

1. Middleton, E., & Drzewicki, G. *Effect of ascorbic acid and flavonoids on human basophil release.* *J Allerg Clin Immunol.* Jan1992:278.
2. Boots, A. W., Haenen, G. R., & Bast, A. *Health effects of quercetin: From antioxidant to nutraceutical.* *Eur J Pharmacol.* 2008; 582(2-3):325-37.
3. Boots, A. W., Li, H., Schins, R. P., Duffin, R., Heemskerk, J. W., Bast, A., & Haenen, G. R. *The quercetin paradox.* *Toxicol Appl Pharmacol.* 2007; 222(1):89-96.
4. Mittman, P. *Randomized, double-blind study of freeze-dried Urtica dioica in the treatment of allergic rhinitis.* *Planta Medica.* 56:44-7, 1990
5. Guo, R., Canter, P. H., & Ernst, E. *Herbal medicines for the treatment of rhinosinusitis: A systematic review.* *Otolaryngol Head Neck Surg.* 2006 Oct; 135(4):496-506. Review.
6. Richardson, P. *Oral N-acetyl cysteine: How does it act?* *Eur. J. Respir. Dis.* 1987; 70:71-72.
7. Millar, A. B. et.al. *Effect of oral N-Acetyl Cysteine on mucus clearance.* *Br J Dist Chest.* 1985; 79: 262-266.

Herbal Supports to Modify and Balance the Immune Response in Allergy:

Nazanol™

Nazanol is believed to be a natural, stimulant-free herbal support for healthy sinus, nasal, and lung function and is compatible with antibiotics.

- Scute & Cinnamon Twig (Xin Qin Ki Li Decoction) to replenish qi, to consolidate superficial resistance — wei qi, and to expel pathogenic wind.
- Nazanol is mainly used to treat nasal obstruction, sinusitis, headache, and other symptoms of allergic rhinitis.
- Preserves healthy function of sinus, nasal, and lung passageways.
- May help support healthy nasal mucosal secretion.
- No ingredients that can cause drowsiness or hyperactivity such as ephedrine, ma huang (Ephedra sinensis), pseudoephedrine, or phenylpropanolamine (PPA).
- Compatible with antibiotics.
- Demonstrated safe and effective for children.

References

- Wang, S. F., et al. Clinical study on the curative effect of Xin Qin Ke Li on allergic rhinitis in children. *Clin Otorhino J.* 2000; 14:197-203.
- Qian, R. L. Clinical study on the curative effect of Xin Qin Ki Li on chronic nasosinusitis. *Hua Xi Medical Journal.* 14: 93 (1999).

Perilla seed (Perilla frutescens is an herb that supports a healthy respiratory and immune response.

- Ongoing herbal support for normal breathing and a healthy immune response.
- Traditionally used to support respiratory health.
- it is reported to also modulate the immune response to minimize how significantly the body responds to an allergy/sensitivity response.

Treatment

Interventional Chiropractic Care that would include spinal manipulation, Acupuncture, Meridian Therapy, Myofascial Release, Neuro/Muscle Skeletal Reeducation, Elector Muscle Stimulation or Transcutaneous Nerve Stimulation and Pursing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT),.

References

- Makino, T., Furuta, A., & Fujii, H., et al. *Effect of oral treatment of Perilla frutescens and its constituents on type-1 allergy in mice.* *Biol Pharm Bull.* 2001;24(10):1206-09. 20.
 - Liu, J., Steigel, A., & Reininger, E., et al. *Two new prenylated 3-benzoxepin derivatives as cyclooxygenase inhibitors from Perilla frutescens var. acuta.* *J Nat Prod.* 2000;63(3):403-05. 21.
 - Yu, H., Kosuna, K., & Haga, M. (1997). *Perilla: The Genus Perilla. Medicinal & Aromatic Plants - Industrial Profiles Series No. 2.* Reading, UK: Harwood Academic.
- 32 Allergies — Modifying the Allergy / Sensitivity

Alzheimer’s Disease / Type 3 Diabetes /

Dementia / Cognitive Impairment

Alzheimer’s disease (AD) is the most common form of dementia (a neurodegenerative disorder) among older people. Dementia is a brain and a spinal cord disorder involving the spine and seriously affects a person’s ability to carry on daily activities. AD begins slowly. It first involves the parts of the brain that control thought, memory, and language. People with AD may have trouble remembering things that happened recently or names of people they know.

MCI

A related problem, mild cognitive impairment (MCI), causes more memory problems than normal for people of the same age. Many, but not all, people with MCI will develop AD. In AD, over time, symptoms get worse. People may not recognize family members or may have trouble speaking, reading, or writing. They may forget how to brush their teeth or comb their hair. Later on, they may become anxious or aggressive, or wander away from home. Eventually, they need total care. This can cause great stress for family members who must care for them. AD usually begins after age 60. The risk goes up as you get older. Your risk is also higher if a family member has had the disease.

NIH: National Institute on Aging Effective therapy for Alzheimer’s disease / Type 3 Diabetes /

Dementia / Cognitive Impairment must accomplish three tasks:

- Reduce inflammation and protect neurons
- Limit the damaging effects of free radicals
- Enhance neuron function which not only effects nerves because all nerves are inter-related to the brain, spinal cord and alignment health of the spine – the regulator of the spinal cord.

Type 3 Diabetes” & Coconut Oil

Recent research suggests that Alzheimer’s disease may represent the effects of diabetes/insulin resistance on the brain – “Type 3 diabetes.” (The effects of insulin resistance, hyperglycemia, oxidative stressors on brain architecture.)

It is important to keep in mind that the pancreas like all other organs is to a major extent related to the brain, spinal cord therefore the spinal column and plays significant roles in the function of the pancreas.

• Steen, E., Terry, B. M., & Rivera, E. J., et al. Impaired insulin and insulin-like growth factor expression and signaling mechanisms in Alzheimer's disease—is this type 3 diabetes? *J Alzheimers Dis.* 2005;7:63-80. It is suggested that the dietary addition of a quality, non-hydrogenated coconut oil may be an Alzheimer's/Dementia remedy. "Researchers say the ketones (medium chain triglycerides) found in coconut oil have improved cognitive function, slowed the progression of Alzheimer's disease in some people, and may actually prevent it." Video on the use of coconut oil in Alzheimer's, [HHhttp://www.cbn.com/media/player/index.aspx?s=/mp4/LJO190v1_WS](http://www.cbn.com/media/player/index.aspx?s=/mp4/LJO190v1_WS)

Coconut Oil, Triglycerides and Dementia

The rationale for the use of a source of medium chain triglycerides (such as coconut oil) in the Alzheimer's disease/Dementia patient: The issue is utilizing glucose (the brain's primary source of energy for function) at the brain cell site (insulin resistance). Medium chain triglycerides (coconut oil) are readily converted into ketones; ketones are not insulin dependent for uptake into the brain cells for energy, thus bypassing the insulin issue.

Ketones, the Brain, Glucose, Insulin Nerves

In 1967, circulating ketones were discovered to replace glucose as the brain's major fuel during the marked hyperketonemia of prolonged fasting. Until then, the adult human brain was thought to be entirely dependent upon glucose. During the 1990s, diet-induced hyperketonemia was found therapeutically effective for treatment of several rare genetic disorders involving impaired neuronal utilization of glucose or its metabolic products. "

There is a rapid growth in the literature pointing toward insulin deficiency and insulin resistance as mediators of Alzheimer's disease-type neurodegeneration...We conclude that the term "type 3 diabetes" accurately reflects the fact that AD represents a form of diabetes that selectively involves the brain and has molecular and biochemical features that overlap with both type 1 diabetes mellitus and T2DM." *Alzheimer's Disease Is Type 3 Diabetes—Evidence Reviewed. J Diabetes Sci Technol.* Nov 2008; 2(6): 1101–1113. Published online Nov 2008. PMID: PMC2769828 Growing evidence suggests that mitochondrial dysfunction and reduced bioenergetic efficiency occur in brains of patients with Parkinson's disease (PD) and Alzheimer's disease (AD). "Because ketones are efficiently used by mitochondria (the power houses of cells) for ATP generation and may also help protect vulnerable neurons from free radical (Chromosomal DNA-RNA damage), hyperketogenic diets should be evaluated for ability to benefit patients with PD, AD, and certain other neurodegenerative disorders." *Nutr Rev.* 2003 Oct;61(10):327-41.

Diagnostic Options

Many years ago when I was a new Doctor of Chiropractic a woman and her husband came into see me because he was losing his mind. At that time dementia took a back seat compared to today. Not having had any experience treating dementia I did the logical thing, I examined him which included a Touch For Health Applied Kinesiological Muscle Response Testing (AKMRT), Applied Kinesiological Muscle Response Testing (TFHAKMRT), made x-rays of his spine, found subluxations, prescribed a spinal treatment program, self-help whole body home exercise program and a multiple vitamin/mineral. To my surprise his mental acuity began improving and we continued to take care of him till he passed on. Little did I know about dementia, the spine or nutrition back then and I am grateful for what we know today.

Interventional Chiropractic Care

Being that the brain is always involved in the health of the body and connected to and influencer of the nervous system therefore all other systems and functions in the body it therefore is involved in neurodegenerative health issues. Being that the spine houses, protects and plays

significant roles in the regulation and distribution of the nervous system and the systems it influences it is logical that if there are issues in the brain and spine they could be contributing factors to dementia and other neurodegenerative health problems.

Aluminum and Alzheimers Disease

Another generally unnoticed, but certainly important risk factor for the development of Alzheimer's disease is exposure to aluminum. The science relating to Alzheimer's and aluminum appears in our most highly respected medical journals. Reporting in the journal *Neurology* in 1996, researchers from the University of Toronto found an astounding 250% increased risk of Alzheimer's disease in individuals drinking municipal water high in aluminum for a 10 or more year period of time. "The findings from epidemiological studies, coupled with the large body of experimental evidence of aluminum neurotoxicity and elevated concentration in the Alzheimer's disease affected brain, argue that priority should be given to consideration of lowering, and maintaining, acceptable limits of residual aluminum.

One could certainly argue the rationale for reducing aluminum exposure "particularly for older age groups at risk for Alzheimer's disease" since aluminum accumulates over many years regardless of age, and we will all be members of the "older age group" eventually.

How aluminum increases Alzheimer's risk is now fairly well understood. Like other metals, aluminum directly enhances the formation of dangerous free radicals, leading to progressive damage of the delicate cell membranes surrounding neurons.

Eventually this cumulative damage hampers neuronal function in such areas as memory and reasoning—characteristics commonly associated with Alzheimer's disease. Aside from municipal drinking water, other potential sources for aluminum exposure are many and include non-dairy creamers, self-rising flours, cake mixes, and various processed foods, especially individually wrapped cheese slices. We are able to excrete about 20 mg of ingested aluminum each day, but this amount can be greatly exceeded by even a single antacid tablet which may provide as much as 200 mg of aluminum. Other medications high in aluminum include many buffered analgesic products. See the following list for additional aluminum containing medications.

Antacids with Aluminum • Acid-X • Alenic Alka tablets • Alkets tablets • Almacore tablets • Calglycine Antacid • Duracid tablets • Extra Strength Alenic Alka tablets • Extra Strength Genaton tablets • Extra Strength Maalox tablets • Foamicon tablets • Gaviscon Extra Strength Relief Formula tablets • Mylanta • RuLox 1 tablets • RuLox 2 tablets • Gelusil tablets • Genaton tablets • Titalac tablets • Maalox Plus Extra Strength tablets • Maalox Plus tablets • Maalox tablets • Marblen tablets • Megalox tablets • Mi-Acid gelcaps • Mintox Plus tablets • Mintox tablets • Myalgen gelcaps • Mylanta Double Strength tablets • Mylanta gelcaps • Gaviscon tablets • Gaviscon-2 Double Strength tablets • RuLox Plus tablets • Tempo tablets • Titalac Extra Strength tablets.

Analgesics with Aluminum • Buffets II tablets • Vanquish caplets • Cope tablets.

Analgesics without Aluminum • Bayer Select Maximum Strength Headache caplets • Anacin caplets and tablets • Anacin Maximum Strength tablets.

References

• *Van Rensberg, S. J., Daniels, W. M., & Potocnik, F. C., et al. A new model for the pathophysiology of Alzheimer's disease. Aluminum toxicity is exacerbated by hydrogen peroxide and attenuated by an amyloid protein fragment and melatonin. S Afr J Med, 87(9):1111-1115;1997.*

• *Weiner, M. A. Evidence points to aluminum's with Alzheimer's disease. Townsend Letter for Doctors. 124:1103; 1993.*

- *Birchell, J. D., & Chappel, J. S. Aluminum, chemical physiology and Alzheimer's disease. Lancet, 2(8618):1008-1010; 1988.*
- *Drug Facts and Comparisons ©1999.*

The Electromagnetic Fields and Alzheimer's Disease

In these days of hand-held cellular phones, personal computers, and an abundance of other electronic devices, the general public seems to be at least marginally concerned about the possible health risks of electromagnetic radiation exposure as evidenced by articles appearing not only in alternative medical publications, but in mainstream journals as well.

In 1995, researchers at the University of Southern California School of Medicine confirmed a direct relationship between occupations exposing individuals to higher levels of electromagnetic radiation and the risk of developing Alzheimer's disease, as published in the American Journal of Epidemiology. The December 1996 issue of Neurology revealed a substantial increased risk of developing Alzheimer's disease in individuals whose occupations exposed them to higher than average levels of electromagnetic radiation.

How exposure to electronic devices may lead to Alzheimer's disease is unclear.

Several authors have indicated that the electromagnetic radiation produced by electronic equipment enhances the formation of beta amyloid, a protein known to be prevalent in the brains of Alzheimer's patients. It is clear that this protein enhances brain inflammation, now known to be the primary cause of brain degeneration in this disease.

Somehow it seems that articles relating environmental factors with disease, much like research dealing with the impact of nutrition on health, are generally overlooked in favor of concentrating on pharmaceutical approaches to treating the illness they cause.

Low Testosterone Levels ed to Alzheimer's Disease in Older Men

The serum level of bioavailable testosterone (BT) can predict risk for Alzheimer's disease (AD) in older men, new research suggests. "The take home message is we should pay more attention to low testosterone, particularly in people who have signs of cognitive impairment," according to coinvestigator John Morley, MD, professor of gerontology and director of the Division of Geriatric Medicine at Saint Louis University School of Medicine J Alzheimer's Dis. 2010;21:1335-1345

How does one determine if testosterone is related to Alzheimers disease? Through blood or Urine based Hormone and Neurotransmitters Analysis.

The Roles of Homocysteine

The Department of Neurology and Clinical Chemistry at the University of Heidelberg, researchers revealed that the second most frequent cause of dementia in the elderly population after Alzheimer's disease was so called "vascular dementia," or brain dysfunction 34 Alzheimer's Disease / Type 3 Diabetes / Dementia / Cognitive Impairment as a consequence of disease of the small blood vessels, as published in The Lancet (May 8, 1999). What was more striking was the finding of elevation of a particular chemical in the blood of these individuals called homocysteine.

Even though we are not suggesting taking B complex vitamins the conclusion of the report provided very strong support for the effectiveness of dietary supplementation with the B-complex group of vitamins in terms of reducing risk of dementia. But apart from vascular dementia, elevation of homocysteine has even more important implications. Research has found that elevation of this blood chemical is directly related to the risk of Alzheimer's disease—the most common dementing illness. Way back in a 1998 article published in the Archives of Neurology, researchers noted a 200% increased risk of Alzheimer's disease in individuals with elevation of

blood homocysteine levels. And again, elevated homocysteine can almost always be normalized with simple vitamin therapy!

More distressing is the fact that levels of brain-damaging homocysteine can be increased by some commonly used medications including L-dopa (Sinemet®, the mainstay treatment for Parkinson's disease), as well as antibiotics containing trimethoprim (Bactrim® and Septra®).

Free Radicals - Inflammation

As with Aluminum, brain cells can be damaged or destroyed by free radicals generated by inflammation. Chronic inflammation leads to progressive damage of the delicate cell membranes surrounding neurons. Eventually this cumulative damage hampers neuronal function in such areas as memory and reasoning—characteristics commonly associated with Alzheimer's disease.

This thesis is supported by many studies demonstrating higher levels of inflammation-specific chemicals known as cytokines in brains of Alzheimer's patients. (The current understanding of Alzheimer's holds that the symptoms of Alzheimer's disease result from neuronal function failure). In a compelling 1998 report appearing in the journal *Medical Hypothesis* entitled,

Could Diet Be Used to Reduce the Risk of Alzheimer's Disease?"

Following is some information regarding phytochemicals and diet that are reported to be options regarding Alzheimer's disease. We do not present them as a treatment but rather something to consider.

Dr. P. E. Newman describes how a specific breakdown product of dietary fat, arachidonic acid, profoundly enhances inflammation. Dr. Newman then reveals how other dietary fats, namely the essential fatty acids from the omega-3 and omega-6 groups, have just the opposite effect—they actually reduce the inflammatory process.

The possible role of Arachidonic Acid

Inflammation-causing arachidonic acid is found in abundance in meats, meat products, and eggs. It is efficiently absorbed from the gut and is incorporated into the membranes of the cells more readily than any other fatty acid. As Dr. Newman stated, "It has been estimated that the persons eating a typical Western diet take in between 200-1000 mg per day of arachidonic acid in their food.

As the normal requirement of arachidonic acid is only 1 mg per day...it is easy to understand why over the years persons in the industrialized countries build up excessive pools of arachidonic acid and why older persons in such societies tend to develop rheumatoid arthritis, atherosclerosis, certain neoplasms (cancers), psoriasis, and why not, Alzheimer's disease." This offers a strong and sound argument for the use of essential fatty acid supplements combined with diets rich in fish and vegetables—natural sources of the inflammation-reducing omega-3 and omega-6 oils.

Light to Moderate Alcohol Use Protective Against Dementia in Older Adults

Mirroring findings in younger adults, a new study of adults 75 years and older at baseline suggests that drinking light to moderate amounts of alcohol may help protect against the development of dementia.

"There is strong evidence from previous longitudinal studies that [drinking] a small amount of alcohol is associated with lower incidence of overall dementia and Alzheimer dementia," says Professor Siegfried Weyerer, PhD, from the Central Institute of Mental Health in Mannheim, Germany. "Unique in our study is that this result was also found among a large population [75 years and older at baseline] where the mean age was, at 80.2 years, much higher than that in previous studies." This study was published online March 2, 2011 in *Age and Ageing*.

Possibility of Nutrient Relationships in Mild Alzheimer's

Administration of the following may play roles in improving synaptic dysfunction is associated with continuous memory improvement in patients with mild Alzheimer's disease (AD), the once-a-day drink contains a nutrient combination with the following ingredients but this is not offered or a suggestion that anyone pursue doing so without professional counsel – the simply are nutritional considerations.

- Eicosapentanoic acid,
- Docosahexanoic acid,
- Phospholipids,
- Choline,
- Uridine monophosphate,
- Vitamin E (alpha-tocopherol equivalents),
- Selenium,
- Vitamin B12,
- Vitamin B6,
- Folic acid,

Alzheimer's Association International Conference (AAIC) 2012. Therapeutics/Therapeutic Strategies, presented July 18, 2012.

Dietary Antioxidants - Keeping Dementia at Bay

Dietary antioxidants, specifically vitamin C and beta-carotene, may protect older adults against dementia, research suggests. Even though the following may seem encouraging Again we are not mentioning any of the following in any way to suggest that people begin adding them into their diet.

A population-based case-control study showed that elderly adults with dementia had significantly lower blood levels of vitamin C and beta-carotene than their cognitively healthy peers. “As the consumption of fruit and vegetables is widely recommended for prevention of chronic diseases, our findings suggest that these public health initiatives...may be beneficial in reducing the prevalence of cognitive impairment in older subjects,” according to study investigator Gabriele Nagel, MD, from the Institute of Epidemiology and Medical Biometry at Ulm University in Germany. “Results from experimental research support the idea that antioxidants protect against neurodegeneration [and] epidemiological data support a relation between the use of antioxidants and risk for dementia.” *J Alzheimer's Dis.* Sep 2012;31:717-724. Again we are not mentioning vitamin C in any way to suggest that people begin adding vitamin C to their diet.

Reducing Inflammation & Protecting Neurons - Proline-Rich Polypeptide complex (PRP)

Colostrum-derived, proline-rich polypeptide complex (PRP) has displayed numerous mechanisms that support healthy brain aging. Again we are not mentioning vitamin C in any way to suggest that people begin adding PRP to their diet. Likewise be aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care.

These include protecting against many free radicals, influencing certain cytokine pathways, and maintaining the stability of beta-amyloid—the substance naturally present in the brain that can become modified in the aging process. These mechanisms may account for observed positive clinical outcomes in patients.

PTP is a purified huperzine A (HupA) from toothed club moss (*Huperzia serrate*) and a prolinerich-polypeptide (PRP) complex known as Colostrinin from colostrum for multidimensional support for neurological health.

Essential Fatty Acids

Manipulation of dietary fats opens the door to consider reducing inflammation. Increasing omega-3 levels have been demonstrated to be effective in a variety of inflammatory conditions including arthritis, psoriasis, inflammatory bowel diseases, and multiple sclerosis.

A number of studies show that reduced intake of omega-3 fatty acids is associated with increased risk of age-related cognitive decline or dementia, including Alzheimer's disease. Scientists believe the omega-3 fatty acid DHA is protective against Alzheimer's disease and dementia. Also in a study published online in October, 2012 in PLOS One, they found that healthy 18 to 25-year-olds at the top of their "cognitive game" could enhance their working memory even further by increasing their intake of omega-3 polyunsaturated fatty acids. "Indicating that diet plays a role in the cognitive abilities of young healthy adults."

Reduced DHA is associated with impairments in cognitive and behavioral performance, effects which are particularly important during brain development.

Recent studies suggest that DHA functions in neurogenesis, neurotransmission, and protection against oxidative stress. These functions relate to the roles of DHA within the hydrophobic core of neural membranes and effects of un-esterified DHA. Reviewed here are some of the recent studies that have begun to elucidate the role of DHA in brain development and function. Dietary (n-3) Fatty Acids and Brain Development, © 2007 American Society for Nutrition.

Limiting Free Radical Activity. Vitamin E / Gamma-tocopherol

The utilization of antioxidants to limit the activity of free radicals as therapy for Alzheimer's disease has been extensively evaluated over the past decade. Perhaps the most widely studied is Vitamin E—a good candidate not only because of its powerful antioxidant activity, but also because of its high fat solubility.

This is crucial since not only is the brain more than 60% fat, but it is the fat component that is at highest risk for free radical damage. In a study published in the New England Journal of Medicine in 1997, patients were given vitamin E, Selegiline (another so-called "Alzheimer's drug"), both or placebo for two years. At the end of the study, data were compiled assessing such parameters as being institutionalized, loss of ability to perform activities of self-care, "severe dementia," and death.

JAMA – Vitamin E and Alzheimers Disease

The compelling results clearly demonstrated the group taking vitamin E did best in all areas including longevity and cognitive function—better than the prescription medication. In a study published in the January 1, 2014 issue of JAMA, it was concluded "for patients with mild to moderate Alzheimer's disease (AD), 2000 IU of vitamin E daily slows functional decline and reduces caregiver burden, according to results of a large randomized controlled trial.

This study indicates that vitamin E could be recommended to improve functional outcomes, such as activities of daily living, for all levels of Alzheimer's disease starting with mild stages and gives good confidence that it is safe." JAMA. 2014;311:29-30, 33-44 36 Alzheimer's Disease / Type 3 Diabetes / Dementia / Cognitive Impairment.

Gamma-tocopherol

Gamma-tocopherol is the most abundant form of vitamin E. It is documented to inhibit the pro-inflammatory COX-2 enzyme and quench reactive oxygen species that occur in oxidative stress. Glutamate-cysteine ligase, the rate-limiting enzyme in glutathione synthesis, is increased by gamma-tocopherol, and not alpha-tocopherol.

Alpha Lipoic Acid

Lipoic acid is a powerful anti-oxidant that is believed to have the possible potential of being rapidly absorbed from the gut and readily enters the brain to protect neurons from free radical damage. Further antioxidant protection is derived from its ability to recycle vitamins C and E, and regenerate glutathione, one of the brain's most important antioxidants.

The brains of Alzheimer's patients have been shown to contain significantly elevated levels of iron, a catalyst which enhances free radical production. Lipoic acid is believed to act as a powerful metal chelator. It binds several potentially toxic metals in the body including cadmium and free iron, and facilitates their excretion. This is another important reason why lipoic acid should be part of any nutritional protocol for Alzheimer's disease. Scientists believe that lipoic acid may increase the production of acetylcholine, an essential nervous system messenger that is deficient in the brains of Alzheimer's disease victims.

•• Holmquist, L., Stuchbury, G., & Berbaum, K., et al. Lipoic acid as a novel treatment for Alzheimer's disease and related dementias. *Pharmacol Ther.* 2007 Jan;113(1):154-64.

Vitamin D

Vitamin D has recently been demonstrated to have profound antioxidant activity. In a Japanese study published in 1998, it was found that moderate to severe deficiencies of vitamin D were found in 80% of Alzheimer's patients studied.

Vitamin D has been tied to higher neurologic function and people with Alzheimer's disease tend to have low levels of vitamin D3; and better cognitive test results are tied to higher vitamin D levels. Vitamin D3 may help clear the brain of amyloid- β . "Older patients with very low levels of vitamin D have about a 122% increased risk for dementia compared with those with higher levels." Vitamin D and Dementia: Neurology. Published online August 6, 2014

Myricetin

Myricetin is reported to possibly inhibit glutamate-mediated excitotoxicity in the neuron and reduces (destabilized) both endogenous and over-expressed tau protein levels in cells.

Rosmarinic Acid

Rosmarinic acid is reported to reduce key factors in Alzheimer's disease:

- AB-induced neurotoxicity
- Reactive oxygen species (induced by AB)
- DNA fragmentation
- Tau protein hyper phosphorylation

Curcumin

Curcumin is reported to play roles in inhibiting activation of NF-kB and Abeta-induced cell death, inhibits Abeta formation, extension and destabilizes preformed Abetas. Curcumin also inhibits Acetylcholinesterase (ACHE) activity.

Ferulic acid

Ferulic acid is reported to assist the body in restoration of glutathione, prevents amyloid-beta induced neurotoxicity, protects against MSG excitotoxicity in the brain.

Grape Seed Proanthocyanidins

Grape seed proanthocyanidins are reported to neuroprotective against Abeta and tau proteins reduce cerebral amyloid deposition and attenuated AD-type cognitive deterioration.

Green Tea Epigallocatechin 3-gallate - (Brain Support)

Green tea epigallocatechin 3-gallate selectively is reported to assist in protection neurons from apoptosis induced by mitochondrial oxidative stress.

Coenzyme Q-10

Coenzyme Q-10 is believed to be a critical transporter of electrons in the process of energy production in every living cell. As such, deficiencies of CoQ-10 function have profound effects on cellular activity and viability. CoQ-10 supplementation has been demonstrated to enhance energy production in brain neurons and thus improve function.

NOTE: It is critically important to recognize that two of the most widely prescribed cholesterol-lowering drugs, pravastatin (Pravachol®) and lovastatin (Mevacor®), can significantly lower serum coenzyme Q10 levels.

Huperzine (HupA) is an alkaloid compound huperzine A (HupA) is a traditional Chinese herbal remedy prepared from the moss *Huperzia serrata*. The purified compound has been used in China for several years as a prescription drug for treating dementia. HupA appears to be a potent inhibitor of acetylcholinesterase (AChE), the enzyme that breaks down acetylcholine.

Biopsy and postmortem studies show substantial loss of presynaptic cholinergic neurons in brains of Alzheimer's patients indicating that whatever acetylcholine is produced in the brains of these patients is quickly broken down by ACHE. This acetylcholine shortage may contribute to memory loss and other cognitive defects. HupA may also protect neurons. In studies using cultures of cells from the hippocampus and cerebellum of rat embryos, HupA decreased neuronal cell death caused by toxic levels of glutamate.

GlyceroPhosphatidylCholine (GPC) - (Brain Restore)

GlyceroPhosphatidylCholine (GPC) is a powerful, natural compound that is reported to improve, assist in helping focus, concentration, achieves better memory, and maintains healthy brain function during aging.

Acetyl-L-Carnitine (ALC)

Research indicates Acetyl-L-Carnitine (ALC) is involved in transports fatty acids into the inner mitochondrial matrix for beta-oxidation and ATP production. It also is reported to facilitate the removal from the inner mitochondria of the excess short- and medium chain fatty acids that accumulate during fat metabolism. Acetyl-L-carnitine functions primarily as a shuttle, transporting critical fuel sources into the mitochondria, the energy producing machinery of the neuron. Its second task is to facilitate the removal of the toxic byproducts of brain metabolism.

Because of these functions, acetyl-L-carnitine has a pivotal role in facilitating the fundamental processes necessary for brain survival. In addition, acetyl-L-carnitine is readily converted into an important neurotransmitter (brain chemical messenger) known as acetylcholine, which is known to be profoundly deficient in the brains of Alzheimer's patients. In a report entitled "A 1-year Multicenter Placebo-controlled Study of Acetyl-L-carnitine in Patients with Alzheimer's Disease," which appeared in the journal *Neurology*, researchers at the University of California San Diego found a striking reduction in the rate of mental decline in younger Alzheimer's patients taking acetyl-L-carnitine over the 1-year evaluation.

Phosphatidylserine (PS)

Over the past 2 decades, extensive medical literature has appeared describing the important role of lecithin in preserving normal brain function. More recent research has revealed that the beneficial action of lecithin is, for the most part, due to one of its components, phosphatidylserine.

Phosphatidylserine is one of the key constituents of neuronal membranes—the site where brain cells both receives and transmits chemical messages. Abnormalities of the neuronal membrane have been ed to age-related functional changes in brain performance. Adequate phosphatidylserine is a basic requirement to maintain vital energy production of the mitochondria, ensuring optimal function of the brain. In a 1991 article entitled, "Effects of Phosphatidylserine in Age-associated Memory Impairment," appearing in the journal *Neurology*, researchers from Stanford University

stated that the results from treating memory impaired patients “suggest that the compound may be a promising candidate for treating memory loss in later life.” Phosphatidylserine (PS) is highly concentrated in the cell membranes of brain neurons. PS stimulates the release of dopamine (mood, physical movement), increases the production of acetylcholine (learning, memory), enhances neuronal glucose metabolism, reduces cortisol levels, and boosts the activity of nerve growth factor.

N-Acetyl-Cysteine (NAC)

N-acetyl-cysteine (NAC) is reported to play important roles in replenishing intracellular levels of glutathione, helping to restore cells’ ability to fight damage from reactive oxygen species. Improving neuronal glutathione to reduce oxidative stress and inflammation is a primary necessity.

NAC is reported to assist in suppressing the master signaling molecule, nuclear factor kappaB (NF-kB), which in turn prevents activation of multiple inflammatory mediators. In addition to increasing glutathione, NAC has an important role in and of itself. One of the most notorious free radicals implicated in Alzheimer’s disease is nitric oxide. NAC has the unique ability to reduce the activity of nitric oxide synthase and thus reduce the generation of nitric oxide.

Pyridoxine—Vitamin B6

Pyridoxine—vitamin B6—levels are sometimes especially low in Alzheimer’s patients and this raised scientific interest in B6’s role in supporting cognitive health beginning in 2004. The neuroendocrinology of vitamin B6 interaction has multiple molecular mechanisms.

Niacinamide—Vitamin B3

Niacinamide—vitamin B3—is reported in some individuals to have a successful clinical history with neurological conditions including depression, anxiety, schizophrenia, and obsessive-compulsive disorder to name a few. Niacinamide does enhance tryptophan conversion to serotonin. We also know that vitamin B3 has a vital role in neuron mitochondria.

It is reported to stabilize the mitochondria by protecting against reactive oxygen species, and is also involved in cellular energy processes. The coenzyme nicotinamide adenine dinucleotide (NAD+) is derived from vitamin B3, and is required for reactions in all three phases of energy production: glycolysis, the Krebs’s cycle, and Complex I of the electron transport chain. There are also emerging animal studies demonstrating how vitamin B3 enhances NAD+, NADH, and NADPH levels in brain regions. A depletion of NAD+ is associated with DNA fragmentation, and thus neuronal degeneration.

5-methyltetrahydrofolate (5-MTHF)—the Bioactive Form of Folate / Folic Acid

Folic acid levels are often markedly depressed in patients suffering from dementia or confessional states. Deficiency of folic acid is associated with apathy, disorientation, memory deficits, and difficulties with concentration.

Several studies have correlated low folic acid levels with dementia. Again, the mechanism may involve elevation of homocysteine since, like vitamin B-12; folic acid helps lower this blood vessel-damaging amino acid. 5-methyltetrahydrofolate, the bioactive form of folate, supports methylation and homocysteine metabolism. The synthesis of S-adenosylmethionine (SAME) is intimately tied with folate and vitamin B12 metabolism, and deficiencies of both these vitamins have been found to reduce brain SAME concentrations. Both folate and vitamin B12 deficiency may cause similar neurological and psychiatric disturbances including depression, dementia, myelopathy, and peripheral neuropathy. Brain S-adenosylmethionine levels are severely decreased in Alzheimer’s disease. Up to half of all Americans may carry a genetic variation that prevents the body, including the brain, from optimally using folic acid. Scientists believe that this genetic

polymorphism may be ed with an increased risk of dementia. 5-MTHF can cross the blood-brain barrier and effectively reduce homocysteine. Elevated homocysteine has been ed with cognitive decline and Alzheimer's disease. In a New England J Med discussion, the following summary was stated: "An increased plasma homocysteine level is a strong, independent risk factor for the development of dementia and Alzheimer's disease."

Methylcobalamin—Vitamin B12.

Standard medical texts have long reported that vitamin B-12 is a critical factor for preservation of normal brain function. Its deficiency is associated with confusion, depression, mental slowness, memory difficulties, and abnormalities of nerve function.

New research reveals that B-12 helps prevent the accumulation of the brain damaging amino acid homocysteine, which when elevated, markedly increases the risk for Alzheimer's disease. Methylcobalamin/cobalamin deficiency principally affects the peripheral nerves, and in later stages may target the spinal cord. Impaired mental function is the usual result, often first manifesting as slower thinking, confusion, and memory lapses. Even a blood level of vitamin B12 that is moderately below the optimum can result in considerable damage to the brain and nervous system. Low vitamin B12 status can be a modifiable cause of atrophy, and of likely subsequent cognitive impairment in the elderly. Methylcobalamin is the molecular state that neurons utilize. Vitamin B12 is one of the primary methylating agents that are needed to enhance methylation chemistry that can be impaired due to gene polymorphisms.

Summary

The science relating electromagnetic radiation exposure to Alzheimer's disease is sound. Reducing the risk of Alzheimer's disease involves a recognition of potential sources of electromagnetic radiation, like hand-held cellular phones, electric blankets, handheld hair dryers, clock radios on the night stand near the head, and desktop computers, to name a few.

The relationship between Alzheimer's disease and aluminum is supported by several observations including worldwide epidemiological reports, the presence of extremely high brain aluminum levels in Alzheimer's patients, and studies revealing that aluminum increases damaging free radicals. Many municipal water utilities add aluminum sulfate to public water sources to help remove fine particulate matter. This is a strong argument in favor of drinking bottled water. Avoid medications containing aluminum.

Read ingredient labels of food products to help avoid aluminum consumption. Food cooked in aluminum cookware can absorb substantial amounts of aluminum, choose glass or stainless steel. And remember that melatonin can limit aluminum's damaging effects. Avoid medications containing acetaminophen as it reduces the availability of the important antioxidant glutathione but again as encouraging as those words sound we are not mentioning them with any intent or any way to suggest that people begin adding them to their diet.

Dietary Considerations

Meat and eggs are rich in inflammation-producing fatty acids. And it is this inflammation that leads to the enhanced production of brain damaging free radicals.

Supplementation with oils rich in appropriate essential fatty acids can assist in reducing inflammation—reducing free radical production. Appropriate antioxidants and cellular energizers, substantiated by research published in the most well respected scientific and medical journals, have important roles in any treatment plan for this disease. "Gluten sensitivity is common in patients with neurological disease of unknown cause and may have aetiological significance." *Lancet*, 347:369-371(1996). In his book *Grain Brain: The Surprising Truth About Wheat, Carbs, and Sugar—Your Brain's Silent Killers*, Dr. David Perlmutter, Associate Professor at the

University of Miami School of Medicine, advocates that lifestyle modifications, starting with a high-fat, nearly carbohydrate-free diet, can prevent or greatly lower dementia risk and progression—and he's armed with plenty of data to back up the claim.

Mediterranean Diet

“Mediterranean Diet led to Less Cognitive Decline.” *Neurology* 2013;80:1684-1692.

Healthy Eating & Reduced Risk of Cognitive Decline

According to a study published in the journal *Neurology*, a higher diet quality was associated with a reduced risk of cognitive decline. Improved diet quality represents an important potential target for reducing the global burden of cognitive decline. Published online May 6, 2015.

Coconut Oil

The dietary addition of a quality, non-hydrogenated coconut oil may be an Alzheimer's/dementia remedy. Researchers say the ketones (medium chain triglycerides) found in coconut oil have slowed the progression of Alzheimer's disease in some people and may actually prevent it.

Chiropractic spinal care and Chiropractic specialized and supervised Massage

The brain could correctly be viewed as the main power plant of the human body through which it transmits its power or life force. The life force, or nerves, arteries, veins and lymphatics travel via the spinal cord and spine out the intervertebral foramina throughout the entire body. The spine may also be involved in Alzheimer's Disease and many other health problems therefore it as well as Touch For Health Applied Kinesiological Muscle Response Testing (TFH AKMRT) are important considerations.

Caution: It is one thing to get a generalized massage and another to have muscle therapy that is specific to the individual.

Why is that important? It is important because the human body is a highly organized creation therefore has individual DNA's as well as issues within the nervous system and muscle skeletal systems therefore as good as sometimes general massage might feel it in fact could miss specific muscle skeletal issues or make them worse. Therefore Chiropractic specialized and supervised massage therapy deals more specifically with the patients individual muscle skeletal issues.

Dietary Considerations

Mediterranean Type Diet

Associated with a reduced risk to Alzheimer's disease / dementia / cognitive decline.

References

- *Van Rensberg, S. J., Daniels, W. M., & Potocnik, F. C., et al. A new model for the pathophysiology of Alzheimer's disease. Aluminum toxicity is exacerbated by hydrogen peroxide and attenuated by an amyloid protein fragment and melatonin. S Afr J Med. 87(9):1111-1115;1997.*
- *Weiner, M. A. Evidence points to aluminum's with Alzheimer's disease. Townsend Letter for Doctors. 124:1103; 1993.*
- *Birchell, J. D., & Chappel, J. S. Aluminum, chemical physiology and Alzheimer's disease. Lancet. 2(8618):1008-1010; 1988.*
- *Faßender, K., Mielke, O., & Bertsch, T. et al. Homocysteine in cerebral macroangiography and microangiography. Lancet. 353:1586-1587; 1999.*
- *Clarke, R., Smith, A. D., & Jobst, K. A., et al. Folate, vitamin B12 and serum total homocysteine levels in confirmed Alzheimer's disease. Arch Neurol. 55:1449-55; 1998.*
- *Müller, T., Werne, B., & Fowler, W., et al. Nigral endothelial dysfunction and Parkinson's disease. Lancet. 354:126-127; 1999.*

- Smulders, Y. M., de Man, A. M. E., & Stehouwer, C. D. A. Trimethoprim and fasting homocysteine. *Lancet*. 352: 1827-1828; 1998.
- Floyd, R. A. Neuroinflammatory processes are important in neurodegenerative disease: A hypothesis to explain the increased formation of reactive oxygen and nitrogen species as major factors involved in neurodegenerative disease development. *Free Radical Biology and Medicine*. 26(9/10):1346-55; 1999.
- Newman, P. E. Could diet be used to reduce the risk of developing Alzheimer's disease? *Med Hypothesis*. 50:335-37; 1998.
- Sano, M., Ernesto, C., & Thomas, R. G., et al. A controlled trial of selegiline, alpha-tocopherol, or both as treatment for Alzheimer's disease. *New Engl J Med*. 336:1216-22;1997.
- Janetsky, B., Reichmann, H., & Youdim, M. B. H. Iron and oxidative damage in neurodegenerative diseases, in mitochondria and free radicals in neurodegenerative diseases. Beal, M. F. (ed) New York, Wiley-Liss Pub. 1997.
- Pahan, J., Sheikh, F. G., & Namboodiri, A. M. S. N-acetylcysteine inhibits induction of NO production by endotoxin or cytokine stimulated rat peritoneal macrophages, C6 glial cells, and astrocytes. *Free Radical Biology and Medicine*. 24(1):39-48; 1997.
- Stao, Y., Asoh, T., & Oizumi, K. High prevalence of vitamin D deficiency and reduced bone mass in elderly women with Alzheimer's disease. *Bone*. 23(6):555-557; 1998.
- Shults, C. W., Beal, M. F., & Fontaine, K., et al. Absorption, tolerability, and effects on mitochondrial activity of oral coenzyme Q10 in Parkinson's patients. *Neurology*. 50:793-795; 1998.
- Birkmayer, J. G. D. Coenzyme nicotinamide adenine dinucleotide: New therapeutic approach for improving dementia in Alzheimer type. *Ann Clin and Lab Science*. 26(1):1-9;1996.
- Thal, L. J., Carta, A., & Clarke, W. R., et al. A 1-year multicenter, placebo-controlled study of acetyl-L-carnitine in patients with Alzheimer's disease. *Neurology*. 47:705-711; 1996.
- Crook, T. H., Tinklenberg, J., & Yesavage, J. Effects of phosphatidylserine in age-associated memory impairment. *Neurology*. 47:705-711; 1996.
- Clarke, R., Smith, A. D., & Jobst, K. A. et al. Folate, vitamin B-12, and serum total homocysteine levels in confirmed Alzheimer's disease. *Arch Neurol*. 55:1449-55; 1998.
- Bacsí, A., Woodberry, M., Kruzel, M. L., & Boldogh, I. Colostrinin delays the onset of proliferative senescence of diploid murine fibroblast cells. *Neuropeptides*. 2007;41(2):93-101.
- Bilikiewicz, A., & Gaus, W. Colostrinin (a naturally occurring, proline-rich, polypeptide mixture) in the treatment of Alzheimer's disease. *J Alzheimer's Dis*. 2004;6(1):17-26.
- Boldogh, I., & Kruzel, M., et al. Colostrinin increases the lifespan and neurological performance in senescence accelerated mice. Presented at 8th International Conference of Alzheimer's and Parkinson's Diseases, Salzburg, Austria; March 2007; Poster Session 3 (1893).
- Boldogh, I., Liebenthal, D., & Hughes, T. K., et al. Modulation of 4HNE-mediated signaling by proline-rich peptides from ovine colostrum. *J Mol Neurosci*. 2003;20(2):125-134.
- Gladkevich, A., Bosker, F., Korf, J., Yenkovyan, K., Vahradyan, H., & Aghajyanov, M. Proline-rich polypeptides in Alzheimer's disease and neurodegenerative disorders: Therapeutic potential or a mirage? *Prog Neuro-Psychopharmacol Biol Psychiatry*. 2007. doi:10.1016/j.pnpbp.2007.06.005
- Leszek, J., Inglot, A. D., & Janusz, M., et al. Colostrinin proline-rich polypeptide complex from ovine colostrum: A long-term study of its efficacy in Alzheimer's disease. *Med Sci Monit*. 2002;8(10):PI93-196.

- Schuster, D., Rajendran, A., Hui, S. W., Nicotera, T., Srikrishnan, T., & Kruzel, M. L. Protective effect of Colostrinin on neuroblastoma cell survival is due to reduced aggregation of beta-amyloid. *Neuropeptides*. 2005;39(4): 419-426.
 - Zablocka, A., Janusz, M., Macala, J., & Lisowski, J. A proline-rich polypeptide complex and its Nona peptide fragment inhibit nitric oxide production induced in mice. *Regul Pept*. 2005;125(1-3):35-39.
 - Zablocka, A., Janusz, M., Rybka, K., Wirkus-Romanowska, I., Kupryszewski, G., & Lisowski, J. Cytokine-inducing activity of a proline-rich polypeptide complex (PRP) from ovine colostrum and its active Nona peptide fragment analogs. *Eur Cytokine Netw*. 2001;12(3)462-467.
 - Balion, C., Griffith, L. E., & Strifler, L., et al. Vitamin D, cognition, and dementia: A systematic review and meta-analysis. *Neurology*. 2012;79:1397-1405.
 - Mizwicki, M. T., Menegaz, D., & Zhang, J., et al. Genomic and non-genomic signaling induced by 1 α ,25 (OH) 2-vitamins D3 promotes the recovery of amyloid- β phagocytosis by Alzheimer's disease macrophages. *J Alzheimers Dis*. 2012;29:51-62.
 - Whitehouse, A. J., Holt, B. J., & Serralha, M., et al. Maternal serum vitamin D levels during pregnancy and offspring neurocognitive development. *Pediatrics*. 2012;129:485-493.
 - Grant, W. B., & Cannell, J. J. Autism prevalence in the United States with respect to solar UV-B doses: An ecological study. *Dermato-Endocrinology*. 2013;5:1-6.
 - Balion, C., Griffith, L. E., & Strifler, L., et al. Vitamin D, cognition, and dementia: A systematic review and meta-analysis. *Neurology*. 2012;79:1397-1405.
 - Mizwicki, M. T., Menegaz, D., & Zhang, J., et al. Genomic and non-genomic signaling induced by 1 α ,25 (OH) 2-vitamins D3 promotes the recovery of amyloid- β phagocytosis by Alzheimer's disease macrophages. *J Alzheimers Dis*. 2012;29:51-62.
 - Whitehouse, A. J., Holt, B. J., & Serralha, M., et al. Maternal serum vitamin D levels during pregnancy and offspring neurocognitive development. *Pediatrics*. 2012;129:485-493.
 - Magee, E. MPH, RD. WebMD Feature, May 05, 2012.
 - Lansdowne, A. T., & Provost, S. C. Vitamin D3 enhances mood in healthy subjects during winter. *Psychopharmacology (Berl)*. 1998;135(4):319-23).
 - Gloth, F. M., Alam, W., & Hollis, B. Vitamin D vs broad spectrum phototherapy in the treatment of seasonal affective disorder. *J Nutr Health Aging*. 1999;3(1):5-739.
- References for the Brain**
- Canal, N., & Franceschi, M., et al. Effect of l-alpha-glyceryl-phosphorylcholine on amnesia. *Int J Clin Pharm Ther Toxicol*. 1991;29(3):103-7.
 - Vessetti, V., & Bettini, R. Clinical and instrument evaluation of the effect of choline alfoscerate on cerebral decline. *Presse Medicale*. 1992;5(141).
 - Locatelli, M. Neurophysiological evaluation of alpha-GPC by means of computerized electroencephalogram. *Le Basi Raz Ter*. 1990;20(79).
 - Parnetti, L., & Abate, G., et al. Multicentre study of GPC vs ST200 among patients with probable senile dementia of Alzheimer's type. *Drugs Aging*. 1993;3(2):159-64.
 - De Jesus Moreno, M. Cognitive improvement in mild to moderate Alzheimer's dementia after treatment with the acetylcholine precursor choline alfoscerate (GPC): A multicenter, double-blind randomized, placebo controlled trial. *ClinTher*. 2003;25(1):178-93.

- *Barbagallo Sangiorgi, G., et al. Alpha-GPC in the mental recovery of cerebral ischemic attacks: An Italian multicenter clinical trial. Ann N Y Acad Sci. 1994;717:253-69.*
- *Auteri, A. Protecting the brain during heart surgery: Treatment with choline alfoscerate (GPC). Le Basi Raz Ter. 1993;23(123).*
- *Parnetti, L., et al. Choline alfoscerate in cognitive decline and in acute cerebrovascular disease: An analysis of published clinical data. Mech Ageing Dev. 2001;122(16):2041-55.*
- *Di Perri, R., et al. A multicentre trial to evaluate the efficacy and tolerability of alpha-GPC vs cytosine diphosphocholine in patients with vascular dementia. J Int Med Res. 1991;19(4): 330-41.*
- *Ames, B. N. A role of supplements in optimizing health: The metabolic tune-up. Arch Biochem Biophys. 2004 Mar 1;423(1):227-34.*
- *Ames, B. N. Mitochondrial decay, a major cause of aging, can be delayed. J Alzheimer's Dis. 2004 Apr;6(2):117-21.*
- *Liu, J., & Ames, B. N. Age-associated mitochondrial oxidative decay: Improvement of carnitine acetyltransferase substrate binding affinity and activity in the brain by feeding old rats acetyl-l-carnitine and/or R-alpha-lipoic acid. Proc Natl Acad Sci. USA 2004 Apr;6(2):117-21.*
- *Dowson, J. H., et al. The morphology of lipopigment in rat Purkinje neurons after chronic acetyl-l-carnitine administration: A reduction in aging-related changes. Biol Psych. 1992;32:179-97.*
- *Cipolli, C., & Chiari, G. Effects of acetyl-l-carnitine on mental deterioration in the aged. Clin Ter. 1990;132:479-510.*
- *Guarnaschelli, C., et al. Pathological brain ageing: Evaluation of the efficacy of a pharmacological aid. Drugs Exp Clin Res. 1988; 14:715-8.*
- *Tempesta, E., et al. Acetyl-l-carnitine in depressed elderly subjects. A cross-over study vs placebo. Drugs Exp Clin Res. 1987;13:417-23.*
- *Garzya, G., et al. Evaluation of the effects of acetyl-l-carnitine on senile patients suffering from depression. Drugs Exp Clin Res. 1990;16:101-6.*
- *Sano, M., et al. Double-blind parallel design pilot of acetyl-l-carnitine in patients with Alzheimer's disease. Arch Neurol. 1992 - Nov;49(11):1137-41.*
- *Spagnoli, A., et al. Long-term acetyl-l-carnitine treatment in Alzheimer's disease. Neurology 1991; 41:1726-32.*
- *Brooks, J. O., et al. Acetyl-l-carnitine slows decline in younger patients with Alzheimer's disease: A reanalysis of a double-blind, placebo-controlled study using the trilinear approach. Int Psychogeriatr. 1998;10:193-203.*
- *Rai, G., et al. Double-blind placebo-controlled study of acetyl-l-carnitine in patients with Alzheimer's dementia. Curr Med Res Opin. 1990;11:638-47.*
- *Puca, F. M., et al. Clinical pharmacodynamics of acetyl-l-carnitine in patients with Parkinson's disease. Int J Clin Pharmacol Res. 1990;10:130-43.*
- *De Angelis, C., & Scarfo, C., et al. Levocarnitine acetyl is reported to stimulate peripheral nerve regeneration and neuromuscular junction remodeling, following sciatic nerve injury. Int J Clin Pharmacol Res. 1992;12:269-79.*
- *Quattroro, A., & Roca, P., et al. Acetyl-l-carnitine for symptomatic diabetic neuropathy. Diabetologia. 1995; 38:123.*
- *Kid, P. M. A review of nutrients and botanicals in the integrative management of cognitive dysfunction. Altern Med Rev. 1999 Jun 4;(3):144-61.*

- Palmieri, G., et al. Double-blind controlled trial of Phosphatidyl serine in patients with senile mental deterioration. *Clin Trials J.* 1987;24:73-83.
 - Delwaide, P. J., et al. Double-blind randomized controlled study of Phosphatidyl serine in senile demented patients. *Acta Neurol Scand.* 1986 Feb;73(2):136-40.
 - Crook, T. H., et al. Effects of Phosphatidyl serine in age-associated memory impairment. *Neurology.* 1991 May;41(5):644-649.
 - Heiss, W. D., et al. Activation PET as an instrument to determine therapeutic efficacy in Alzheimer's disease. *Ann N Y Acad Sci.* 1993 Sep 24;695:327-31.
 - Engel, R. R. Double-blind cross-over study of phosphatidylserine vs. placebo in patients with early dementia of the Alzheimer type. *Eur Neuropsychopharmacol.* 1992 Jun;2(2):149-55.
 - Maggioni, M., et al. Effects of phosphatidylserine therapy in geriatric patients with depressive disorders. *Acta Psychiatr Scand.* 1990;81:265-270.
 - Monteleone, P., et al. Blunting by chronic phosphatidylserine administration of the stress-induced activation of the hypothalamopituitary-adrenal axis in healthy men. *Eur J Clin Pharmacol.* 1992;42(4):385-388.
 - Cenacchi, T., et al. Cognitive decline in the elderly: A double-blind, placebo-controlled multicenter study on efficacy of phosphatidylserine administration. *Aging.* 1993 Apr;5(2):123-33.
 - Chen, G., et al. Inhibitory effect on cerebral inflammatory response following traumatic brain injury in rats: A potential neuroprotective mechanism of NAC. *Mediators Inflamm.* 2008;2008:716548.
 - Kim, H., et al. Suppression of NF-kappaB activation and cytokine production by NAC in pancreatic acinar cells. *Free Radic Biol Med.* 2000 Oct 1;29(7):674-83.
 - Atkuri, K. R., et al. NAC—a safe antidote for cysteine/glutathione deficiency. *Curr Opin Pharmacol.* 2007 Aug;7(4):355-9.
 - Metz, J. Cobalamin deficiency and the pathogenesis of nervous system disease. *Annu Rev Nutr.* 1992;12:59-79.
 - Vogiatzoglou, A., et al. Vitamin B12 status and rate of brain volume loss in community-dwelling elderly. *Neurology.* 2008 Sep 9;71(11):826-32.
 - Morris, L. D., et al. Brain S-adenosylmethionine levels are severely decreased in Alzheimer's disease. *J Neurochem.* Sept 1996;67(3):1328-31.
 - Bottiglieri, T., et al. The clinical potential of ademetionine (S-adenosylmethionine) in neurological disorders. *Drugs.* 1994 Aug;48(2):137-52.
 - 5-methyltetrahydrofolate monograph. *Altern Med Rev.* 2006 Dec;11(4):330-7.
 - Willems, F. F., et al. Pharmacokinetic study on the utilization of 5-methyltetrahydrofolate and folic acid in patients with coronary artery disease. *Br J Pharmacol.* 2004 Mar;141(5):825-30.
 - Weir, D. G., et al. Brain function in the elderly: Role of vitamin B12 and folate. *Br Med Bull.* 1999;55(3):669-82.
 - Yoo, J. H., et al. Pathogenicity of thermolabile methylenetetrahydrofolate reductase for vascular dementia. *Arterioscler Thromb Vasc Biol.* 2000 Aug;20(8):1921-5.
 - Bottiglieri, T., et al. Plasma total homocysteine levels and the C677T mutation in the methylenetetrahydrofolate reductase (MTHFR) gene: A study in an Italian population with dementia. *Mech Ageing Dev.* 2001 Nov;122(16):2013-23.
- Alzheimer's Disease / Type 3 Diabetes / Dementia / Cognitive Impairment 43*

References for the Brain Support

- Ong, K. *Biological Effects of Myricetin*. *Gen Pharmac.* 1997; 29;(2):121-26.
- Shimmyo, Y., et al. *Multifunction of myricetin on A beta: Neuroprotection via a conformational change of A beta and reduction of A beta via the interference of secretases*. *J Neurosci Res.* 2008 Feb 1;86(2): 368-77.
- Jones, J. R., et al. *The Diarylheptanoid (+)-aR,11S-Myricanol and two flavones from bayberry (Myrica carefree) destabilize the microtubule associated protein tau*. *J Nat Prod.* 2011 Jan 28; 74(1):38-44.
- Liu, L., et al. *Trans-synaptic spread of tau pathology in vivo*. *PLOSOne.* 2012;7(2).
- Iuvone, T., et al. *The spice sage and its active ingredient rosmarinic acid protect PC12 cells from amyloid- β peptide-induced neurotoxicity*. *J Pharmacol Exp Ther.* 2006; 317: 1143-49.
- Alkam, T., et al. *A natural scavenger of peroxynitrites, rosmarinic acid, protects against impairment of memory induced by A β 25–35*. *Behav Brain Res.* 2007: 180:139-45.
- Giri, R. K., et al. *Curcumin, the active constituent of turmeric, inhibits amyloid peptide-induced cytochemokine gene expression and CCR5-mediated chemotaxis of THP-1 monocytes by modulating early growth response-1 transcription factor*. *J Neurochem.* 2004;91:1199-1210.
- Cole, G. M., et al. *NSAID and antioxidant prevention of Alzheimer's disease: Lessons from in vitro and animal models*. *Ann NY Acad Sci.* 2004 Dec: 1035:68-84.
- Ahmed, T., et al. *Inhibitory effect of curcuminoids on acetylcholinesterase activity and attenuation of scopolamine-induced amnesia may explain medicinal use of turmeric in Alzheimer's disease*. *Pharmacy Biochem Behav.* 2009 Feb; 91(4):554-9.
- Yu, S., et al. *Curcumin prevents dopaminergic neuronal death through inhibition of the c-Jun N-terminal kinase pathway*. *Rejuvenation Res.* 2010 Feb;13(1):55-64. doi: 10.1089/rej.2009.0908.
- Thyagaraju, B. M. *Ferulic acid supplements abrogate oxidative impairments in liver and testis in the streptozotocin-diabetic rat*. *Zoologi Sci.* 2008 Aug; 25(8): 854-60.
- Ying, J., et al. *Sodium ferulate prevents amyloid-beta-induced neurotoxicity through suppression of p38 MAPK and up regulation of ERK-1/2 and Akt/protein kinase B in rat hippocampus*. *Acta Pharmacol Sinica.* 2005; 26, 943-51.
- Yu, L., et al. *Potent protection of ferulic acid against excitotoxic effects of maternal intragastric administration of monosodium glutamate at a late stage of pregnancy on developing mouse fetal brain*. *Eur Neuropsychopharmacol.* 2006 Apr; 16(3): 170-7.
- Lap Ho, Shrishailam Yemul, Jun Wang, and Giulio Maria Pasinetti. *Role of grape seed polyphenols in Alzheimer's disease neuropathology* *J Alzheimers Dis.* 2009 Feb; 16(2): 433–439.
- Wang, J., et al. *Grape-derived polyphenolics prevent Abeta oligomerization and attenuate cognitive deterioration in a mouse model of Alzheimer's disease..* *J Neurosci.* 2008; 28:6388-92.
- Schroeder, E. K., et al. *Green tea epigallocatechin 3-gallate accumulates in mitochondria and displays a selective ant apoptotic effect against inducers of mitochondrial oxidative stress in neurons*. *Antioxid Redox Signal.* 2009 Mar;11(3):469-80. doi: 10.1089/ARS.2008.2215.

References for Colostrinin

- Plassman, B. L., Langa, K. M., & Fisher, G. G., et al. *Prevalence of cognitive impairment without dementia in the United States*. *Ann Intern Med.* 2008;148(6):427-434.
- Alzheimer's Association. *2010 Alzheimer's Disease Facts and Figures*. Available at http://www.alz.org/alzheimers_disease_facts_figures.asp. Accessed November 3, 2010.

- Teter, B., & Ashford, J. W. Neuroplasticity in Alzheimer's disease. *J Neurosci Res.* 2002;70(3):402-37.
- Davila, D., Piriz, J., Trejo, J. L., Nunez, A., & Torres-Aleman, I. Insulin and insulin-like growth factor I signaling in neurons. *Front Biosci.* 2007;12:3194-3202. •• Garcia-Sequra, L. M. (2009). *Hormones and brain plasticity (1st ed.)*. Oxford University Press.
- Greenwood, P. M., & Parasuraman, R. Neuronal and cognitive plasticity: A neurocognitive framework for ameliorating cognitive aging. *Front Aging Neurosci.* 2010;2:150.
- Lu, T., Pan, Y., & Kao, S.Y., et al. Gene regulation and DNA damage in the ageing human brain. *Nature.* 2004;429(6994):883-891.
- National Institutes for Health. NIH Blueprint for Neuroscience Research: Neurodegeneration Workshop Report. Available at http://neuroscienceblueprint.nih.gov/blueprint_basics/neurodegeneration_workshop_report.htm. Accessed January 31, 2011.
- National Institutes for Health. NIH Blueprint for Neuroscience Research: Thematic Initiatives 2007-2009. Available at http://neuroscienceblueprint.nih.gov/blueprint_basics/BP_themes.htm. Accessed January 31, 2011.
- Llorens-Martin, M., Torres-Aleman, I., & Trejo, J. L. Mechanisms mediating brain plasticity: IGF1 and adult hippocampal neurogenesis. *Neuroscientist.* 2009;15(2):134-148.
- Glass, C. K., Saijo, K., Winner, B., Marchetto, M. C., & Gage, F. H. Mechanisms underlying inflammation in neurodegeneration. *Cell.* 140(6):918-934.
- Lucin, K. M., & Wyss-Coray, T. Immune activation in brain aging and neurodegeneration: Too much or too little? *Neuron.* 2009;64(1):110-22.
- Ryu, J. K., & McLarnon, J. G. A leaky blood-brain barrier, fibrinogen infiltration and microglial reactivity in inflamed Alzheimer's disease brain. *J Cell Mol Med.* 2009;13(9A):2911-2925.
- Wang, X., & Michaelis, E. K. Selective neuronal vulnerability to oxidative stress in the brain. *Front Aging Neurosci.* 2010;2:12.
- Gella, A., & Durany, N. Oxidative stress in Alzheimer disease. *Cell Adh Migr.* 2009;3(1):88-93.
- Jellinger, K. A. Basic mechanisms of neurodegeneration: A critical update. *J Cell Mol Med.* 2010;14(3):457-487.
- Castellani, R. J., Rolston, R. K., & Smith, M. A. Alzheimer disease. *Dis Mon.* 2010;56(9):484-546.
- Castellani, R. J., Zhu, X., Lee, H. G., Smith, M. A., & Perry, G. Molecular pathogenesis of Alzheimer's disease: Reductionist versus expansionist approaches. *Int J Mol Sci.* 2009;10(3):1386-1406.
- Janusz, M., Lisowski, J., & Franek, F. Isolation and characterization of a proline-rich polypeptide from ovine colostrum. *FEBS Lett.* 1974;49(2):276-279.
- Janusz, M., Staroscik, K., Zimecki, M., Wieczorek, Z., & Lisowski, J. Chemical and physical characterization of a proline-rich polypeptide from sheep colostrum. *Biochem J.* 1981;199(1):9-15.
- Boldogh, I., Bacsi, A., Aguilera-Aguirre, L., German, P., & Kruzal, M. Colostrinin™ increases the lifespan and neurological performance of mice. *Neurodegenerative Diseases.* 2007;4:264.
- Janusz, M., Staroscik, K., Zimecki, M., Wieczorek, Z., & Lisowski, J. Physicochemical properties of a proline-rich polypeptide (PRP) from ovine colostrum. *Arch Immunol Ther Exp (Warsz).* 1978;26(1-6):17-21.

- *Inglot, A. D., Janusz, M., & Lisowski, J. Colostrinine: A proline-rich polypeptide from ovine colostrum is a modest cytokine inducer in human leukocytes. Arch Immunol Ther Exp (Warsz). 1996;44(4):215-224.*
- *Schuster, D., Rajendran, A., & Hui, S. W., et al. Protective effect of colostrinin on neuroblastoma cell survival is due to reduced aggregation of beta-amyloid. Neuropeptides. 2005;39(4):419-426.*
- *Boldogh, I., & Kruzel, M. L. Colostrinin: An oxidative stress modulator for prevention and treatment of age-related disorders. J Alzheimers Dis. 2008;13(3):303-321.*
- *Boldogh, I., Hughes, T. K., Georgiades, J. A., & Stanton, J. Antioxidant and cell-differentiating activity of colostrinin and its component peptides (CCP) in cell culture. Psychogeriatr Ann. 2001;4:57-65.*
- *Bacsi, A., Woodberry, M., Kruzel, M. L., & Boldogh, I. Colostrinin delays the onset of proliferative senescence of diploid murine fibroblast cells. Neuropeptides. 2007;41(2):93-101.*
- *Szaniszlo, P., German, P., & Hajas, G., et al. New insights into clinical trial for Colostrinin in Alzheimer's disease. J Nutr Health Aging. 2009;13(3):235-241.*
- *Popik, P., Bobula, B., Janusz, M., Lisowski, J., & Vetulani, J. Colostrinin, a polypeptide isolated from early milk, facilitates learning and memory in rats. Pharmacol Biochem Behav. 1999;64(1):183-189.*
- *Zimecki, M., Hraba, T., Janusz, M., Lisowski, J., & Wieczorek, Z. Effect of a proline-rich polypeptide (PRP) on the development of hemolytic anemia and survival of New Zealand black (NZB) mice. Arch Immunol Ther Exp (Warsz). 1991;39(5-6):461-467.*
- *McKhann, G., Drachman, D., & Folstein, M., et al. Clinical diagnosis of Alzheimer's disease: Report of the NINCDS-ADRDA. Work Group under the auspices of Department of Health and Human Services Task Force on Alzheimer's Disease. Neurology. 1984;34(7):939-944.*
- *Leszek, J., Inglot, A. D., & Janusz, M., et al. Colostrinin: A proline-rich polypeptide (PRP) complex isolated from ovine colostrum for treatment of Alzheimer's disease. A double-blind, placebo-controlled study. Arch Immunol Ther Exp (Warsz). 1999;47(6):377-385.*
- *Folstein, M. F., Folstein, S. E., & McHugh, P. R. "Mini-mental state." A practical method for grading the cognitive state of subjects for the clinician. J Psychiatr Res. 1975;12(3):189-198.*
- *Leszek, J., Inglot, A. D., & Janusz, M., et al. Colostrinin proline-rich polypeptide complex from ovine colostrum—a long-term study of its efficacy in Alzheimer's disease. Med Sci Monit. 2002;8(10):PI93-PI96.*
- *Bilikiewicz, A., & Gaus, W. Colostrinin (a naturally occurring, proline-rich, polypeptide mixture) in the treatment of Alzheimer's disease. J Alzheimers Dis. 2004;6(10):17-26.*
- *Rosen, W. G., Mohs, R. C., & Davis, K. L. A new rating scale for Alzheimer's disease. Am J Psychiatry. 1984;141(11):1356-1364.*
- *Guy, W. Clinical Global Impression. ECDEU Assessment Manual for Psychopharmacology. In: Services UDoHaH, ed.;1976.*
- *Graf, C. The Lawton instrumental activities of daily living scale. Am J Nurs. 2008;108(4):52-62.*

Amenorrhea - Absence of menstruation

Amenorrhea may be primary (the girl has never begun her periods) or secondary (the woman had her periods once and then stopped having them). Physiologic amenorrhea is the lack of menses

before menarche, during pregnancy and early lactation, and after menopause (all considered normal). All other causes of amenorrhea are pathologic. (see also

Causes of Primary Amenorrhea

Physiologic Delay - The late onset of menses in a physiologically normal female but there are potential problems with doing so and they include:

Some medical authorities believe that no workup is necessary in the female who has secondary sexual characteristics but no menstrual cycles until she is 18; however, if no secondary characteristics appear by age 14 and no menses has occurred, then a workup should be started earlier. The age of menarche of the mother will often provide clues as to when the female child should expect to begin.

Primary Ovarian Failure

These patients are divided into two groups: those with normal but infantile genitalia (e.g. Turner's syndrome), and those with ambiguous genitalia (e.g. hermaphrodites). Karyotyping is necessary. Causes include:

Hypothalamic or pituitary failure (insufficiency or organic disease of either of those organs); congenital abnormalities (vaginal agenesis under development), vaginal septa (malformative where the uterine cavity is partitioned by a longitudinal ligament), cervical atresia (the absence of vaginal opening or bicornuate divided), uterine agenesis, uterine septi, or bicornuate uterus); imperforate hymen (this could impede the outflow of the menstruum. The girl will report monthly cyclical abdominal cramping due to the buildup of the menstrual flow. Treatment includes opening the hymen after a needle aspiration of the area behind the hymen demonstrates that a vagina exists).

Causes of Secondary Amenorrhea

Endometrial Sclerosis - This usually occurs as a result of a D&C after which the tissues heal by fibrosis. Cervical Stenosis can occur after a cervical conization where the cervix scars or the os cannot be found. Intrauterine growths must be ruled out.

Anovulation

This may be sporadic or constant. These can be causes for anovulation:

- Hypothalamic causes*: The organ disorder may be due to organic lesions (tumors, scars) or insufficiency (polycystic ovarian disease, hyperprolactinemia amenorrhea).
- Pituitary causes*: Including insufficiency (Sheehan's syndrome) or organic disease (tumors, adenomas).
- Ovarian causes*: From scarring, tumors, cysts.

Low Body Fat from Excess Exercise* (less than 10% body fat): Although this form of anovulation is similar to that which is induced with anorexia nervosa, in this type, when the patient regains weight or stops exercising excessively, the period will return.

- Adrenal Dysfunction: Hyperplasia, adenomas, tumors.
- Systemic Causes of Anovulation: Cushing's disease; post oral contraceptive agent syndrome; hyperprolactinemia; both over and underactive thyroid problems; and other disease (ulcerative colitis, diabetes mellitus, steroid use for autoimmune diseases, celiac disease). Usually when these diseases are corrected the menses will return to normal. Indicates primary or secondary causes, usually secondary.

Consider Vitamin D Deficiency

Vitamin D deficiency appears to occur frequently in women with hormonal balance dysfunction such as PCOS, dysmenorrhea, endometriosis, and possibly fertility issues, and may be a contributing factor to some of the biochemical abnormalities seen in these conditions. Likewise be

aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care as well as pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (AKMRT), Applied Kinesiological Muscle Response Testing (TFHAKMRT)..

In a study published in *Steroids* (1999; 64(6):430-435), of 13 women with PCOS, 5 were found to have frank vitamin D deficiency (serum 25-hydroxyvitamin D concentration <9 ng/mL) and 3 others had borderline-low vitamin D status. All 13 women were treated with vitamin D₃ to maintain a serum 25-hydroxyvitamin D. Each woman also received 1500 mg of supplemental calcium per day. Of the 9 women with amenorrhea or oligomenorrhea prior to vitamin D treatment, 7 experienced normalization of their menstrual cycles within 2 months and the other 2 became pregnant. Dysfunctional uterine bleeding also resolved within 2 months in both women whom it had been present. Vitamin D₃ (the form of the vitamin produced in the human body after sunlight exposure) is at least 3.4 times as potent as vitamin 46 Amenorrhea D₃ and may be as much as 9.4 times as potent according to a study published in *J Clin Endocrinol Metab.* (2004;89(11):5387-5391). Therefore, when supplementing with vitamin D₃, lower doses than those administered in the aforementioned study should be used. According to the *Food and Nutrition Board of the Institute of Medicine*, long-term vitamin D₃ intake up to 5000 IU per day is unlikely to have any adverse effects in the general adult population.

Contributing Factors

- Poor diet – when we refer to “poor diet” we are not in any way blaming people who do not eat a well-balanced nutritional diet. Fact is some people are in situations where they are ill or lack the financial; resources to purchase nutritious foods and we should not look down upon them.

One aspect of our practice was establishing a Chiropractic Clinic at –The Union Gospel Mission that cared for less fortunate people – offer two meals a day to its clients. It was (and continues to be a wonderful service and the leadership works diligently at providing healthy foods but that is not always the case in other similar services in that very often the meals are predominately high in refined carbohydrates and saturated fats- certainly that the most healthy foods but at least the people they serve are getting something to eat.

- High stress

- Impaired fatty acid conversion and spinal issues that could be interrupting the proper nerve and blood supply to the ovary’s.

Dietary Options

Mediterranean Diet

Designed to contribute to relieving symptoms related to menstrual cycles, such as:

- Abdominal discomfort

- Occasional irritability

- Feeling bloated

- Minor back, joint, and muscle pain

- Joint stiffness lower back issues

- Temporary weight gain

- Breast tenderness

- Feeling sad or blue

- Designed to assist in modulating the effects of circulating estrogens with non-soy phytoestrogens from kudzu and flax.

- Features a high quality, easily digestible rice protein concentrate.

- Formulated with antioxidants, fiber, and a variety of well-researched ingredients.

Chiropractic Care and Amenorrhea

•• Initially one might question what relationship Chiropractic care could have with amenorrhea, but from a scientific perspective it's possible. The uterus, ovaries and blood vessels relate to the brain, spinal cord and spine and will affect the hormonal and adrenal glands which in turn may affect amenorrhea.

- Pursuing 24 Hour Hormone Analysis, a Chem Screen, CBC and IgE and IgG4 blood tests,
- Hair Mineral Toxic Metal Analysis and Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT), should be taken into consideration.

Over the years of practicing as Chiropractic Physicians we have seen countless numbers of women who struggled with hormone issues find those issues either eliminated and/or minimalized when they included Chiropractic care with a science-based nutraceutical program.

Angina Pectoris

NOTE: We want to make abundantly clear that if you or someone close to you is experiencing chest pains **immediately call 911**. As you wait for the EMS team to arrive, if you or someone near you is able to use cardiac resuscitation do so – if not make sure the patient's oral cavity is clear and then repeatedly pound on their chest.

Angina pectoris is manifested as acute pain in the chest resulting from decreased blood supply to the heart muscle (myocardial ischemia). A syndrome due to myocardial oxygen deficit characterized by prolonged substernal, thoracic pain, which is precipitated chiefly by emotion, exercise, or the ingestion of a heavy meal. It is caused by a temporary inability of the coronary arteries to supply sufficient blood to the heart muscle therefore said issues should never be ignored but seek immediate medical attention.

Options For Nutritional Supplementation for Angina Pectoris

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure, nor in any way intended to diagnosis or treat angina pectoris or in any way to discourage anyone from seeking immediate medical intervention or following up with a medical doctors supervision.

Certainly if not contraindicated there are possible nutritional considerations, but they should never be used to replace medical prescriptions or discourage medical care. If possible food supplementation is being considered the person recommending those supplements should advise the patient's medical doctor and seek her/his counsel.

Dietary Considerations

Modified Mediterranean-style, low glycemic load diet

The following nutritional considerations are presented as a preventative approach to angina pectoris as well as a possible supplemental option for those who are under medical care for angina pectoris, **not** an alternative to prescribed medical care. Likewise be aware that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care.

Other Complimentary Alternatives

Is there a relationship between the spine and angina pectoris? In many cases yes, because like all other systems in the body, the brain, spinal cord and spine have a direct relationship with the heart.

This is not implying that interventional Chiropractic care is an end all to heart conditions or any other health issue, but it does have component relationships.

Ankylosing Spondylitis

Ankylosing spondylitis is a form of ongoing joint inflammation (chronic inflammatory arthritis) that primarily affects the spine. This condition is characterized by:

Back pain and stiffness that typically appear in adolescence or early adulthood. Over time, back movement gradually can become limited as the bones of the spine (vertebrae) fuse together. This progressive bony fusion is called ankyloses.

The earliest symptoms of ankylosing spondylitis result from inflammation of the joints between the pelvic bones (the ilia) and the base of the spine (the sacrum).

These joints are called sacroiliac joints, and inflammation of these joints is known as Sacroiliitis. The inflammation gradually spreads to the joints between the vertebrae, causing a condition called spondylitis. Ankylosing spondylitis can involve other joints as well including the shoulders, hips, and, less often, the knees. As the disease progresses, it can affect the joints between the spine and ribs, restricting movement of the chest and making it difficult to breathe deeply. People with advanced disease are also more prone to fractures of the vertebrae which are a possibility if a person has been diagnosed with ankyloses spinal spondylosis (or other articulations).

Other names are used for ankylosing spondylitis?

- AS
- Bechterew's Disease
- Marie-Struempell Disease
- Anakylosis Spondylitis
- Spondylarthritis Ankylopoietica
- Spondylitis Ankylopoietica
- Spondylitis, Ankylosing
- Spondyloarthritis Ankylopoietica

Spondyloarthropathies

Ankylosing spondylitis is part of a group of related diseases known as spondyloarthropathies. In the United States, spondyloarthropathies affect 3.5 to 13 per 1,000 people. Ankylosing spondylitis is likely caused by:

A combination of genetic and environmental factors, most of which have not been identified. However, researchers have found variations in several genes that influence the risk of developing this disorder.

The HLA A-B Gene

The HLA-B gene provides instructions for making a protein that plays an important role in the immune system. The HLA-B gene is part of a family of genes called the human leukocyte antigen (HLA) complex.

The HLA Complex

The HLA complex helps the immune system distinguish the body's own proteins from proteins made by foreign invaders such as viruses and bacteria. The HLA-B gene has many different normal variations, allowing each person's immune system to react to a wide range of foreign proteins.

A variation of the HLA-B gene called HLA-B27 increases the risk of developing ankylosing spondylitis. Although many people with ankylosing spondylitis have the HLA-B27 variation, most

people with this version of the HLA-B gene never develop the disorder. It is not known how HLA-B27 increases the risk of developing ankylosing spondylitis. Variations in several additional genes, including ERAP1, IL1A, and IL23R, have also been associated with ankylosing spondylitis. Although these genes play critical roles in the immune system, it is unclear how variations in these genes affect a person's risk of developing ankylosing spondylitis. Other genes, which have not yet been identified, are also believed to affect the chances of developing ankylosing spondylitis and influence the progression of the disorder. Some of these genes likely play a role in the immune system, while others may have different functions. Researchers are working to identify these genes and clarify their role in ankylosing spondylitis.

Not a purely genetic disease

Although ankylosing spondylitis can occur in more than one person in a family, it is not a purely genetic disease. Multiple genetic and environmental factors likely play a part in determining the risk of developing this disorder.

As a result, inheriting a genetic variation with ankylosing spondylitis does not mean that a person will develop the condition, even in families in which more than one family member has the disorder. For example, about 80 percent of children who inherit HLA-B27 from a parent with ankylosing spondylitis do not develop the disorder.

The Eyes and Ankylosing spondylitis

Ankylosing spondylitis affects the eyes in up to 40 percent of cases, leading to episodes of eye inflammation called acute iritis. Acute iritis causes:

Eye pain and increased sensitivity to light (photophobia). Rarely, ankylosing spondylitis can also cause serious complications involving the heart, lungs, and nervous system.

Muscle Skeletal Relationships to spondylitis

Conventional ankylosing spondylitis treatment does not stop the progression of the disease, but very often the related symptoms of ankylosing spondylitis can be eliminated. Similar to other tissues and organs in the body including:

Bones, muscles and ligaments are related to the brain, spinal cord and spine, thus changes in the spine are going to contribute to bone problems. Many successfully seek chiropractic care, individualized massage, and/or physical therapy, seeing to it that the Doctor of Chiropractic has x-rays of their spine (articulations) and that if any manipulation, traction or chiropractic supervised message be non-force because heavy-force pressure on the spine could aggravate the ankylosed articulations. This is not meant to discourage or imply that Chiropractic care is contraindicated, but rather that its existence needs to be taken into consideration and appropriate treatment adaptations utilized. The key being to do as much as one can (to physical tolerance) to maintain as much muscle skeletal flexibility as reasonably possible.

- If physically possible lie on back with hands behind head; bend at knees and draw them up to abdomen; then raise feet with some force; relax and lower them
- Lying on back, stretch out with arms over head; use momentum of arms to rise to a sitting position
- Lying face down, extend arms to sides then lift them over back as though flying
- Standing, do neck range of motion exercises slowly
- Standing, lean to right then left, bending slowly at trunk
- Repeat each of the above exercises 10 times, once or twice a day which complement one another in that they offer inexpensive diagnostic tests that give insight into the past and present biochemical activity's in the body and possibly things that can be done to retain good health and/or assist the body in correcting present health problems

Anti-Inflammatory Diet

As you review the following keep in mind that it is not our intent to make you think that we in any way are attempting to make a diagnosis, treatment or imply cure or prevention. Similarly we invite you to consult with a Chiropractic physician who has the reputation of being skilled in the nutritional components of health care.

Dietary Modifications to Manage Inflammation*

Food Category Serving Size Servings per day Calories per serving Choices

VEGETABLES All vegetables are often allowed except white potato, turnip, parsnip, rutabaga, and corn. Fresh vegetable juices are also allowed.

FRUITS All whole fruits except banana, pineapple, and papaya. Fruit juice not recommended.

CONCENTRATED PROTEIN Arachidonic acid (AA) daily; (please refer to chart to calculate AA content).

POULTRY (remove all skin): Turkey breast and chicken breast

LEAN MEATS: Sliced boiled ham, pork tenderloin, beef flank steak, ground beef, 5% fat.

FISH (avoid farmed fish): (See chart below.)

DAIRY: Cottage cheese 1%, 3/4 cup; ricotta, reduced fat, 1/2 cup

TOFU PRODUCTS: tofu

DAIRY 6 oz. Plain yogurt (low-fat or nonfat), milk (nonfat, 1%, or 2%), buttermilk, milk, substitutes (soy, rice, nut)

LEGUMES All peas and beans, hummus, bean soups

GRAINS Whole grains such as 100% whole wheat bread and pasta, brown rice, whole oats, rye crackers, and pearly barley with at least 3 grams or more of fiber per serving.

NUTS/SEEDS

OILS See **Essential Oils on the Nutri Dyn Midwest electronic order form.**

BEVERAGES Unlimited Water intake recommended. Water, herbal tea, decaffeinated coffee or tea, mineral water, club soda, or seltzer, plain or flavored (**no added artificial sweeteners**).

CONDIMENTS Unlimited as desired. Cinnamon, carob, mustard, horseradish, vinegar, lemon, lime, flavored extracts, herbs/spices, stevia. Try to avoid refined sugars or artificial sweeteners.

Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) can assist in helping determine if any of those considerations are biological harmonious.

If you suspect that that you have issues with food allergies or sensitivities, consider an elimination diet. Please eat only the cheeses that are listed, as most other cheeses are quite high in saturated fat and not allowed on this program.

It's a Matter of Fat

Arachidonic Acid is a fat associated with inflammation in the body. Various opinion leader organizations, such as the American College of Rheumatology, support eating certain fish and foods that contain:

Omega-3 fatty acids due to the new evidence indicating that these fats can reduce the pain and inflammation of RA. The American Heart Association (AHA) advocates a general recommendation of at least two servings per week to receive the cardiovascular benefits of these fatty acids.

In many cases increased consumption of omega-3 fatty acids results in a decrease in the amount of arachidonic acid. Along with a diet low in glycemic index, research supports the limitation of arachidonic acid to no more than 60 mg daily.

Adjacent is a list of animal foods (meat, poultry, and fish) that are at or below 60 mg per 3.5 oz average serving. Please consider limiting food in this category to only those on this list. Remember if you eat more than 3-4 oz at a time, you must add the additional arachidonic acid to your calculations. Egg yolks are high in arachidonic acid (70 mg per yolk) and therefore must be avoided. Soy and dairy products contain no significant arachidonic acid.

Food Arachidonic Acid Content - (mg per 3.5 oz. for meats)

Meat and poultry:

Ham, sliced boiled	0
Pork tenderloin	30
Turkey breast, roast	40
Beef, flank steak	40
Ground beef, 5% fat	50
Chicken breast	60

Fish:

Mahi	0	Snapper	40
Pacific mackerel	10	Yellowfin tuna	40
Pink salmon	10	Flounder	50
Pacific cod	20	Atlantic mackerel	50
Sockeye salmon	30	Grouper	60
Atlantic cod	30	White tuna, canned in water	50
Haddock	30		

Anxiety Disorder

Fear and anxiety are part of life but they do not have to persist in life. You may feel anxious before you take a test or walk down a dark street. This kind of anxiety is useful — it can make you more alert or careful. It usually ends soon after you are out of the situation that caused it. But for millions of people in the United States, the anxiety does not go away, and gets worse over time. They may have chest pains or nightmares. They may even be afraid to leave home. These people have anxiety disorders.

Anxiety disorders differ from normal feelings of nervousness.

Untreated anxiety disorders can push people into avoiding situations that trigger or worsen their symptoms. People with anxiety disorders are likely to suffer from depression, and they also may abuse alcohol and other drugs in an effort to gain relief from their symptoms. Job performance, schoolwork, and personal relationships can also suffer.

Types include:

- Panic disorder
- Obsessive-compulsive disorder
- Post-traumatic stress disorder
- Phobias
- Generalized anxiety disorder

Anxiety disorders are the most common of emotional disorders and affect more than 25 million Americans. Many forms and symptoms may include:

- Overwhelming feelings of panic and fear
- Uncontrollable obsessive thoughts
- Painful, intrusive memories
- Recurring nightmares

•• Physical symptoms such as feeling sick to your stomach, “butterflies” in your stomach, heart pounding, startling easily, and muscle tension particularly in the spine and its surrounding soft tissues. When there is tension in the spine, the brain and spinal cord are also involved and the nervous system and all organs and tissues that supply life force are decreased. Considering the involvement of the spine, brain and spinal cord in anxiety, very often some Chiropractic intervention is called for.

Types of Anxiety Disorders

Panic Disorder

The core symptom of panic disorder is the panic attack, an overwhelming combination of physical and psychological distress. During an attack several of these symptoms occur in combination:

- Pounding heart or chest pain
- Sweating, trembling, shaking
- Shortness of breath, sensation of choking
- Nausea or abdominal pain
- Dizziness or lightheadedness
- Feeling unreal or disconnected
- Fear of losing control, “going crazy,” or dying
- Numbness
- Chills or hot flashes
- Back and joint pains

Because symptoms are so severe, many people with panic disorder believe they are having a heart attack or other life-threatening illness.

Phobias

A phobia is an excessive and persistent fear of a specific object, situation, or activity. These fears cause such distress that some people go to extreme lengths to avoid what they fear. **There are three primary types of phobias:**

- **Specific phobia** — An extreme or excessive fear of an object or situation that is generally not harmful. Patients know their fear is excessive, but they can’t overcome it. Examples are fear of flying or fear of spiders.
- **Social phobia** (also called social anxiety disorder) — Significant anxiety and discomfort about being embarrassed or looked down on in social or performance situations. Common examples are public speaking, meeting people, or using public restrooms.
- **Agoraphobia** — This is the fear being in situations where escape may be difficult or embarrassing or help might not be available in the event of panic symptoms. Untreated agoraphobia can become so serious that a person may refuse to leave the house. A person can only receive a diagnosis of phobia when their fear is intensely upsetting, or if it significantly interferes with their normal daily activities.

Generalized Anxiety Disorder

People with generalized anxiety disorder (GAD) have ongoing, severe tension that interferes with daily functioning. They worry constantly and feel helpless to control these worries. Often their worries focus on:

Job responsibilities, family health, living up to real or fantasied expectations of themselves or others, or minor matters such as chores, car repairs, or appointments. They may have problems sleeping, muscle aches/tension, and feel shaky, weak, and headachy. People with GAD can be irritable and often have problems concentrating and working effectively.

What Causes Anxiety Disorders?

In addition to disruption of the neuroplasticity (flow of life force) in the brain, spinal cord, nervous system and spine, the causes of some anxiety disorders are currently unknown, although research has provided several clues. Areas of the brain that control fear responses may have a role in some anxiety disorders.

Anxiety disorders can run in families, suggesting that a combination of genes and environmental stresses can produce the disorders. The role of brain chemistry is also being investigated. As many as 18% of US adults[1] and upwards of 30% of young people[2] suffer from some form of anxiety, making it the most prevalent mental health disorder in the country.

The Spine The Switchboard of the Nervous System

The ability of health care practitioners to identify and help address anxiety early on with diet modification, nutrition individualized massage and specific Chiropractic spinal care are imperative as anxiety often goes undiagnosed/misdiagnosed, incorrectly treated and/or untreated, especially in children and adolescents. Left mistreated or untreated, it can lead to chronic and debilitating mental and physical illness.

Some of us are at more risk for Anxiety Disorders:

- **Being female.** Research shows that women are more likely than men to be diagnosed with an anxiety disorder. This is questionable as men suffer with anxiety but very often tend to not consult with a health care provider which makes it look like women are the ones troubled with anxiety – not men.
- **Trauma.** Children who endured abuse or trauma during delivery or in early childhood or witnessed traumatic events are at higher risk of developing an anxiety disorder at some point in life and as unfortunate as it is many young children are led to believe that they are the cause of adults doing uncivilized things to one another. Adults who experience a traumatic event also can develop anxiety disorders.
- **Stress due to an illness.** Having a health condition or serious illness can cause significant worry about issues such as treatment and your future.
- **Stress buildup.** A big event or a buildup of smaller stressful life situations may trigger excessive anxiety—for example, a death in the family or ongoing worry about finances.
- **Personality.** People with certain personality types are more prone to anxiety disorders than others particularly if they have inherited genetic predispositions to anxiety.
- **Other mental health disorders.** People with other mental health disorders, such as depression, often experience anxiety disorder as well.
- **Having blood relatives with an anxiety disorder.** Anxiety disorders can run in families which can be environmental and/or genetic.
- **Drugs or alcohol.** Drug or alcohol use, abuse, or withdrawal can cause or worsen anxiety.

References

- Kessler, R. C., Demler, O., & Frank, R. G., et al. Prevalence and treatment of mental disorders, 1990 to 2003. *N Engl J Med.* 2005;352:2515-2523.
- Merikangas, K. R., He, J. P., & Burstein, M., et al. Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Survey Replication — Adolescent Supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry.* 2010;49:980-989.

Options For Nutritional Supplementation for Anxiety

Let us be very careful when taking food supplements without proper science-based diagnostic testing and the same holds true with mixing prescribed medications without submitting the

nutritional proposals to the physician who prescribed them. Not all food supplements and prescribed medications are compatible and mixing them can cause serious problems. When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Caution: Frankly some peoples issues with anxiety is to such an extent that they need prescribed medications and if that is the case they should do so and never be embarrassed in doing so and if they are taking a prescribed medication they should never add nutritional supplements without first discussing that possibility with the physician who prescribed the medication..

Beginning:

First and foremost, one should be addressing diet and base nutritional support including essential fatty acids, and vitamin D. According to a study by Davison and Kaplan (*Can J Psychiatry*; 2012;57:85-92, one of a number of recent studies): “There are consistent associations between dietary patterns and symptoms of anxiety and depression...

Decreasing adherence to a Mediterranean diet pattern was associated with increased likelihood of depression or anxiety. Greater anti-inflammatory or antioxidant activity of some diets (such as the Mediterranean-type diet), may protect against mood disorders.” There are many good diets but each of us has bio-individualities and what foods might be good for one person could be bad/biocidic to another. That being the case, would be wise to have a bio-individuality test and IgE and IgG4 food sensitivity tests prior to embarking on a specific diet or eating program.

Learning To Eat Biocentrically

“People who suffer from mood disorders function better when they are eating better,” according to Bonnie Kaplan, PhD, from the University of Calgary in Alberta, Canada, “It really is true that you are what you eat.” It isn’t so much the foods we eat but rather how our body digests and assimilates them.

All foods contain proteins (antigens) and based on our genetic nature we react to them as begin biogenic (good) or biocidic (bad) and when our body is incapable of handling them our immune system reacts with an antigen/anti-body reaction, developing toxins. When those toxic reactions enter the blood stream the body is predisposed to systemic disorders and in the case of this subject, emotional issues.

Note: As positive as the following might be we cannot over emphasize that before embarking on any nutritional program that people first consult with their medical physician and that the following are for information purposes not any suggested treatment.

Vitamin D

Research studies have documented an association between low serum levels of vitamin D and higher incidences of mood disorders: PMS, Seasonal Affective Disorder (SAD), anxiety, non-specified mood disorder, and major depressive disorder.

In Seasonal Affective Disorder (SAD), which is a particular subtype of depression characterized by the onset or exacerbation of melancholia during winter months when bright light, sun exposure, and serum 25(OH)D levels are reduced, vitamin D was found superior to light therapy.

Increased levels of vitamin D (serotonin agonist) and full spectrum light have been associated with improved mood. Researcher Pamela K. Murphy, PhD, at the Medical University of South Carolina says, “People can help manage their moods by getting adequate vitamin D daily.” Elaine Magee, MPH, RD - WebMD Feature, May 05, 2012

- Lansdowne, A. T., & Provost, S. C. Vitamin D3 enhances mood in healthy subjects during winter. *Psychopharmacology* (Berl). 1998;135(4):319-23.
- Vitamin D vs broad spectrum phototherapy in the treatment of seasonal affective disorder. *J Nutr Health Aging*. 1999;3(1):5-739.
- Biotics Research Corporation. The clinical importance of vitamin D (Cholecalciferol): A paradigm shift with implications for all healthcare providers. *Alternative Therapies*. Sept/Oct 2004, VOL. 10, NO. 5. Regarding Vitamin D in General Vitamin D deficiency could be considered a pandemic in our country, with even people in the sun belt being less than optimal. In a study reported in the *Am J Clin Nutr* 2008, only 22% of the 637 residents of southern Arizona had optimal vitamin D levels. Considered optimal was any 25-hydroxy vitamin D blood levels over 30 Ng/ml, which is considered low by many researchers/practitioners.

Vitamin D Can Be dangerous

Let us keep in mind that vitamin D is a fat soluble vitamin therefore if taken in dosages to high it can cause toxic reactions. That being the case it is always a good idea to monitor the person's blood serum level of vitamin D.

Regarding the Preferred Form of Vitamin D to Supplement

Preferably supplementation should be performed with GMP Certified vitamin D3 rather than D2.- this holds true with all food supplements in that only GMP Certified (*) are of the Pharmaceutical Quality.

If supplementation is going to be above the "10,000 IU upper limit" per day, it should be done only when the serum 25(OH)D levels are below the Proposed Optimal Range of 40-100 ng/mL (100-250 mmol/L), and the Vitamin D supplementation must be continued for at least 5-9 months for maximum benefit.

- Endocrine Society. Practice guideline on vitamin D. *J Clin Endocrinol Metabol*. Published online June 6, 2011.
- Vasquez, A., Manso, G., & Cannell, J. The clinical importance of vitamin D (Cholecalciferol): A paradigm shift with implications for all healthcare providers. *Alternative Therapies*. Sept/Oct 2004, VOL. 10, NO. 5. Regarding the Serum Test for Vitamin D.
- The best serum analysis is the "25-(OH)D"
- The safety range of the "25-(OH)D" is 20 to 150 ng/ml and the Proposed Optimum Range is 40 to 100 ng/ml, and possible intoxication is >150 ng/ml. **NOTE:** If after vitamin D3 supplementation, symptom improvement is non-responsive, consider checking the vitamin D hormone ("1,25(OH)2D") for actual tissue saturation in ratio to the "25-(OH)D" level- again first consult with your medical physician..

EPA-DHA / Omega-3 Fatty Acids and Joint Pain and Depression and Anxiety

Our typical American diet of high omega-6 (associated with inflammation) and low omega-3 (anti-inflammatory) polyunsaturated fatty acids (the ratio can be as high as 30:1, and should ideally be 4:1) are ed to depression and anxiety, and one of the reasons why this is so prevalent in our country.

- Kiecolt-Glaser, J. K., Belury, M. A., Andridge, R., Malarkey, W. B., & Glaser, R. Omega-3 supplementation lowers inflammation and anxiety in medical students: A randomized controlled trial. *Brain Behav Immun*. 2011 Jul 19. *Observational studies have ed lower omega-3 (n-3) polyunsaturated fatty acids (PUFAs) and higher omega-6 (n-6) PUFAs with inflammation and depression.*

Determining whether if the omega 3 decreases proinflammatory cytokine production and depressive and anxiety symptoms are related.

To determine whether omega 3 decreases proinflammatory cytokine production and depressive and anxiety symptoms in healthy young adults, this parallel group, placebo-controlled, double-blind 12-week RCT compared n-3 supplementation with placebo.

The participants, 68 medical students, provided serial blood samples during lower-stress periods as well as on days before an exam. The students received either n-3 (2.5g/d, 2085 mg Eicosapentanoic acid and 348 mg docosahexaenoic acid) or placebo capsules that mirrored the proportions of fatty acids in the typical American diet.

Compared to controls, those students who received n-3 showed a 14% decrease in lipopolysaccharide (LPS) stimulated interleukin 6 (IL-6) productions and a 20% reduction in anxiety symptoms. Individuals differ in absorption and metabolism of n-3 PUFA supplements, as well as in adherence; accordingly, planned secondary analyses that used the plasma n-6:n-3 ratio in place of treatment group showed that decreasing n-6:n-3 ratios led to lower anxiety and reductions in stimulated IL-6 and tumor necrosis factor alpha (TNF- α) production, as well as marginal differences in serum TNF- α . These data suggest that n-3 supplementation can reduce inflammation and anxiety even among healthy young adults. The reduction in anxiety symptoms associated with n-3 supplementation provides the first evidence that n-3 may have potential anxiolytic benefits for individuals without an anxiety disorder diagnosis.

GABA & Glutamate Balance

Glutamate is an excitatory neurotransmitter and GABA is the nervous system's primary inhibitory neurotransmitter, found in the brain and spinal cord.

What possible Roles are reported that GABA might play in the body?

GABA tells neurons to slow down. About 40% of the millions of neurons all over the brain respond to GABA and our neurotransmitters.

What Are Neurotransmitters? How Do They Affect Health?

Neurotransmitters are natural chemical messengers found in the brain and nervous systems of the body. They are designed to facilitate and regulate the transmission of electrical energy and subsequent chemical release between the brain and nervous systems. Neurotransmitters affect neurons (nerve cells) that communicate with the brain and other organs in the body. Just like an automobile, neurons use accelerator neurotransmitters and brake neurotransmitters in regulating the speed of the neurological signal between brain, nerves and other organs of the body. When there is an excess, deficiency and/or imbalance of neurotransmitters, disease or illness can occur including both psychological as well female health.

Excitatory and Inhibitory Functions

Neurotransmitters have either an excitatory or inhibitory reaction on the body. Excitatory neurotransmitters accelerate nerve and chemical reactions in the brain, nerves and organs. Excitatory neurotransmitters include: Glutamate, Epinephrine (Adrenaline), Norepinephrine, PEA, (Beta-phenylethylamine).

Inhibitory neurotransmitters slow down nerve activity and they include: GABA, Serotonin, Dopamine.

Histamine is classified as neither excitatory or inhibitory but instead acts as a catecholamine (Dopamine, Epinephrine, and Norepinephrine) release.

Excitatory Neurotransmitter	Low	Appr	Norm	Appr	High
-----------------------------	-----	------	------	------	------

		Low		High	
Epinephrine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norepinephrine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norepinephrine/Epinephrine Ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glutamate-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PEA-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Inhibitory Neurotransmitter	Low	Appr Low	Norm	Appr High	High
Dopamine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Serotonin-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GABA-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Catecholamine Release	Low	Appr Low	Norm	Appr High	High
Epinephrine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norepinephrine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norepinephrine/Epinephrine Ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dopamine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Histamine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Neurotransmitter Patterns & Associated Symptoms

While no neurotransmitter test will diagnose a particular disease, a number of general health/disease patterns of and predispositions to illnesses and diseases are commonly seen. They are:

Epinephrine – affects metabolism, behavior, fatty acids (cholesterol) and blood glucose (diabetes/hypoglycemia).

High Levels – Anxiety, Hyperactivity, Stress.

Low Levels – Fatigue, Poor Concentration, Adrenal Gland Insufficiency, Obesity.

Norepinephrine – affects attention, concentration, anxiety, depression.

High Levels – Hypertension, Insulin Resistance, Stress, Malfunction in Neurotransmitter Metabolism, Obesity.

Low Levels – Fibromyalgia, Mood Disorders, Depression, Anorexia, Bulimia.

Dopamine – affects emotions, functions of the heart, kidneys, central nervous system and hormones.

High Levels – Autism, Hyperactivity, ADD, Abuse, L-DOPA containing therapies, Parkinson’s Disease, High Glycemic Carbohydrate Diets.

Low Levels – Drug/Alcohol Addiction, Sleep Disorders, Neurotoxicity, Cognitive dysfunction.

GABA – affects sleep (insomnia) and anxiety.

High Levels – Anxiety, Insomnia, Autism, Elevated Catecholamines, Compulsive Disorders. Catecholamines are stimulatory chemicals that affects the nerve synapses.

Low Levels – Schizophrenia, Epilepsy, Neurotransmitter metabolism.

PEA – affects roles in mental stability and behavioral problems.

High Levels – Schizophrenia, Psychotic Disorders, Phenylketonuria, ADD/ADHD, Autism.

Low Levels – Depression, Food Cravings (Chocolate), Fatigue, Cognitive dysfunction.

Histamine – affects allergies, immunity, sleep, and secretion of Pituitary secretions.

High Levels – Allergies, Inflammations, Tobacco Addiction, Restlessness, Inability to Relax, Stress, Serotonin Depletion.

Low Levels – Antihistamine use, L-Dopa therapy, Depression. Fatigue.

Glutamate – affects behavior and secretions of the Pituitary gland.

High Levels – ALS (Amyotrophic Lateral Sclerosis), Depression, Obsessive Compulsive Disorders, Autism, Amino Acid (protein) metabolism errors.

Low Levels – ADHD, Schizophrenia, Fatigue, Amino Acid (protein) metabolism errors.

Serotonin – affects mood, compulsive disorders, anxiety, insomnia, migraine headaches and depression.

Creatinine – effects roles in kidney functions, water retention and excretion.

The Neuroendocrine Connection - The Sex Hormones

The role of sex hormones in brain function (as well as other health problems) is multifaceted and influences the actions of multiple neurotransmitters, i.e. Anxiety disorders, depression, low libido disorders, substance abuse, impotence and antisocial behavior. Some of that tendency is related to hormones which are in fact neurotransmitters.

Parkinson’s Disease and Neurotransmitters

Estrogen has an antidopamine which explains why Parkinson’s Disease, which previously tended to be more severe in women, is now becoming equally prevalent in both genders. Estrogen, Progesterone, Estradiol, Testosterone, Androstandiol, Androsterone, Etiocholanolone and other Adrenal Cortico Steroid hormones all affect other hormones and their activities in the body. All neurotransmitters (including the male - testosterone and female hormones) should be regularly evaluated. Research is showing that many men have excessive levels of estrogens and many women have excess levels of androgens and it is those issues that are at the base cause of their health problems including loss of sex drive and aggression.

The Adrenal Hormones

In particular DHEA, Cortisol, Epinephrine and Norepinephrine affect not only personality, but influence metabolism, body weight, stress response and cognitive function. Cortisol inhibits the release of catecholamines and reduces the post-synaptic responses to norepinephrine. In addition to reducing the effects of norepinephrine, Cortisol, like progesterone, potentiates GABA receptors. These effects of Cortisol explain its ability to reduce anxiety.

Adrenal Hormones	Low	Appr Low	Norm	Appr High	High
DHEA-saliva	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cortisol-saliva (early morning)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cortisol-saliva (late morning)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cortisol-saliva (mid-afternoon)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cortisol-saliva (evening)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Epinephrine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norepinephrine-urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norepinephrine/Epinephrine Ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DHEA

DHEA is another hormone secreted by the adrenal glands which affects neurotransmitter function and disorders. DHEA enhances the neurotransmission of both serotonin and norepinephrine. This may explain its ability to enhance cognitive function, reduce depression and its inverse association with pain in Fibromyalgia. DHEA is a hormone readily available without prescription and can cause short as well as long term adverse effects on the health of those who take it. Just because a chemical is natural or available without prescription doesn't mean it's safe or that it will not have adverse effects on the health of those who take it without proper diagnostic testing,

Diagnosing The Whole Person – To See Is To Know, To Know Gives The Ability To Correctly Manage

In many areas of health care neurotransmitter and hormone evaluation is neglected. And people who want to get well and/or prevent illnesses are not equipped to properly manage their present or future health. If you fail to see the internal chemical activities of the body you cannot properly manage your health. An integral approach to neurotransmitter related diseases takes into account the important role of both male (Androgen) and female (Estrogen) hormones. With an understanding of neurotransmitters female and male hormones, more options are available to either augment existing or create new science based natural nutrition of therapeutic regimens.

What function do neurotransmitters play in the body?

They enable brain cells to transmit impulses from one to another. Impulses are released from the brain cells by electrical signals. GABA tells the neurons of the brain to slow down or stop working.

What does that mean?

This means that GABA has a general quietening influence on the brain; it is in some ways the body's natural hypnotic and tranquilizer.

GABA-and glutamatergic network imbalance underlies a spectrum of emotional and neurodegenerative disorders such as Anxiety Disorder. Convergence of neuroscience and natural ingredient research identifies safe bio actives—amino acids, phytochemicals, vitamins, and minerals that may successfully promote GABA & glutamate balance.

Neurotransmitters should not be taken without a Neurotransmitter (Amino Acid) Test. and/or The Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT).

It can be performed simply and inexpensively by analyzing a urine sample and discussing the idea with their medical physician. Why? Several reasons but one is that as good as some people's response to food supplements might be not everyone is going to receive the same or similar benefits or react to them in positive ways.

N-acetylcysteine (NAC). What is it?

Considered a:

- Natural NDMA receptor antagonist
- Protect nerve cells from harmful effects
- Precursor to glutathione, a primary antioxidant in the body as well as in the CNS
- NAC inhibits excitatory neurotransmission by activation of the xc- transporter, promoting metabotropic receptors and inhibiting glutamate release **Source:** *Journal of Neuroscience*. 2005;6389.

Taurine. What is it and what roles does it play in the body? Taurine (C 2 aminoethanesulfoonic) acid (a component of the family of proteins

When functioning normally it can:

- Acts as an endogenous GABA agonist
- Rescues neurons from excitotoxic effects induced by elevated glutamate
- Naturally occurring amino acid in mammalian brain which plays a role in transulfation pathways
- End product of cysteine metabolism
- High ligand affinity to GABA receptors
- Blocks GABA degradation by inhibiting the enzyme GABA transaminase (GABA-T)
- Inhibits metabotropic glutamate mediated calcium depolarization
- Activates GABA receptors in hippocampal neurons
- Binds to GABA receptors and reduces plasma cortisol levels after stress

Note:

If you are looking for particular neurotransmitter relevant to a specific health issue go to Find” type in the name of the health issue and your computer will bring up the condition and give you a list of not only relative neurotransmitter but the other food supplements that are relevant to the health issue.

Then if you’re interested in ordering any of those food supplements:

Are neurotransmitters food supplements available?

Yes like all of the are GPM Pharmaceutical Quality food supplements food supplements discussed in our books) are available at discount through Nutri Dyn Midwest.

24/7/365 Access

Procedures for ordering food supplements from Nutri Dyn Midwest

Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today
1. Go to www.nutri-dyn.com
2. Click on Create Account
3. Click on Patients
4. Complete the short form and type in the following Account Number 100160
5. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive

Références

- *Albrecht, J., et al. Taurine interaction with neurotransmitter receptors in the CNS: An update. Neurochemical Research. 2005;30(12):1615–1621.*
- *European Journal of Pharmacology. 2006;171-175.*

Magnesium. What is it?

Magnesium is an essential element that catalyzes more than 300 enzymatic reactions, in particular those involving mitochondrial ATP. What are mitochondria? When healthy they are the cellular powerhouses of cells (Organelles) that act like for example the digestive system which they take the nutrients that we ingest, metabolize them and create energy for us and one of the minerals vital to their functioning correctly is magnesium.

- Mitochondrial Magnesium deficiency may increase excitatory events in the neuron
- Reduced ATP efficiency
- Calcium influx
- Excess glutamate
- Potentiate stimuli that trigger apoptosis (cell death)

Références

- *Miller, S., et al. Effects of magnesium on atrial fibrillation after cardiac surgery: A meta-analysis. Heart. 2005;91(5):618-623.*
- *Gums, J. G. Magnesium in cardiovascular and other disorders. Am J Health Syst Pharm. 2004;61(15):1569-1576.*
- *Pearlstein, T., & Steiner, M. Non-antidepressant treatment of premenstrual syndrome. J Clin Psychiatry. 2000;61(Suppl 12):22-27.*

Green Tea Catechins. What is it?

- *Amongst many other things it is known to binds to GABA receptors and reduces plasma cortisol levels after social separation stress European Journal of Pharmacology. 2006;171-175.*
- *May be neuroprotective due to its ability to inhibit intracellular calcium influx in the glutamate receptors Mol Nutr Food Res. 2006;50:229-234*

Pyridoxine (B6). What is it and what roles does it play in the body?

Pyridoxine is a B complex vitamin that is involved in excitatory glutamate conversion to calming GABA, neuron life cycle, nervous system function, methylation, homocysteine metabolism. *Brain and Development*. 2001;24-29. and *Epilepsia*. 1993;34:33-47.

NOTE 1: The nutritional support/dietary review outlined below are primarily designed for mild to moderate symptomatology. It should be noted that if the patient is on prescription medication, and the patient's intent is to reduce or discontinue the prescribed medication, it should be stressed that the prescribing physician must be informed, and ideally should participate in any changes in the prescription dosing.

NOTE 2: Regarding dosing for children

The general recommendations are dosed for an average 150 pound adult. For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc.

Foods for Healthy Brain Function and Mood

What we eat influences our mental and neurologic health. Our understanding of how diet affects the brain has grown significantly, but one is best served when they have a bio-individuality and IgE and IgG4 Food Sensitivity Tests – even internal combustion engines have very specific grades of gasoline just as everybody has some similarity's as well as biochemical differences and the IgE and IgG4 Food Sensitivity Tests are good ways to determine foods that may be biocidal (incompatible) as well as biogenic (compatible).

The Effects of Long Term Ingestion of Biocidal Foods

Some foods are good for our wellbeing others not. When we consume foods that our body (genetic DNA) is unable to accommodate then there are antigen/antibody reactions which interfere with the life Force with us and if we persist in consuming those foods we will have initial as well as experience the accusative negative effects on our health.

Diet Considerations for Depression

Research from the past several years suggests that consumption of monounsaturated fatty acids (found in olive oil, avocados, and nuts), polyunsaturated fatty acids (PUFAs; found in nuts, seeds, fish, and leafy green vegetables), and supplements containing Eicosapentanoic acid decreases depression risk over time.[1-3] to that end, adhering to Mediterranean diet patterns—specifically that is, a diet rich in fruits, vegetables, nuts, whole grains, and fish and high in unsaturated fat—is associated with a 30% reduction in depression risk, compared with meat and dairy-heavy diets and diets high in trans-fatty acids; intake of the latter is associated with an increased depression risk over time.[4] Conversely, low levels of PUFAs may increase the risk of developing postpartum depression, according to a 2012 literature review published in the *Canadian Journal of Psychiatry*. [5] Keep in mind, however, that although there is strong evidence of an association between diet and depression, most studies to date have not proven causality, supporting the need for large, randomized primary prevention trials.[6].

Rethinking Fat

Beyond reducing depression risk, the unsaturated fatty acids common in the Mediterranean diet have other benefits for the brain. A 2012 review published in *Pediatrics* reported on the evidence of PUFA deficiency to attention-deficit/hyperactivity disorder, as well as findings from trials where these fats were used successfully to address ADHD symptoms.[7]. Another small study showed that increasing omega-3 fatty acid consumption enhances working memory in young adults.[8]. Previous work has tied Mediterranean diets high in olive oil consumption with a lower risk for ischemic stroke,[9,10] mild cognitive impairment and Alzheimer disease, and particularly the latter two when associated with high levels of physical activity.[11,12]

Consider Salmon

Oily, cold-water fish like salmon, trout, and mackerel are especially good sources of PUFAs, namely omega-3 fatty acids. According to a 2012 study,[13] 2 servings a week are associated with a modest but clinically significant reduction in stroke risk. A 2010 study suggested that consuming a moderate amount of oily fish was protective against the risk for psychotic symptoms; however, greater intakes were associated with an increased risk.[14] This J-shaped relationship between fish or PUFA intake and mental health problems has also been suggested by other studies and is consistent with the importance of a balanced diet.[15,16] However, concurrent work from randomized controlled trials has suggested that fish oil may help prevent psychosis in high-risk individuals. [17] A multicenter, randomized double-blind study is under way to determine whether omega-3 fatty acid supplementation can help prevent the onset of psychosis and improve symptoms and outcomes in those at high risk for schizophrenia. Again the importance of having a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT), Chem Screen, CBE, IgG, IgG4 and Bio Individuality and Hair mineral/toxic Metal tests can't be overstated because often unbeknown to us we are allergic to what we often consider "good" foods.

Fruit to Fend Off Stroke

2012 was a good year for fruit. An analysis from the Nurses' Health Study found that high consumption of flavanones, a flavonoid subclass found in high concentrations in grapefruits and oranges, is associated with a 19% lower risk for ischemic stroke in women. [18]. A Finnish study, [19] published in *Neurology* reported that a diet high in lycopene, a potent antioxidant found in tomatoes, may cut stroke risk in men. Previous work has shown that polyphenols, namely anthocyanins, found in berries and other darkly pigmented fruits and vegetables may slow cognitive decline by inducing autophagy (a process by which cells clear proteinaceous debris ed to memory loss) and reduce cardiovascular disease risk by reducing oxidative stress and attenuating inflammatory gene expression.[20-22] Each of these studies points to the importance of a healthy diet high in plant foods and low in processed foods for a range of health outcomes, both physical and mental.

Soda and Coffee

2012 saw more evidence that coffee might be the original wonder drug. A new observational study,[23] to be presented at the American Academy of Neurology meeting in March shows that people who drink 4 cups of coffee a day are 10% less likely to develop depression. Those who opted for 4 or more servings a day of diet soda or fruit punch were 30% and 38% more likely, respectively, to develop depression. Past work also suggests that coffee, the world's most widely used stimulant, cuts depression risk, possibly by altering serotonin and dopamine activity and through its antioxidant and anti-inflammatory properties. [24-27]

Alcohol: Always in Moderation

The Greeks touted "nothing in excess," a refrain that still rings true: Low to moderate* alcohol consumption has been associated with numerous potential physiologic benefits with neurologic implications, including improved cholesterol profiles, beneficial effects on platelet and clotting function, and improved insulin sensitivity.[28] Last year a study found that limited alcohol use is associated with a lower risk for dementia[28,29] and that moderate alcohol—especially antioxidant-rich red wine intake—may protect against cerebrovascular disease.[30-32].

A new study published in *Circulation Research* found that dealcoholized Merlot reduced blood pressure by approximately 6/3 mm Hg in a sample of 67 men at high cardiovascular risk, suggesting that the beneficial effects of wine consumption may not strictly be due to its alcohol content.[33] However, the health costs to the brain of alcohol consumption can quickly outweigh

the benefits, as heavy and long-term alcohol use can lead to alcohol abuse and dependence, impair memory function, contribute to neurodegenerative disease, and hinder psychosocial functioning.

**The US Food and Drug Administration defines “moderate alcohol consumption” as up to 1 drink per day for women and up to 2 drinks per day for men. One drink is equivalent to 12 fluid ounces of regular beer, 5 fluid ounces of 12% alcohol wine, or 1.5 fluid ounces of distilled spirits.*

Chocolate—and Still More Antioxidants

Many recent studies have added to the already robust body of evidence suggesting that dark, flavone-rich chocolate may have cardiovascular benefits. A meta-analysis published in Cochrane Database of Systematic Reviews reported that individuals who consumed 100 g of dark chocolate every day (a standard Hershey bar weighs 43 g) saw an average blood pressure drop of 2.77/2.20mm Hg compared with control participants.[34].

A study out of Finland,[35] published in Neurology reported that individuals who eat at least 52 g of chocolate per week have a 17% lower risk for stroke, compared with those who eat less than 12 g a week.

The flavones in dark chocolate likely contribute to the reported benefits by:

Scavenging free radicals and improving endothelial and platelet function. But always check the label, as some processed chocolate contains trans-fats, which should be avoided.

What Not to Eat: Cut the Carbs

Various 2012 studies further clarified how overly sweet, unhealthy foods affect the brain. An animal study,[36] out of UCLA found that diets high in fructose can impair cognitive function, which is reversible with omega-3 fatty acid supplementation. Coauthor Fernando Gomez-Pinilla, PhD, told Medscape Medical News, “High fructose consumption can induce some signs of metabolic syndrome in the brain and can disrupt the signaling of the insulin receptors and reduce the action of insulin in the brain. “

The Journal of The American Medical Association

Other work[37] published in JAMA suggests that fructose consumption modulates the neurophysiologic pathways involved in appetite regulation and encourages overeating. An October 2012 study [38] published in the Journal of Alzheimer’s Disease reported that a diet high in carbohydrates and sugar raises the risk for mild cognitive impairment in the elderly, while a diet high in fat and protein may reduce this risk. Lead author Rosebud O. Roberts, MD, an epidemiologist at Mayo Clinic in Rochester, Minnesota, commented to Medscape Medical News that an optimal balance of carbohydrates, fat, and protein may help “maintain neuronal integrity and optimal cognitive function in the elderly.”

Earlier in the year another study [40] found that processed and unprocessed red meat is associated with a higher risk for stroke, while poultry was associated with a reduced risk. A study by Sánchez-Villegas and colleagues found that a diet high in fruits, vegetables, grains, and fish led to a 30% lower depression risk compared with a meaty diet. But, meat quality might be a factor: moderate consumption of unprocessed, free-range/grass-fed red meat may actually protect against depression and anxiety.[41] Mental health nutrition expert Dr. Felice Jacka, a research fellow at Deakin University in Geelong, Australia, comments in this report that despite the growing locavore movement, much of the livestock in the United States is raised on industrial feedlots, which “...increases saturated fat and decreases very important good fatty acids, pasture-raised animals have a much healthier fatty acid profile.”

Moderation Is the Key

It appears to be true that consumption of red meats increases the risk of stroke but as true as that might be just because you might eat red meat periodically doesn't mean that you are setting yourself up for a stroke.

Mounting evidence in 2012 reinforces that high consumption of red meat increases stroke risk. The largest meta-analysis to date[39] looking at the atherogenic effects of red meat found that the risk for total stroke increased by up to 13% for each increase in a single serving of fresh, processed, and total amount of red meat consumed per day. And common sense says that the same thing about most other foods.

Références

1. Sánchez-Villegas, A., Verberne, L., & de Irala, J., et al. *Dietary fat intake and the risk of depression: The SUN project. PLoS One.* 2011;6:e16268.
2. Sánchez-Villegas, A., Toledo, E., de Irala, J., Ruiz-Canela, M., Pla-Vidal, J., & Martínez-González, M. A. *Fast-food and commercial baked goods consumption and the risk of depression. Public Health Nutr.* 2012;15:424-432.
3. Sublette, M. E., Ellis, S., Geant, A. L., & Mann, J. J. *Meta-analysis of the effects of Eicosapentanoic acid (EPA) in clinical trials in depression. J Clin Psychiatry.* 2011;72:1577-1584.
4. Sánchez-Villegas, A., Delgado-Rodríguez, M., & Alonso, A., et al. *Association of the Mediterranean dietary pattern with the incidence of depression: The Seguimiento Universidad de Navarra/University of Navarra follow-up (SUN) cohort. Arch Gen Psychiatry.* 2009;66:1090-1098.
5. Pierre, J. M. *Mental illness and mental health: Is the glass half empty or half full? Can J Psychiatry.* 2012;57:704-712.
6. Sanchez-Villegas, A., & Martinez-Gonzalez, M. A. *Diet, a new target to prevent depression? BMC Med.* 2013;11:3. [Epub ahead of print.]
7. Millichap, J. G., & Yee, M. M. *The diet factor in attention-deficit/hyperactivity disorder. Pediatrics.* 2012;129:330-337.
8. Narendran, R., Frankle, W. G., Mason, N. S., Muldoon, M. F., & Moghaddam, B. *Improved working memory but no effect on striatal vesicular monoamine transporter type 2 after omega-3 polyunsaturated fatty acid supplementation. PLoS One.* 2012;7:e46832.
8. Fung, T. T., Rexrode, K. M., Mantzoros, C. S., Manson, J. E., Willett, W. C., & Hu, F. B. *Mediterranean diet and incidence of and mortality from coronary heart disease and stroke in women. Circulation.* 2009;119:1093-1100.
9. Kastorini, C. M., Milionis, H. J., & Ioannidi, A., et al. *Adherence to the Mediterranean diet in relation to acute coronary syndrome or stroke nonfatal events: A comparative analysis of a case/case-control study. Am Heart J.* 2011;162:717-724.
10. Scarmeas, N., Stern, Y., Mayeux, R., Manly, J. J., Schupf, N., & Luchsinger, J. A. *Mediterranean diet and mild cognitive impairment. Arch Neurol.* 2009;66:216-225.
11. Scarmeas, N., Luchsinger, J. A., & Schupf, N., et al. *Physical activity, diet, and risk of Alzheimer disease. JAMA.* 2009;302:627-637.
12. Chowdhury, R., Stevens, S., & Gorman, D., et al. *Association between fish consumption, long chain omega 3 fatty acids, and risk of cerebrovascular disease: Systematic review and meta-analysis. BMJ.* 2012 Oct 30;345:e6698.
13. Hedelin, M., Löf, M., & Olsson, M., et al. *Dietary intake of fish, omega-3, omega-6 polyunsaturated fatty acids and vitamin D and the prevalence of psychotic-like symptoms in a cohort of 33000 women from the general population. BMC Psychiatry.* 2010;10:38.

14. Sanchez-Villegas, A., Henriquez, P., & Figueiras, A., et al. Long chain omega-3 fatty acids intake, fish consumption and mental disorders in the SUN cohort study. *Eur J Nutr.* 2007;46:337-346.
15. Jacka, F. N., Pasco, J. A., Williams, L. J., Meyer, B. J., Digger, R., & Berk, M. Dietary intake of fish and PUFA, and clinical depressive and anxiety disorders in women. *Br J Nutr.* 2012 Oct 10:1-8. [Epub ahead of print.]
16. Amminger, G. P., Schäfer, M. R., & Papageorgiou, K., et al. Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders: A randomized, placebo-controlled trial. *Arch Gen Psychiatry.* 2010;67:146-154.
17. Cassidy, A., Rimm, E. B., & O'Reilly, E. J., et al. Dietary flavonoids and risk of stroke in women. *Stroke.* 2012;43:946-951.
18. Karppi, J., Laukkanen, J. A., & Sivenius, J. Serum lycopene decreases the risk of stroke in men. *Neurology.* 2012;79:1540-1547.
19. Brooks, M. New mechanism for berries' potential brain benefits uncovered. *Medscape Medical News.* August 31, 2010. Accessed January 10, 2013. <http://www.medscape.com/viewarticle/727764>
20. Polouse, S. Berry extracts and brain aging: Clearance of toxic protein accumulation in brain via induction of autophagy. Program and abstracts of the 240th National Meeting of the American Chemical Society. August 22-26, 2012. Boston, MA,[Abstract 60.]
21. Basu, A., Rhone, M., & Lyons, T. J. Berries: Emerging impact on cardiovascular health. *Nutr Rev.* 2010;68:168-177.
22. Chen, H. Sweetened beverages, coffee, and tea in relation to depression among older US adults. American Academy of Neurology 65th Annual Meeting. March 16-23, 2013. San Diego, California. [Abstract 2257.]
23. Lucas, M., Mirzaei, F., & Pan, A., et al. Coffee, caffeine, and risk of depression among women. *Arch Intern Med.* 2011;171:1571-1578.
24. Pasco, J. A., Nicholson, G. C., & Williams, L. J., et al. Association of high-sensitivity C-reactive protein with de novo major depression. *Br J Psychiatry.* 2010;197:372-377.
25. Ng, F., Berk, M., Dean, O., & Bush, A. I. Oxidative stress in psychiatric disorders: Evidence base and therapeutic implications. *Int J Neuropsychopharmacol.* 2008;11:851-876.
26. O'Connor, A. Coffee drinking ed to less depression in women. *New York Times.* February 13, 2012. Accessed January 11,2013. <http://well.s.nytimes.com/2011/09/26/coffee-drinking-ed-to-less-depression-in-women/>
27. Wayerer, S., Schäufele, M., & Wiese, B., et al. German AgeCoDe Study group (German Study on Ageing, Cognition and Dementia in Primary Care Patients). Current alcohol consumption and its relationship to incident dementia: Results from a 3-year. follow-up study among primary care attenders aged 75 years and older. *Age Ageing.* 2011;40:456-463.
28. Peters, R., Peters, J., Warner, J., Beckett, N., & Bulpitt, C. Alcohol, dementia, and cognitive decline in the elderly: A systematic review. *Age Ageing.* 2008;37:505-512.
29. de Gaetano, G., Di Castelnuovo, A., Rotondo, S., Iacoviello, L., & Donati, M. B. A meta-analysis of studies on wine and beer and cardiovascular disease. *Pathophysiol Haemost Thromb.* 2002;32:353-355.
30. Matos, R. S., Baroncini, L. A., & Précoma, L. B., et al. Resveratrol causes antiatherogenic effects in an animal model of atherosclerosis. *Arq Bras Cardiol.* 2012;98:136-142.
31. Bertelli, A. A., & Das, D. K. Grapes, wines, resveratrol, and hearth health. *J Cardiovasc Pharmacol.* 2009;54:468-476.

32. Chiva-Blanch, G., Urpi-Sarda, M., & Ros, E., et al. Dealcoholized red wine decreases systolic and diastolic blood pressure and increases plasma nitric oxide: Short communication. *Circ Res.* 2012;111:1065-1068.
33. Ried, K., Sullivan, T. R., & Fakler, P., et al. Effect of cocoa on blood pressure. *Cochrane Database Syst Rev.* 2012; DOI: 10.1002/14651858.CD008893.pub2
34. Larsson, S. C., Virtamo, J., & Wolk, A. Chocolate consumption and risk of stroke: A prospective cohort of men and met analysis. *Neurology.* 2012;79:1223-1229.
35. Agrawal, R., & Gomez-Pinilla, F. 'Metabolic syndrome' in the brain: Deficiency in omega-3 fatty acid exacerbates dysfunctions in insulin receptor signaling and cognition. *J Physiol.* 2012;590:2485-2499.
36. Page, K. A., Chan, O., & Arora, J., et al. Effects of fructose vs glucose on regional cerebral blood flow in brain regions involved with appetite and reward pathways. *JAMA.* 2013;309:63-70, 85-86.
37. Roberts, R. O., Roberts, L. A., & Geda, Y. E., et al. Relative intake of macronutrients impacts risk of mild cognitive impairment or dementia. *J Alzheimers Dis.* 2012;32:329-339.
38. Kaluza, J., Wolk, A., & Larsson, S. Red meat consumption and risk of stroke. *Stroke.* 2012;43:2556-2560.
39. Bernstein, A. M., Pan, A., & Rexrode, K. M., et al. Dietary protein sources and the risk of stroke in men and women. *Stroke.* 2012;43:637-644.
40. Jacka, F. N., Pasco, J. A., & Williams, L. J., et al. ORed meat consumption and mood and anxiety disorders. *Psychother Psychosom.* 2012;81:196-198.

AREDS & AREDS2

The Age-Related Eye Disease Study (AREDS), sponsored by the National Eye Institute, was a landmark study[3] that established AMD as a “nutrition-responsive disorder.” This large randomized controlled trial showed a 25% reduction in risk for progression to advanced AMD in high-risk patients who took a combination of antioxidant vitamins (vitamins C and E), beta-carotene, zinc, and copper. AREDS2 is now underway to establish the benefits of xanthophylls and omega-3 fatty acids, and initial results are expected in 2013. Supplement manufacturers aren't waiting, however. Formulations of AREDS2 have already joined AREDS supplements on the drugstore shelves.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Lutein

Lutein and zeaxanthin are xanthophyll carotenoids that have antioxidant and light-screening mechanisms. When functioning optimally they are deposited in the macula, where they are hoped to boost macular pigment optical density that is lost with age, reducing photo-oxidation in the central retina. [4] Lutein's purported benefits are believed to be related to its effects on immune responses and inflammation.[5] The CARMA study failed to provide definitive evidence for the protective effects of carotenoids on AMD.[6] Epidemiologic studies also suggest that dietary intake of lutein and zeaxanthin is inversely related to the risk for cataract.[7,8] The human body does not synthesize lutein, so it must be obtained from dietary sources. Green leafy vegetables are the major dietary sources of lutein.[9]

Zeaxanthin

Like lutein, zeaxanthin is contained within the retina. Whereas lutein predominates in the peripheral retina, zeaxanthin is the dominant component in the central macula. Zeaxanthin may be a better photoprotector than lutein, but its protective role might have been obscured because investigations usually studied both carotenoids together.[10] The major dietary sources of zeaxanthin are corn, spinach, collard greens, lettuce, and tangerines. A recent study showed that the effect on macular pigment level did not differ whether lutein and zeaxanthin intake came from plant sources or dietary supplements.[11]

Zinc

Zinc is documented to be potentially an effective antioxidant and anti-inflammatory mineral, and it was included in the AREDS study.[3] Participants were randomly assigned to receive oral supplements of high-dose antioxidants, zinc, antioxidants plus zinc, or placebo. The only statistically significant reduction in rates of at least moderate visual acuity loss occurred in persons assigned to receive antioxidants plus zinc. Patients with AMD or cataract had lower survival, but survival was higher in patients taking zinc.[12] High doses of zinc can lead to copper deficiency anemia, so copper has been added to AREDS formula supplements. Good dietary sources of zinc include oysters, crab, toasted wheat germ, veal liver, low-fat roast beef, mutton, pumpkin seeds, dark chocolate, and peanuts.

Omega-3 Fatty Acids

An important functional role for the essential fatty acid docosahexaenoic acid (DHA) is suggested by its high concentration in the retina. Prospective data from a large cohort of female health professionals without AMD at baseline indicate that regular consumption of omega-3 fatty acids and fish is associated with a significantly lower risk for AMD and may be of benefit in primary prevention of AMD.[13] The AREDS2 study is evaluating the effect of omega-3 fatty acids on progression to advanced AMD. Dietary omega-3 fatty acids have also been shown to control the symptoms of dry eye syndrome.[14] Omega fatty acids can be acquired through higher consumption of fatty fish (salmon, tuna, mackerel, sardines) or through omega-3 fatty acid supplements in the form of oil or capsules

Vitamin E

It has been suggested that vitamin E, like other antioxidants, might have a role in preventing, slowing progression of, or improving macular degeneration. However, the evidence is inconclusive. Studies have not shown a benefit of vitamin E supplementation in reducing the development or progression of either AMD[15] or cataracts.[16] However, a combination of vitamin E and other nutrients (a 400 IU/day intake of vitamin E plus beta-carotene, vitamin C, and zinc) slows the progression of advanced AMD. Vitamin E is more difficult to obtain from food sources alone because it is found in very small quantities in foods. Dietary sources of vitamin E include fortified cereals, wheat germ, sunflower seeds, and vegetable oils.

Vitamin C

Vitamin C (500 mg) was also included in the AREDS formulation that were believed to play roles in possibly reducing the risk for progression to advanced AMD. An antioxidant found in fruits and vegetables, vitamin C may have a role in lowering risk for cataracts and, when taken in combination with other essential nutrients, slow the progression of AMD and visual acuity loss. Independent effects of vitamin C on eye health are inconclusive. In a large-scale, randomized trial of physicians, daily use of 500 mg of vitamin C for 8 years had no appreciable beneficial or harmful effect on risk for incident diagnosis of AMD.[17]

Flavonoids

Natural flavonoids are believed to have a role in the prevention of cataracts. Flavonoids are believed to influence the multiple key molecular mechanisms involved in cataract formation and lens opacification, including oxidative stress, lens calpain proteases, epithelial cell signaling, nonenzymatic glycation, and the polyol pathway.[18] The flavonol quercetin is the most widely consumed flavonoid in the human diet, found in apples, tea, onions, nuts, and berries.

Beta-carotene

Beta-carotene is a carotenoid that is believed to be active in the prevention of free radical formation. To determine the effects of a carotenoid on the development of AMD, beta-carotene was included in the original AREDS formula because lutein and zeaxanthin were not yet commercially available. However, beta-carotene is not present in the retina, so any beneficial effects of the combination of nutrients are unlikely to be related to beta-carotene. In a large population of healthy men, beta carotene supplementation had no beneficial or harmful effect on the incidence of AMD.[19]

References

1. *Ocular Nutrition Society. Baby boomers value vision more than any other sense but lack focus on eye health. October 24, 2011. <http://www.ocularnutritionssociety.org/boomers> Accessed October 14, 2012.*
2. Hochstetler, B. S., Scott, I. U., Kunselman, A. R., Thompson, K., & Zerfoss, E. Adherence to recommendations of the age-related eye disease study in patients with age-related macular degeneration. *Retina*. 2012;30:1166-1170.
3. Age-Related Eye Disease Study Research group (AREDS Report No. 8): A randomized, placebo controlled, clinical trial of high-dose supplemented with vitamins C and E, beta-carotene, for age-related macular degeneration and vision loss. *Arch Ophthalmol*. 2001;119:1417-1436.
4. Bernstein, P. S., Zhao, D. Y., Wintch, S. W., Emakov, I. V., McClane, R. W., & Gellermann, W. Resonance Raman measurement of macular carotenoids in normal subjects and in age-related macular degeneration patients. *Ophthalmology*. 2002;109:1780-1787.
5. Kijlstra, A., Tian, Y., Kelly, E. R., & Berendschot, T. T. Lutein: More than just a filter for blue light. *Prog Retin Eye Res*. 2012;31:303-315.
6. Chakravarthy, U., Beatty, S., & Stevenson, M. CARMA study group. Functional and morphological outcomes in the CARMA clinical trial. Program and abstracts of the Association for Research in Vision and Ophthalmology 2009 Annual Meeting; May 3-9, 2009; Ft. Lauderdale, Florida. Abstract 1257.
7. Chiu, C. J., & Taylor, A. Nutritional antioxidants and age-related cataract and maculopathy. *Exp Eye Res*. 2007;84:229-245.
8. Christen, W. G., Liu, S., Glynn, R. J., Gaziano, J. M., & Buring, J. E. Dietary carotenoids, vitamins C and E, and risk of cataract in women: A prospective study. *Arch Ophthalmol*. 2008;126:102-109.
9. Perry, A., Rasmussen, H., & Johnson, E. J. Xanthophyll (lutein, zeaxanthin) content in fruits, vegetables, and corn and egg products. *J Food Compost Anal*. 2009;22:9-15.
10. Gale, C. R., Hall, N. F., Phillips, D. I., & Martyn, C. N. Lutein and zeaxanthin status and risk of age-related macular degeneration. *Invest Ophthalmol Vis Sci*. 2003;44:2461-2465.
11. Graydon, R., Hogg, R. E., Chakravarthy, U., Young, I. S., & Woodside, J. V. The effect of lutein- and zeaxanthin-rich foods v. supplements on macular pigment level and serological markers of endothelial activation, inflammation, and oxidation: Pilot studies in healthy volunteers. *Br J Nutr*. 2012;108:334-342.

12. Age-Related Eye Disease Study Research. AREDS Report No. 13: Association of mortality with ocular disorders and an intervention of high dose anti-oxidants and zinc in the age-related eye disease study. *Arch Ophthalmol.* 2004;122:716-726.
13. Christen, W. G., Schaumberg, D. A., Glynn, R. J., & Buring, J. E. Dietary omega-3 fatty acid and fish intake and incident age-related macular degeneration in women. *Arch Ophthalmol.* 2011;129:921-929.
14. Brignole-Baudouin, F., Baudouin, C., & Aragona, P., et al. A multicentre, double-masked, randomized, controlled trial assessing the effect of oral supplementation of omega-3 and omega-6 fatty acids on a conjunctival inflammatory marker in dry eye patients. *Acta Ophthalmol.* 2011;89:e591-597.
15. Taylor, H. R., Tikellis, G., Robman, L. D., McCarty, C. A., & McNeil, J. J. Vitamin E supplementation and macular degeneration: Randomized controlled trial. *BMJ.* 2002;325:11.
16. McNeil, J. J., Robman, L., Tikellis, G., Sinclair, M. I., McCarty, C. A., & Taylor, H. R. Vitamin E supplementation and cataract: Randomized controlled trial. *Ophthalmology.* 2004;111:75-84.
17. Christen, W. G., Glynn, R. J., & Sesso, H. D., et al. Vitamins E and C and medical record-confirmed age-related macular degeneration in a randomized trial of male physicians. *Ophthalmology.* 2012;119:1642-1649.
18. Stefek, M. Natural flavonoids as potential multifunctional agents in prevention of diabetic cataract. *Interdiscip Toxicol.* 2011;4:69-77.
19. Christen, W. G., Manson, J. E., & Glynn, R. J., et al. Beta carotene supplementation and age-related maculopathy in a randomized trial of US physicians. *Arch Ophthalmol.* 2007;125:333-339.

Asthma

Asthma is a disease in which inflammation of the airways restricts airflow in and out of the lungs. The word asthma comes from the Greek word for “panting.” The panting and wheezing sound characteristic of asthma occurs because of the restricted flow of air.

Normally, when you breathe in an irritant or are subjected to a stressor such as exercise, your airways relax and open, allowing the lungs to get rid of irritants or take in more air. In a person with asthma, muscles in the airways tighten and the lining of the air passages swells. The immune system gets involved, but instead of helping, it causes inflammation.

Asthma is a disease of both adults and children. In fact, asthma is the most common chronic childhood illness. About half of all cases of asthma develop before the age of 10. Many children with asthma also have allergies. While there is no cure for asthma, it can be controlled. A significant proportion of children with asthma also have allergies/sensitivities.

Signs & Symptoms

Most people with asthma have periodic attacks separated by symptom-free periods. Some asthmatics have chronic shortness of breath with episodes of increased shortness of breath. Asthma attacks can last minutes to days and can become dangerous if the airflow becomes severely restricted.

Very often asthmatic attacks are followed after eating a food the patient is unknowingly sensitive to and/or being exposed to something in the environment that causes an internal antigen/antibody reaction which may often manifest as an asthmatic attack.

The primary symptoms of asthma include:

- Shortness of breath

- Wheezing — usually begins suddenly; may be worse at night or early in the morning; aggravated by exposure to cold air, exercise, heartburn, and relieved with the use of bronchodilators (drugs that open the airways; see Medications)
- Chest and back tightness
- Cough (dry or with sputum)

Call for emergency assistance if you or are someone you are with is having any of the following serious symptoms:

- Extreme difficulty breathing or cessation of breathing
- Bluish color to the lips and face (called cyanosis)
- Severe anxiety
- Rapid pulse
- Profuse sweating
- Decreased level of consciousness (such as drowsiness or confusion)

Additional symptoms that may be associated with an asthma attack include:

- Flared nostrils
- Abnormal breathing pattern, in which exhalation takes more than twice as long as inhalation.
- Use of the muscles between the ribs (called intercostal) to help with the increased work of breathing
- Coughing up blood (called hemoptysis)

Causes of asthma

Asthma is most likely caused by a combination of several factors. Experts suggest that in people who are:

Susceptible (genetically predisposed), factors such as allergens (substances that commonly induce an allergic reaction), infections, dietary patterns, exercise, cigarette smoke, spinal issues and stress can bring on an asthma attack.

Asthma Related Risk Factors

The following factors may increase the risk of developing asthma:

- **Heredity/Family History** — Children with asthma often have allergies as well
- **Cigarette smoke**, including second-hand smoke from, for example, parents or a spouse
- **Food allergies** — A true food allergy, particularly one that induces asthma, is difficult to identify and, therefore, it is not clear exactly how frequently (or infrequently) this contributes to asthma; it seems to be more common in children than in adults and the responsible foods include eggs, milk, wheat, soy, peanuts, fish, shellfish, and sulfite food preservatives
- **Living in a Western or industrialized country** — Some experts believe that dietary habits (more processed foods, less fruits and vegetables), indoor living (resulting in overexposure to indoor allergens), energy-efficient homes (trapping allergenic dust mites inside), immunizations, and possibly, declining rates of breastfeeding contribute to the rising rates of asthma
- **Urban living / air quality**
- **Gender** — Among younger children, asthma develops twice as frequently in boys as in girls, but after puberty it may be more common in girls
- **Obesity** — Controversial; a recent study suggests that asthma is over-diagnosed among obese people
- **Acetaminophen or Paracetamol use**

Goksoor, E., et al. Risk for wheeze in kids increased with antibiotics, acetaminophen (preschool wheeze as a marker for childhood asthma). *Acta Paediatrica*. 2011;100:1561-1566, 1567-1571.

•• **Common Cleaning Products Can Trigger Asthma Symptoms** — Fumes from cleaning products such as bleach, glass cleaner, detergents, and air fresheners exacerbated asthma-related symptoms for the women, and their reduced lung function lasted until the morning after exposure, in some cases getting worse with time. *Occup Environ Med* 2015

Triggers of Asthma

Childhood asthma in particular can be triggered by almost all of the same things that trigger allergies, such as the following:

•• **Sensitivity to allergens in foods and the air**, such as dust, cockroach waste, animal dander, indoor mold, pollens. Evidence suggests that people suffering with asthma also have food allergies and much of the acute attacks of asthma as well as period exacerbations of it are related to antigen/antibody reactions from foods they have eaten.

•• **Smoke exposure** Burke, H., et al. Prenatal and passive smoke exposure and incidence of asthma and wheeze: Systematic review and meta-analysis. *Pediatrics*. 2012;129:735-744.

•• **Respiratory infections**

•• **Air pollutants**, such as smoke from tobacco or a fireplace, aerosols, perfumes, fresh newsprint, diesel particles, sulfur dioxide, elevated ozone levels, and fumes from paint, cleaning products, and gas stoves

•• **Changes in the weather**, especially in temperature (particularly cold) and humidity

•• **Antibiotic use**, Goksoor, E., et al. Risk for wheeze in kids increased with antibiotics, acetaminophen (preschool wheeze as a marker for childhood asthma). *Acta Paediatrica*. 2011;100:1561-1566, 1567-1571.

Other triggers include:

•• **Behaviors that affect breathing** (exercising, laughing, crying, yelling) as anything that can stress their adrenal glands can cause an attack of asthma. Interestingly there is all probability is no greater medication or prevention of illnesses than daily laughing. Certainly the world is over consumed with seriousness but laughter is the best antidote to illnesses.

•• **Stress and spinal problems** in that there can be issues within the spine that are interfering with the proper nerve and blood supply to the lungs thus be contributing to asthma.

Common Reducing the Triggers for Asthma

Reduce your chances of exposure to them by taking some common-sense steps:

•• **Viral infections (colds, flu, bronchitis, pneumonia)** — Stay away from people who you know are ill.

•• **Sinusitis and allergic rhinitis (hay fever or year-round allergies)** — Avoid seasonal allergens by staying indoors in air conditioning as much as possible and eliminating indoor allergens; fewer allergy attacks generally means fewer cases of sinusitis and asthma

•• **Gastro-esophageal reflux (heartburn)** — Avoid provoking foods, medication, and mealtime habits

Diagnosis of Asthma

The symptoms of asthma can mimic several other conditions, and a doctor must take a thorough history to rule out other diseases.

Questions will likely be asked about how and when symptoms occur, and if there is a family history of allergies and asthma or occupational exposure to chemicals. If asthma is suspected, tests (called pulmonary function tests) will probably be done to measure, among other things, the volume of your lungs and how much air you exhale. Diagnostic tests may include chest and sinus and spinal x-rays, Diagnostic tests considered should include a Blood Profile, CBC, IgE and IgG4, Neurotransmitter and Hair Mineral/Toxic Metal Analysis.

Asthma an Interventional Chiropractic Care

Because the spine houses and protects the spinal cord and regulates the transmission of nerve energy to every cell and organ in the body including the lungs, if there is some interference with the flow of nerve energy in the spine and nervous system it can be a causative factor of Asthma therefore a spinal examination including pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT), Applied Kinesiological Muscle Response Testing (TFHAKMRT) should be pursued. At minimum chiropractic manipulation of the spine column (particularly the cervical and thoracic spine would aid in contributing to expansion of the thorax therefore assisting in breathing.

Preventive Care for Asthma

Although there is no method guaranteed to prevent asthma, there are a number of measures parents can take to reduce their child's risk of developing asthma. These include:

- **Exclusively breastfeeding for the first 3 to 6 months of life**; this issue is controversial, however, with the most recent (and largest) study suggesting that breastfeeding for the first 6 months of life helps to protect the child.
- **Delaying the introduction of solid food until age 6 months**
- **Manipulating the child's environment** — Not smoking during pregnancy or around infants, eliminating household allergens such as mites and cockroaches; for example, to reduce exposure to dust mites, encase mattresses and pillows in special covers that are impermeable to allergens; also, remove carpets from bedrooms
- **Maternal use of acetaminophen** during pregnancy or giving a newborn broad-spectrum antibiotics during the first week of life was associated with an increased risk of wheezing in preschoolers, whereas **introducing fish into a child's diet before age 9 months was associated with a reduction in risk**, report Swedish researchers in 2 studies published online July 27 and 30 and in the December 2011 print issue of Acta Paediatrica.
- According to certain studies on adults, apples and selenium-rich food in the diet may protect against asthma, and moderate consumption of red wine may be associated with less severe asthma attacks. These foods are high in antioxidants (namely, flavonoids) It is too early to say definitively that these nutrients protect against asthma, however. Plus, it is important to note that in certain individuals, red wine may actually induce asthma symptoms if you have an allergy to sulfites, a food additive, or any other substance found in wine. Often, wine labels indicate if sulfites are present.

The Importance of identifying asthma related allergens

Key steps in preventing asthma attacks include identifying the allergens and the triggers that bring on or worsen your asthma symptoms and then working to eliminate or avoid them. Sometimes it takes exposure to more than one of these factors before an asthma episode is triggered. Keeping a diary to determine triggers may be helpful.

Consider Avoiding the following altogether:

- If sensitive or allergic, aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs)
- Beta-blockers (such as acebutolol, atenolol, esmolol, labetalol, metoprolol, nadolol, pindolol, propranolol, and timolol) including those in eye medication
- Foods and food supplements to which a patient may unknowingly be allergic.
- If sensitive or allergic, processed potatoes, shrimp, dried fruit, beer, and wine—these often contain sulfite food preservatives Allergy desensitization, if you have a known allergy, may decrease the number of asthma attacks you experience, diminish the intensity of each attack, and lower the amount of medication that you need.

Treatment Approach

Avoiding asthma attacks, reducing inflammation, and preventing lung damage are the primary goals of treatment.

This requires educating yourself about asthma, working closely with your doctor to determine the severity of your asthma and to define a treatment plan, and following recommendations. Adjusting your environment as much as possible to prevent exposure to allergens or irritants is important for the successful control of asthma. Certain nutritional changes, particularly increasing the amount of omega-3 fatty acids in your diet and decreasing omega-6 fatty acids, and acupuncture may be useful adjuncts.

The Importance of Lifestyle

Involves common sense in adults suffering with asthma as well as guardians keeping their children in a preventative environment.

- Quit smoking and/or stay away from smoke laden environments
- Lose weight if you are overweight and already have asthma; although the connection between obesity and asthma is not entirely understood, excess weight may put pressure on the lungs and trigger an inflammatory response
- Keep a diary of respiratory complaints — this may help determine triggers such as aggravating spinal issues and eating foods that a Bio Individuality and IgE and IgG4 Food Sensitivity Tests have revealed as cytotoxic therefore potentially harmful and contributory to asthma.

Nutrition

Studies indicate that people with asthma tend to have low levels of certain nutrients (for example, selenium and potassium) and that the Western diet (high in fast foods and low in fresh fruits and vegetables) has been associated with higher rates of asthma. In fact, fried foods and margarine may be particularly bad, especially in children. On the other hand, it has been suggested that adding onion, garlic, pungent spices, and antioxidants (such as foods rich in vitamin C, vitamin E, flavonoids, and beta-carotene).

NOTE: Make sure that any food supplements you contemplate purchasing are GMP Certified. Those that are not GMP Certified may contain insipients that can cause an allergic reaction such as an asthmatic attack.

Nutritional Supplementation Options for Asthma.

Note: The following are not presented as treatments but rather for you to discuss with the physician who is managing your asthmatic issues.

Never ever stop taking any prescribed medications without the permission of the doctor who prescribed them or trying to replace prescribed medications with food supplements

If you or your child has asthma and is taking any prescribed medication, any diet or food supplement program you plan to implement should be discussed with the medical doctor who prescribed the drugs.

If you are going to utilize food supplements make sure that they are GMP Certified Food Quality not food Grade.

Dietary Options:

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Anti-Inflammatory Diet / Modified Elimination Diet

“Data clearly shows a very high rate of IgE sensitization to foods and IgE-mediated allergy to egg, milk, and peanut in children with persistent atopic dermatitis and asthma-resistant to standard medical therapies.”

The Journal of Allergy and Clinical Immunology, Volume 128, Issue 1, pgs 214-215, July 2011

References

- Aligne, C. A., Auinger, P., Byrd, R. S., & Weitzman, M. Risk factors for pediatric asthma. Contributions of poverty, race, and urban residence. *Am J Respir Crit Care Med*. 2000;162(3 Pt 1):873-877.
- American College of Allergy, Asthma, and Immunology. Accessed at <http://www.allergy.mcg.edu/patients/control.html> on July 22, 2002.
- Balon, J., Aker, P. D., & Crowther, E. R., et al. A comparison of active and simulated chiropractic manipulation as adjunctive treatment for childhood asthma. *N Engl J Med*. 1998;339:1013-1020.
- Birkel, D. A., & Edgren, L. Hatha yoga: Improved vital capacity of college students. *Altern Ther Health Med*. 2000;6(6):55-63.
- Bronfort, G., Evans, R. L., Kubic, P., & Filkin, P. Chronic pediatric asthma and chiropractic spinal manipulation: A prospective clinical series and randomized clinical pilot study. *J Manipulative Physiol Ther*. 2001;24(6):369- 377.
- Carr, A. C., & Frei, B. Toward a new recommended dietary allowance for vitamin C based on antioxidant and health effects in humans. *Am J Clin Nutr*. 1999;69(6):1086-1107.
- Ciarallo, L., Brousseau, D., & Reinert, S. Higher-dose intravenous magnesium therapy for children with moderate to severe acute asthma. *Arch Ped Adol Med*. 2000;154(10):979-983.
- Ciarallo, L., Sauer, A. H., & Shannon, M. W. Intravenous magnesium therapy for moderate to severe pediatric asthma: Results of a randomized, placebo-controlled trial. *J Pediatr*. 1996;129(6):809-814.
- Ernst, E. Breathing techniques: Adjunctive treatment modalities for asthma? A systematic review. *Eur Respir J*. 2000;15(5):969-972.
- Field, T., Henteleff, T., & Hernandez-Reif, M., et al. Children with asthma have improved pulmonary functions after massage therapy. *J Pediatr*. 1998;132(5):854-858.
- Fung, K. P., Chow, O. K. W., & So, S. Y. Attenuation of exercise-induced asthma by acupuncture. *Lancet*. 1986;2(8521-8522): 1419-1421.
- Gazdol, F., Gvozdjakova, A., & Nadvornikova, R., et al. Decreased levels of coenzyme Q(10) in patients with bronchial asthma. *Allergy*. 2002;57(9):811-814.
- Gdalevich, M., Mimouni, D., & Mimouni, M. Breast-feeding and the risk of bronchial asthma in childhood: A systematic review with meta-analysis of prospective studies. *J Pediatr*. 2001;139(2):261-266.
- Gilliland, F. D., Berhane, K. T., Li, Y. F., Kim, D. H., & Margolis, H. G. Dietary magnesium, potassium, sodium, and children's lung function. *Am J Epidemiol*. 2002. 15;155(2):125-131.
- Graham, R. I., & Pistolese, R. A. An impairment rating analysis of asthmatic children under chiropractic care. *J Vertebr Sublux Res*. 1997;1(4):41-48.
- Gupta, I., Gupta, V., & Parihar, A., et al. Effects of *Boswellia serrata* gum resin in patients with bronchial asthma: Results of a double-blind, placebo-controlled, 6-week clinical study. *Eur J Medical Research*. 1998;3(11):511-514.

- Haby, M. M., Peat, J. K., Marks, G. B., Woolcock, A. J., & Leeder, S. R. Asthma in preschool children: Prevalence and risk factors. *Thorax*. 2001;56(8):589-595.
- Hackman, R. M., Stern, J. S., & Gershwin, M. E. Hypnosis and asthma: A critical review. *J Asthma*. 2000;37(1):1-15.
- Hasselmark, L., Malmgren, R., Zetterstrom, O., & Onge, G. Selenium supplementation in intrinsic asthma. *Allergy*. 1993;48:30-36.
- Hijazi, N., Abalkhail, B., & Seaton, A. Diet and childhood asthma in a society in transition: A study in urban and rural Saudi Arabia. *Thorax*. 2000;55:775-779.
- Hondras, M. A., Linde, K., & Jones, A. P. Manual therapy for asthma (Cochrane Review). *Cochrane Database Syst Rev*. 2001;(1):CD001002.
- Hope, B. E., Massey, D. B., & Fournier-Massey, G. Hawaiian materia medica for asthma. *Hawaii Med J*. 1993;52:160-166.
- Howes LG. Which drugs affect potassium? *Drug Saf*. 1995;12(4):240-244.
- Huntley, A., White, A. R., & Ernst, E. Relaxation therapies for asthma: A systematic review. *Thorax*. 2002;57(20):127-131.
- Jain, S. C., Rai, L., Valecha, A., Jha, U. K., Bhatnagar, S. O., & Ram, K. Effect of yoga training on exercise tolerance in adolescents with childhood asthma. *J Asthma*. 1991;28(6):437-442.
- Joos, S., Schott, C., Zou, H., Daniel, V., & Martin, E. Immunomodulatory effects of acupuncture in the treatment of allergic asthma: A randomized controlled study. *J Alt Comp Med*. 2000;6(6), 519-525.
- Kadrabova, J., Mad'aric, A., Kovacikova, Z., Podivinsky, F., Ginter, E., & Gazdik, F. Selenium status is decreased in patients with intrinsic asthma. *Biol Trace Elem Res*. 1996;52(3):241-248.
- Kalliomaki, M., Salminen, S., Arvilommi, H., Kero, P., Koskinen, P., & Isolauri, E. Probiotics in primary prevention of atopic disease: A randomized placebo controlled trial. *Lancet*. 2001;357(9262):1076-1079.
- Kaur, B., Rowe, B. H., & Ram, F. S. Vitamin C supplementation for asthma (Cochrane Review). *Cochrane Database Syst Rev*. 2001;4:CD000993.
- Kleijnen, J., ter Riet, G., & Knipschild, P. Acupuncture and asthma: A review of controlled trials. *Thorax*. 1991;46:799-802.
- Kohen, D. P., & Wynne, E. Applying hypnosis in a preschool family asthma education program: Uses of storytelling, imagery, and relaxation. *Am J Clin Hypnosis*. 1997;39(3):169-181.
- Lehrer, P. Emotionally triggered asthma: A review of research literature and some hypotheses of self-regulation therapies. *Appl Psychophysiol Biofeedback*. 1998;23(1):13-41.
- Lehrer, P., Feldman, J., Giardino, N., Song, H. S., & Schmaling, K. Psychological aspects of asthma. *J Consult Clin Psychol*. 2002;70(3):691-711.
- Levine, M., Rumsey, S. C., Daruwala, R., Park, J. B., & Wang, Y. Criteria and recommendations for vitamin C intake. *JAMA*. 1999;281(15):1415-1453.
- Linde, K., Jobst, K., & Panton, J. Acupuncture for chronic asthma (Cochrane Review). In: *The Cochrane Library, Issue 3, 2001*. Oxford: Update Software.
- Mazur, L. J., De Ybarrondo, L., Miller, J., & Colasurdo, G. Use of alternative and complementary therapies for pediatric asthma. *Tex Med*. 2001;97(6):64-68.
- Meydani, S. N., & Ha, W. K. Immunologic effects of yogurt. *Am J Clin Nutr*. 2000;71(4):861-872.
- Middleton, E., ed. *Allergy: Principles and Practice*. 5th ed. St. Louis, Mo: Mosby-Year Book, Inc; 1998.

- Miller, A. L. *The etiologies, pathophysiology, and alternative/complementary treatment of asthma.* *Altern Med Rev.* 2001;6(1):20-47.
- Monteleone, C. A., & Sherman, A. R. *Nutrition and asthma.* *Arch Intern Med.* 1997;157:23-24.
- Nagakura, T., Matsuda, S., Shichijyo, K., Sugimoto, H., & Hata, K. *Dietary supplementation with fish oil rich in omega-3 polyunsaturated fatty acids in children with bronchial asthma.* *Eur Resp J.* 2000;16(5):861-865.
- Neuman, I., Nahum, H., & Ben-Amotz, A. *Prevention of exercise-induced asthma by a natural isomer mixture of beta-carotene.* *Ann Allergy Asthma Immunol.* 1999;82(6):549-553.
- Neuman, I., Nahum, H., & Ben-Amotz, A. *Reduction of exercise-induced asthma oxidative stress by lycopene, a natural antioxidant.* *Allergy.* 2000;55(12):1184-1189.
- Newnham, D. M. *Asthma medications and their potential adverse effects in the elderly: Recommendations for prescribing.* *Drug Saf.* 2001;24(14):1065-1080.
- NIH Consensus Statement: *Acupuncture.* National Institutes of Health, Office of the Director. 1997;15(5):1-34. Accessed at http://odp.od.nih.gov/consensus/cons/107/107_statement.htm on September 24, 2001.
- Nielsen, N. H., Bronfort, G., Bendix, T., Madsen, F., & Weeke, B. *Chronic asthma and chiropractic spinal manipulation: A randomized clinical trial.* *Clin Exp Allergy.* 1995;25:80-88.
- Okamoto, M., Misunobu, F., Ashida, K., Mifune, T., Hosaki, Y., & Tsugeno, H. et al. *Effects of dietary supplementation with n-3 fatty acids compared with n-6 fatty acids on bronchial asthma.* *Int Med.* 2000;39(2):107-111.
- Okamoto, M., Misunobu, F., & Ashida, K., et al. *Effects of perilla seed oil supplementation on leukotriene generation by leucocytes in patients with asthma associated with lipometabolism.* *Int Arch Allergy Immunol.* 2000;122(2):137-142.
- Rohdewald, P. *A review of the French maritime pine bark extract (Pycnogenol), an herbal medication with a diverse clinical pharmacology.* *Int J Clin Pharmacol Ther.* 2002;40(4):158-168.
- Romieu, I., & Trenga, C. *Diet and obstructive lung diseases.* *Epidemiol Rev.* 2001;23(2):268-287.
- Rowe, B. H., Edmonds, M. L., Spooner, C. H., & Camargo, C. A. *Evidence-based treatments for acute asthma. [Review].* *Respir Care.* 2001;46(12):1380-1390.
- Sancier, K. M. *Therapeutic benefits of qigong exercises in combination with drugs.* *J Altern Complement Med.* 1999;5(4):383-389.
- Sanders, R. *Pine bark extract is a potent antioxidant, and may help boost the effects of vitamin C and other antioxidants, UC Berkeley scientists report [news release].* February 5, 1998. Accessed at http://www.berkeley.edu/news/media/releases/98legacy/02_05_98a.html on July 19, 2002.
- Sathyaprabha, T. N., Murthy, H., & Murthy, B. T. *Efficacy of naturopathy and yoga in bronchial asthma: A self-controlled matched scientific study.* *Ind J Physiol Pharmacol.* 2001;45(10):80-86.
- Shaheen, S. O., Sterne, J. A., Thompson, R. L., Songhurst, C. E., Margetts, B. M., & Burney, P. G. *Dietary antioxidants and asthma in adults: Population-based case-control study.* *Am J Respir Crit Care Med.* 2001;164(10 Pt 1):1823-1828.
- Shimizu, T., Maeda, S., & Arakawa, H., et al. *Relation between theophylline and circulating vitamin levels in children with asthma.* *Pharmacol.* 1996;53:384-389.

- Smit, H. A., Grievink, L., & Tabak, C. *Dietary influences on chronic obstructive lung disease and asthma: A review of the epidemiological evidence. Proc Nutr Soc.* 1999;58(2):309-319.
- Tamaoki, J., Nakata, J., Kawatani, K., Tagaya, E., & Nagai, A. *Ginsenoside-induced relaxation of human bronchial smooth muscle via release of nitric oxide. Br J Pharmacol.* 2000;130(8):1859-1864.
- Ullman, D. *The Consumer's Guide to Homeopathy.* New York, NY: Penguin Putnam; 1995: 260-261.
- Urata, Y., Yoshida, S., & Irie, Y., et al. *Treatment of asthma patients with herbal medicine TJ-96: A randomized controlled trial. Respir Med.* 2002 Jun;96(6):469-474.
- Vally, H., Carr, A., El-Saleh, J., & Thompson, P. *Wine-induced asthma: A placebo-controlled assessment of its pathogenesis. J Allergy Clin Immunol.* 1999;103(1 Pt 1):41-46.
- Vedanthan, P. K., Kesavalu, L. N., & Murthy, K. C., et al. *Clinical study of yoga techniques in university students with asthma: A controlled study. Allergy Asthma Proc.* 1998;19(1):3-9.
- Yoshida, S. *Herbalism for the treatment of asthma. Chest.* 1999;116(2):582-583.
- Ziment, I., & Tashkin, D. P. *Alternative medicine for allergy and asthma. J Allergy Clin Immunol.* 2000;106(4):603-614.

Automobile Accident and Other Personal Injury's

No doubt there are countless numbers of people who are involved automobile accidents and other personal injury's. Most wholly or partially involve the spine and other muscle skeletal injury's some of which cause immediate symptoms others latter on.

It has been our experience that it is important that the people have a Chiropractic evaluation. The reason being that regardless if there are immediate symptom or not very often the untreated muscle skeletal injury's can latter on have long term health ramifications.

Similarly when tissues are traumatize internal metabolic issues do result therefore not only is important to be evaluated from a muscle skeletal approach but nutritional.

As we have previously stated "we do not charge the patient any out of pocket expenses related to muscle shtetel injury's related to Automobile Accident and Other Personal Injury's.

Atrial Fibrillation / Atrial Flutter / Cardiac Arrhythmia / PACs (Premature Atrial Contractions) / PVCs (Premature Ventricular Contractions)

Cardiac Arrhythmia

Arrhythmia: Variation from the normal rhythm, especially of the heartbeat.

Sinus arrhythmia: The physiologic cyclic variation in heart rate is related to vagal impulses to the sinoatrial node which causes atria quiver or fibrillate when the ventricles receive an erratic impulse.

Atrial Fibrillation

Atrial fibrillation (is nothing to take lightly or not seek medical advice and follow the medical doctor's recommendations) is an irregular heartbeat that may be very fast. Affects 2-4% of population. Assuming that you have no genetic issues your heart has four compartments called chambers. The top two chambers are called the atria. The bottom two chambers are called the

ventricles. In atrial fibrillation, the atria stop beating regularly. Instead, they tremble (fibrillate) in a disorganized way. This can cause an irregular, and sometimes very fast, heartbeat.

Atrial fibrillation is most common in people older than 60 years of age thus where there is ongoing atrial fibrillation there is higher the predisposition to stroke thus that is a serious matter and needs serious medical counsel. Sometimes, atrial fibrillation has no cause, but your risk goes up if you have any of the following:

Heart disease caused by high cholesterol

A larger heart size caused by high blood pressure

Damage to a heart valve.

An overactive thyroid gland

Lung disease

Heavy drinking of alcohol

Use of certain medicines

Genetics

Spinal Problems - sometimes examination of the heart shows no anatomical irregularities, but examination of the spine and its neurological relationship to the heart is discovered. Often when there is a chiropractic examination, particularly of the cervical and thoracic spine, subluxations or curvatures are found and when chiropractic corrective manipulations are conducted the atrial fibrillation issues may be resolved.

NOTE: This is not saying that where there is Atrial Fibrillation or any other heart issue that Chiropractic or nutraceuticals can cure those issues, but in some cases they can aid those people and the medications their medical doctor may prescribe. This book in no way suggests that you stop taking any prescribed medication. Be sure to discuss with your medical doctor any nutraceutical you may contemplate and listen to their counsel.

Usually Not Life Threatening

In most situations atrial fibrillation is not life threatening but when the heart starts skipping there is a potential for the blood accumulates in the atrium blood and coagulate forming blood clots that may pass into systemic circulation and travel to the brain causing a CVA (Cerebral Vascular Accident) or stroke. If the clot or emboli lodges in the coronary artery it can cause a heart attack. Clots can also travel to other areas of the body such as the lungs or legs (thrombophlebitis) and cause by severe leg cramps, pain, redness, swelling and increased temperature in the involved area.

Symptoms of Atrial; Fibrillation

Irregular heartbeat

Bradycardia - slow heart beat

Tachycardia - rapid heart beat

Situations of emotional stress

Tightness of the chest

Weakness, fatigue

Shortness of breath when exercising

Heart palpitations

Ectopic Heartbeats- What is it?

Ectopic heartbeats are small changes in an otherwise normal heartbeat that lead to extra or skipped heartbeats. They often occur without a clear cause and are most often harmless. The two most common types of ectopic heartbeats are:

- Premature ventricular contractions (PVC)
- Premature atrial contractions (PAC)

Sometimes ectopic heartbeats are seen with:

Situations of emotional stress. In reality Arterial Fib is becoming ever more diagnosed and treated but in all probability it has affected many people previously but never diagnosed because people lived with it rather than sought medical intervention.

- Changes in the blood, such as low potassium level (hypokalemia)
- Decrease in blood supply to the heart
- Heart muscle disease (cardiomyopathy)
- Ectopic beats may be caused or made worse by smoking, alcohol use, caffeine, medications such as stimulants, and some illicit drugs.

Ectopic heartbeats are rare in children without heart disease that was present at birth (congenital).

Most extra heartbeats in children are premature atrial contractions (PACs), which are almost always harmless.

Ectopic heartbeats are rare in adults

In adults, ectopic heartbeats are common. They are most often due to PACs or PVCs. Their causes should be investigated, although usually no treatment is needed.

Possible Diagnostic Tests

Echocardiogram

ECG (Electrocardiogram) measures the electro cardiac flow. Sometimes the ECG and EKG show no abnormalities in the heart.

Halter monitor – records heart rhythm or activity usually over a 24-48 hours

Traditional Orthodox Medical Treatment

Following are some types commonly prescribed medications and they depend on the blood and other diagnostic tests results. Most cardiologists are conservative and follow the conservative protocol and see how the patient responds and the results of follow up monitoring tests.

Anticoagulants (Blood thinners): there are many new anticoagulants available but the ones still under patent can be quite expensive (as many are with high co-pays) but their cost as opposed to not taking them could become much costlier there it behooves people with atrial fibrillation to take medical advice very seriously.

Rate controlling medications - usually some form of a Beta-blocker which are designed to slow down and regulate the heartbeat.

Antiarrhythmic medications

Cardioversion - applying an electrical shock to the heart to stabilize the rhythm. Usually a day procedure and if everything goes well the patient is released to go home.

Electrophysiological study/ablation

Surgical implant of a pacemaker

Risk Factor For Atrial Fibrillation

NSAIDS (Aspirin) Use Associated With Atrial Fibrillation. The use of nonsteroidal anti-inflammatory drugs (NSAIDs) is associated with an increased internal bleeding and risk of chronic atrial fibrillation but it can't be over emphasized that it is dangerous to think that a food supplement is going to cure atrial fibrillation. If at best they may contribute to enhancing the persons overall health and wellbeing and if that becomes the case one could logically assume that the persons cardiovascular system would likewise be enhanced.

Nutritional Supplementation Options For Atrial Fibrillation / Atrial Flutter / Cardiac Arrhythmia / PVCs (Premature Atrial Contractions) / PVCs (Premature Ventricular Contractions)

- Note:** 1. Never ever stop taking any prescribed medications without the permission of the doctor who prescribed them or trying to replace prescribed medications with food supplements and in reality if you do discuss food supplements with your cardiologist you won't be the first person who does so as many other patients have also done so.
2. If you are taking any prescribed medication, any diet or food supplement program you plan to implement should be discussed with the medical doctor who prescribed the drugs.
3. If you are going to utilize food supplements make sure that they are GMP Certified (Food Quality not food Grade.)
4. If your medical doctor has prescribed any medication make sure that you do not stop taking any of those medications. As inviting as substituting food supplements for prescribed medications can be one should be very careful in not doing so.
5. Likewise respond in the positive to your medical doctors recommendations of periodic blood tests, and heart monitors.
6. We do not object to any of the food supplements we list here. But the key is to open and up-front with their medical doctor regarding the ingestion of food supplements or changes in diet or life style. It is highly likely that anyone diagnosed with atrial fibrillation has been examined by a cardiologist and by and large the mass majority follow the same or similar diagnostic and treatment proven effective protocols that are designed for the long term health benefits of patients. With the amount of third party scrutiny that is increasingly prevalent of medical providers it is highly unlikely that a medical doctor would practice outside standard medical protocol and that is especially so in cardiovascular conditions.
7. Far too often people who sell food supplements and/or have hatred toward medicine are imbalanced and advocate disregarding medical diagnostic testing and prescribed medications which in some way jeopardizes the health of those with health problems.
- Writhe, B. P., Hearing, J., & Hoffman, A., et al. Non-steroidal anti-inflammatory drugs and the risk of atrial fibrillation: A population based follow-up study. *BMJ Open*. 2014;4:e004059. doi:10.1136/bmjopen-2013-004059.

Dietary Considerations

NOTE: please keep in mind that in addition to discussing nutraceuticals with your medical doctor it is also A good investment to have a Touch For Health Applied Kinesiology Muscle Response Test, Chem Screen, CBC, and Hair Mineral Toxic Metal Analysis that the results are analyzed from both the Clinical as well as Homeostatic perspectives.

A modified Mediterranean-style, low-glycemic load diet meaning that you consider reducing refined sugar containing foods.

Consider avoiding caffeine in that it's possible to have a negative effect on arrhythmia.

If you're over weight consider losing some of that excess weight

If your cardiologist agrees get involved in a good aerobic exercise program

Support For Heart Muscle Function

A well-rounded heart muscle support formula that features extracts of hawthorn and arjuna, herbs with a history of traditional use in supporting heart function. Complementing these herbs is a blend of amino acids and minerals—including taurine, magnesium, potassium, selenium, and calcium—that play important roles in heart muscle function.

The following description of Nutritionnel Supplémentation is not intended to give advice regarding treatment Atrial Fibrillation but rather some food suppléments that have been reported as potentially positive for people diagnosed with Atrial Fibrillation. If you have been diagnosed with Atrial Fibrillation and your cardiologist has prescribed medications you should continue to take them and inquire of your doctor about her/his opinions regarding the following. Lastly most people who are taking Certified Pharmaceutical Quality multiple vitamin/mineral are likely ingesting the following ingredients.

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Vitamin C and the bioflavonoids are known to be helpful in reducing the effects of allergy mediated bronchial asthma, sometimes stopping the attack in as little as five minutes.

Quercetin, which is a member of a group of antioxidants called flavonoids, is reported to play possible roles in inhibiting the production and release of histamine and other allergic/inflammatory substances. Histamine is a substance that contributes to allergy symptoms such as a runny nose, watery eyes, and hives. Like other flavonoids, quercetin is a plant pigment responsible for colors seen in fruits and vegetables.

DMG

Research has shown DMG to be a physiologically active ingredient that:

- is reported to be an anti-stress agent that can significantly improve physical and mental performance,
- can improve and stimulate oxygen utilization and thereby reduce hypoxic (low oxygen) states in the body, and
- can possibly increase resistance to disease and infection by strengthening both arms of the immune response system, including antibody and lymphocyte production.

Vitamin D—Should be based on blood study

Asthmatic patients with vitamin D insufficiency:

- had poorer lung function.
- had higher levels of immunoglobulin E (IgE), an immune system protein the body makes in response to allergens that tells you the likelihood that you're allergic.
- were more likely to need inhaled and oral steroid medications to reduce airway inflammation and mucus production.
- were more likely to need long-acting beta-agonist drugs that relax muscles in the lung's airways, improving a patient's ability to breathe freely and reducing asthma symptoms. WebMD Health News, March 3, 2010. Further studies have shown that hospitalization for asthma attacks was 50% higher in children who had insufficient vitamin D status as vitamin D has an anti-inflammatory effect on cells and enhances the activity of inhaled steroids.

Astaxanthin

Astaxanthin is a part of carotenoid complex, a powerful antioxidant that is structurally similar to beta-carotene. Astaxanthin contains the highest relative antioxidant activity when compared with alpha-tocopherol, alpha-carotene, beta-carotene, lutein, and lycopene. The T-cell activation suppression is also achieved by antihistamines, which suggests that Astaxanthin could serve as a novel antiasthma treatment.

- Mahmoud, F. F., et al. In vitro effects of Astaxanthin combined with ginkgolide B on T lymphocyte activation in peripheral blood mononuclear cells from asthmatic subjects. *J Pharmacol Sci.* 2004;94:129-36.

EPA-DHA

EPA-DHA hopefully consisting of 3 essential fatty acids from cold-water fish to enhance the body's anti-inflammatory capabilities.

- When it is a GMP Certified Pharmaceutical Food Quality fish oil that is independently tested for purity. Ideal for children and adults for health maintenance.
- Supports healthy blood lipids, cardiovascular health, a positive mood, and overall health.
- Triglyceride form for easy absorption.
- Produced in a Norwegian pharmaceutical-licensed facility.
- Stabilized with natural antioxidants to maintain freshness. Preliminary research in asthma suggests that an omega-3 fatty acid supplement may reduce inflammation and improve lung function.

“The current study demonstrates that DHA supplementation for infants of less than 33 weeks’ gestation can reduce the risk for Bronchopulmonary Dysplasia among boys and all infants with a birth weight of less than 1250 g.” *Pediatrics*. Published online June 27, 2011 “Introducing fish (fish oils), into a child’s diet before age 9 months was associated with a reduction in risk to asthma.” *Acta Paediatrica*. 2011;100:1561-1566, 1567-1571

Perilla

Perilla Seed Extract known to modulate the immune response, to minimize how significantly the body negatively responds to an “allergy/sensitivity” response.

B12 Folic

Highly concentrated B12/folic acid liquid. Childhood asthma has been shown to respond remarkably well to B12 therapy.

Vitamin E Gamma -Tocopherol Symptoms

- Feeling your heart beat (palpitations)
- Feeling like your heart stopped or skipped a beat
- Feeling of occasional, forceful beats

Note: There may be no symptoms in that some people do not note any symptoms.

Taurine — Orally, taurine is used in the treatment of congestive heart failure (CHF), high blood pressure, hepatitis, high cholesterol (hypercholesterolemia), cardiac muscle support, and cystic fibrosis. Other uses include seizure disorders (epilepsy), autism, attention deficit-hyperactivity disorder (ADHD), retinal degeneration, diabetes, and alcoholism. It is also used to improve mental performance and as an antioxidant.

Magnesium — Used orally for treating symptoms of asthma and allergic rhinitis; for cardiovascular diseases including angina, arrhythmias, hypertension, coronary heart disease and hyperlipidemia, low high-density lipoprotein (HDL) levels, mitral valve prolapse, vasospastic angina, myocardial infarction, multiple sclerosis; and as an antacid for symptoms of gastric hyperacidity.

Hawthorn — Used for cardiovascular conditions such as congestive heart failure (CHF), coronary circulation problems, angina, and arrhythmias. It is also used to increase cardiac output reduced by hypertension or pulmonary disease, to treat hypotension and hypertension, atherosclerosis, hyperlipidemia, and Buerger’s disease.

Arjuna (*Terminalia arjuna*) — Used for cardiovascular conditions including ischemic heart disease and angina, arrhythmias, hypertension, and hyperlipidemia.

Potassium — Used for treating and preventing hypokalemia, cardiac arrhythmias including atrial tachycardia and ventricular arrhythmias, and myocardial infarction.

Calcium — Used for treatment and prevention of hypocalcemia, osteoporosis, rickets, and latent tetany. It is also used orally for hypoparathyroidism, Osteomalacia, premenstrual syndrome (PMS), leg cramps associated with pregnancy, pre-eclampsia, and reducing the risk of colorectal cancer. Calcium is also used orally for diarrhea and rectal epithelial hyper proliferation following intestinal bypass, hypertension, cardiac arrhythmias, elevated levels of low-density lipoprotein (LDL), Lyme disease, elevated fluoride levels in children, and elevated lead levels.

Selenium — Used for treating HIV/AIDS, swine flu, cardiovascular disease, hypothyroidism, osteoarthritis, rheumatoid arthritis (RA), stroke, atherosclerosis, benign prostatic hyperplasia (BPH), and for critical illness.

Arginine - L-arginine is best known for its effects on the vascular system. L-arginine is a substrate for the nitric oxide synthase (NOS) enzyme. NOS in vascular endothelial cells converts L-arginine to nitric oxide (NO), also known as endothelium-derived relaxation factor (EDRF), which causes vasodilation.

In certain conditions, the NOS enzymes may become uncoupled, shifting from production of nitric oxide to superoxide anion, a potent free radical and oxidant. **Multiple lines of evidence suggest a role for NOS in the pathogenesis of atrial fibrillation.** Therapeutic approaches to reduce atrial fibrillation by modulation of NOS activity may be beneficial.” Bonilla, I. M., Sridhar, A., Gorki, S., Carouel, A. J., & Carnes, C. A. Nitric oxide synthases and atrial fibrillation. *Front Physiol.* 2012;

3: 105. “Long-term oral L-arginine supplementation for 6 months in humans improves coronary small-vessel endothelial function in association with a significant improvement in symptoms and a decrease in plasma endothelin concentrations. This study proposes a role for L-arginine as a therapeutic option for patients with coronary endothelial dysfunction and non-obstructive coronary artery disease.”

Lerman, A., Burnett, J. C., Jr., Higano, S. T., McKinley, L. J., & Holmes, D. R., Jr. Long-term L-arginine supplementation improves small vessel coronary endothelial function in humans. *Circulation.* 1998, *Am Heart Assoc.*

CoQ10 - Coenzyme Q10, also called ubiquinone, is a compound found naturally in the human body and is essential for the health of virtually all human tissues and organs.

In a 2010 article in *Advances in Healthy Aging*, Dr. Isaac Eliaz reports that low levels of CoQ10 have been associated with several types of heart disease. CoQ10 supplementation has reduced the risk of heart failure in several different populations, according to Eliaz.

**Clinical uses of supplemental Coenzyme Q10 in cardiovascular conditions include:
Irregular Heartbeat / Atrial Fibrillation**

People who took CoQ10 before heart surgery also had a reduced risk of irregular heartbeats during recovery, according to UMMC. While atrial fibrillation is not mentioned specifically, CoQ10 may reduce some of the associated risk factors.

Terms

Even though CoQ10 is reported to have possible good effects on the following we advise you to consult with your medical doctor before you involve yourself in utilizing it. Cardiovascular problems

Heart Attack — UMMC reported a reduction in the rates of recurrent heart attacks in those who took the CoQ10 supplement.

Congestive heart failure — The beneficial effect of CoQ10 in the treatment of heart failure has been confirmed in a number of published studies.

Cardiomyopathy — Research has documented that circulating levels of CoQ10 were significantly lower in patients with dilated cardiomyopathy and CoQ10 supplementation improves disease outcome.

Angina pectoris — Compared to placebo, CoQ10 significantly increased exercise tolerance on a treadmill (as measured by time before onset of chest pain) and also reduced the number of angina episodes by 53%.

Hypertension — CoQ10 has been shown to lower blood pressure in both animal and human models of hypertension. The reduction in blood pressure appears to be due to a decrease in peripheral resistance.

Cardiovascular Disease and Vitamin D

Deaths from cardiovascular disease are more common in the winter, more common at higher latitudes, and more common at lower altitudes, observations that are consistent with vitamin D insufficiency.

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

The risk of heart attack is reported to be twice as high for those with 25(OH)D levels less than 34 ng/ml (85 nmol/L) than for those with vitamin D status above this level. Patients with congestive heart failure were recently found to have markedly lower levels of vitamin D than controls, and vitamin D deficiency as a cause of heart failure has been documented in numerous case reports. Vitamin D deficiency is often highly prevalent condition and is independently associated with most CVD risk factors and to CVD morbidity and mortality.

Numerous epidemiologic studies, including the largest one to date, suggest that a low vitamin D level increases the risk for cardiovascular disease.

Vitamin D Deficiency led to Fatal Cardiovascular Disease (CVD)

Vitamin D deficiency is much more strongly led to fatal than nonfatal cardiovascular (CV) events, results of a large prospective study suggest. “Although our results were able to confirm an approximately 27% increased total CV risk in subjects with vitamin Deficiency, they indicate that the risk is much stronger for (and possibly even confined to) fatal CVD events,” write the researchers, led by co-first authors Drs. Laura Pena and Ben Schottker, German Cancer Research Center (Heidelberg).

Hypertension

It has long been known that blood pressure is higher in the winter than the summer, increases at greater distances from the equator and is affected by skin pigmentation—all observations consistent with a role for vitamin D in regulating blood pressure.

Ultraviolet light and Vitamin D

When patients with hypertension were treated with ultraviolet light three times a week for six weeks their vitamin D levels increased by 162%, and their blood pressure fell significantly. Even small amounts of oral cholecalciferol (800 IU) for eight weeks lowered both blood pressure and heart rate.

Regarding the serum test for Vitamin D, the best serum analysis is the “25-(OH)D.” The safety range of the 25-(OH)D is 20 to 150 ng/ml and the “proposed” ideal range is 40 to 100 ng/ml, and possible intoxication is >150 ng/ml.

NOTE: If after vitamin D3 supplementation symptom improvement is non-responsive, consider

checking the vitamin D hormone (1,25(OH)2D) for actual tissue saturation in ratio to the 25-(OH)D level.

Base Nutrition, Phyto-nutrient Support & Essential Fatty Acids:

The essential polyunsaturated fatty acids, Eicosapentanoic acid (EPA) and docosahexaenoic acid (DHA), are not synthesized by mammals. Therefore, dietary intake or supplements are required for these fatty acids. The most common sources are consumption of marine vertebrates or fish or fish oil or omega-3 polyunsaturated fatty acid supplements.

“Prophylactic dietary treatment with fish oil in a canine model of post-cardiac surgery canine model was reported to reduce postoperative AF (Atrial Fibrillation).” Dietary ω 3 fatty acids modulate the substrate for post-operative atrial fibrillation in a canine cardiac surgery model. *Cardiovasc Res. 2011*

“The reduction in AF (Atrial Fibrillation) was attributable in part to reduced inflammatory changes accompanied by less induction of atrial iNOS. Eicosapentanoic acid (EPA), a component of the omega-3 polyunsaturated fatty acids found in fish oil, has recently been found to reduce the spontaneous activity in pulmonary veins (Suenari et al., 2011). Unlike the canine study of fish oil, this study used acute application of EPA to rabbit pulmonary vein preparations. Acute application of EPA was found to reduce delayed after depolarizations; the effects of EPA on PV electrophysiology were somewhat abrogated by the NOS inhibitor, L-NAME, suggesting that the effects of EPA were NOS mediated.” *Billman et al., 2010*

EPA and Pulmonary Vein Arrhythmias

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Eicosapentanoic acid reduces the pulmonary vein arrhythmias through nitric oxide. *Life Sci. 2011*

- Effects of dietary omega-3 fatty acids on ventricular function in dogs with healed myocardial infarctions: in vivo and in vitro studies. *Am J Physiol Heart Circ Physiol. 2010.*

Interventional Whole Person Care

Because the spine houses and protects the spinal cord and regulates the transmission of nerve energy to every cell and organ in the body including the cardiovascular system, if there is some interference with the flow of nerve energy in the spine and nervous system it can be a causative factor of cardiovascular issues therefore it is important to consider including pursuing chiropractic administered Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) in the chiropractic examination, At minimum chiropractic manipulation of the spinal column (particularly the cervical and thoracic spine, muscle therapy would in contributing to expansion of the thorax therefore assisting in breathing.

Autoimmune Diseases

The term *Autoimmune Disease* refers to a varied group of more than 80 distinct, chronic illnesses in which the underlying problem is similar—the body’s immune system is misdirected, attacking the body tissues it was designed to protect.

Autoimmune disease can affect any system, organ, or tissue in the body, including the gastrointestinal (GI), nervous, and endocrine systems as well as the eyes, blood, blood vessels, and skin and other connective tissues. Examples of autoimmune conditions include the following:

- Rheumatoid arthritis (RA)

- Lupus (e.g., systemic lupus erythematosus [SLE])
- Type 1 diabetes
- Inflammatory bowel disease (IBD) (e.g., Crohn's disease, Ulcerative colitis, Celiac disease, Leaky Gut)
- Hashimoto's thyroiditis
- Grave's disease
- Raynaud's phenomenon
- Neurological diseases (e.g., myasthenia gravis, multiple sclerosis [MS])
- Glomerulonephritis
- Pernicious anemia
- Good pasture's syndrome
- Scleroderma
- Lupus (e.g., systemic lupus erythematosus [SLE])
- Vitiligo
- Sjogren's syndrome
- Addison's disease
- Autoimmune Haemolytic Anaemia
- Idiopathic Thrombocytopenic Purpura

The Purpose of This Discussion

The purpose of this guide is to offer a natural approach to addressing the various issues associated with autoimmune disease. The strategies discussed in this guide are not intended to treat disease, but to identify possible triggers and address underlying and mediating factors, such as:

- Sex hormones
- GI barrier function and microflora balance
- Inflammation
- Nutritional deficiencies
- Drugs and chemicals
- T helper (Th1) dominance
- Impaired biotransformation (detoxification)
- Oxidative stress

If an Autoimmune Response is Suspected

Nutritional Support Protocol for Auto-Immune Syndromes “and being that we chose not to recommend certain products we also advise you not to stop taking any prescribed medication or embark on any of the following without consulting the physician who prescribed your medication.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Interventional Chiropractic Care

Every cell, organ and system (including the immune system) in the human body is inter-connected to the brain, spinal cord and spinal column (the switchboard of the nervous systems) should be considered when there are auto immune problems. The greater the health of the brain and spinal cord and spine, the higher the propensity of the body receiving proper life force within the nervous

and blood vascular systems and every other function of the body therefore enhancing overall health and wellbeing.

References:

- *Majno, G., & Joris, I. (2004). Cells, Tissues and disease: Principles of general pathology. Oxford University Press: USA.*
- *Giugliano, D., Ceriello, A., & Esposito, K. The effects of diet on inflammation: Emphasis on the metabolic syndrome. J Am Coll Cardiol. 2006;48:677-685.*
- *Recchiuti, A. Immuno resolving lipid mediators and resolution of Inflammation in aging. J Gerontol Geriat Res. 2014;3:151.*
- *Nathan, C., & Ding, A. Non resolving inflammation. Cell. 2010;140:871-882.*
- *Tabas, I., & Glass, C. K. Anti-inflammatory therapy in chronic disease: Challenges and opportunities. Science. 2013;339:166-172.*
- *Libby, P. Atherosclerosis: The new view. Sci Am. 2002;286:46-56.*
- *Mushtaq, G., Khan, J. A., Kumosani, T. A., & Kamal, M. A. Alzheimer's disease and type 2 diabetes via chronic inflammatory mechanisms. Saudi J Biol Sci. 2015;22:4-13.*
- *Fuentes, E., Fuentes, F., Vilahur, G., Badimon, L., & Palomo, I. Mechanisms of chronic state of inflammation as mediators that obese adipose tissue and metabolic syndrome. Mediators Inflamm. 2013;2013:136584.*
- *Parmeggiani, F., Romano, M. R., & Costagliola, C., et al. Mechanism of inflammation in age-related macular degeneration. Mediators Inflamm. 2012;2012:546786.*
- *Franceschi, C. Inflammation as a major characteristic of old people: Can it be prevented or cured? Nutr Rev. 2007;65:S173-176.*
- *Lawrence, T., Willoughby, D. A., & Gilroy, D. W. Anti-inflammatory lipid mediators and insights into the resolution of inflammation. Nat Rev Immunol. 2002;2:787-795.*
- *Samuelsson, B., Dahlen, S. E., Lindgren, J. A., Rouzer, C. A., & Serhan, C. N. Leukotrienes and lipoxins: Structures, biosynthesis, and biological effects. Science. 1987;237:1171-1176.*
- *Spite, M., Claria, J., & Serhan, C. N. Resolvins, specialized pro-resolving lipid mediators, and their potential roles in metabolic diseases. Cell Metab. 2014;19:21-36.*
- *Serhan, C. N. Pro-resolving lipid mediators are leads for resolution physiology. Nature. 2014;510:92-101.*
- *Serhan, C. N., Brain, S. D., & Buckley, C. D., et al. Resolution of inflammation: State of the art, definitions and terms. Faseb J. 2007;21:325-332.*
- *Serhan, C. N. A search for endogenous mechanisms of anti-inflammation uncovers novel chemical mediators: Missing steps to resolution. Histochem Cell Biol. 2004;122:305-321.*
- *Maddox, J. F., Hachicha, M., & Takano, T., et al. Lipoxin A4 stable analogs are potent mimetics that stimulate human monocytes and THP-1 cells via a G protein-coupled lipoxin A4 receptor. J Biol Chem. 1997;272:6972-6978.*
- *Ariel, A., Fredman, G., & Sun, Y. P., et al. Apoptotic neutrophils and T cells sequester chemokines during immune response resolution through modulation of CCR5 expression. Nat Immunol. 2006;7:1209-1216.*
- *Schwab, J. M., Chiang, N., Arita, M., & Serhan, C. N. Resolvin E1 and protectin D1 activate inflammation-resolution programmes. Nature. 2007;447:869-874.*
- *Chiang, N., Fredman, G., & Backhed, F., et al. Infection regulates pro-resolving mediators that lower antibiotic requirements. Nature. 2012;484:524-528.*

- Serhan, C. N., & Savill, J. *Resolution of inflammation: The beginning programs the end.* *Nat Immunol.* 2005;6:1191-1197.
- Levy, B. D., Clish, C. B., Schmidt, B., Gronert, K., & Serhan, C. N. *Lipid mediator class switching during acute inflammation: Signals in resolution.* *Nat Immunol.* 2001;2:612-619.
- Hong, S., Gronert, K., Devchand, P. R., Moussignac, R. L., & Serhan, C. N. *Novel docosatrienes and 17S-resolvins generated from docosahexaenoic acid in murine brain, human blood, and glial cells. Autacoids in anti-inflammation.* *J Biol Chem.* 2003;278:14677-14687.
- Serhan, C. N., Clish, C. B., & Brannon, J., et al. *Novel functional sets of lipid-derived mediators with anti-inflammatory actions generated from omega-3 fatty acids via cyclooxygenase 2-nonsteroidal anti-inflammatory drugs and transcellular processing.* *J. Exp Med.* 2000;192:1197-1204.
- Serhan, C. N., & Petasis, N. A. *Resolvins and protectins in inflammation resolution.* *Chem Rev.* 2011;111:5922-5943.
- Serhan, C. N. *Lipoxins and aspirin-triggered 15-epi-lipoxins are the first lipid mediators of endogenous anti-inflammation and resolution.* *Prostaglandins Leukot Essent Fatty Acids.* 2005;73:141-612.
- Serhan, C. N. *Novel lipid mediators and resolution mechanisms in acute inflammation: To resolve or not? Am J Pathol.* 2010;177:1576-1591.
- Serhan, C. N., & Chiang, N. *Resolution phase lipid mediators of inflammation: Agonists of resolution.* *Curr Opin Pharmacol.* 2013;13:632-640.
- Navarro-Xavier, R. A., Newson, J., & Silveira, V. L., et al. *A new strategy for the identification of novel molecules with targeted proresolution of inflammation properties.* *J Immunol.* 2010;184:1516-1525.
- Chan, M. M., & Moore, A. R. *Resolution of inflammation in murine autoimmune arthritis is disrupted by cyclooxygenase-2 inhibition and restored by prostaglandin E2-mediated lipoxin A4 production.* *J Immunol.* 2010;184:6418-6426.

Bipolar Disorder / Manic-Depressive Illness

Bipolar disorder is a serious mental illness. People who have it go through unusual mood changes. They go from very happy, “up” and active, to very sad and hopeless, “down” and inactive, and then back again.

They often have normal moods in between. The up feeling is called mania. The down feeling is depression. In 85% of cases, depression dominates the personality cycle. The causes of bipolar disorder aren’t always clear. It runs in families. Abnormal brain structure and function may also play a role. Bipolar disorder often starts in a person’s late teen or early adult years. But children and adults can have bipolar disorder too. The illness usually lasts a lifetime.

Conventional Medical Considerations

Antidepressant use in patients hospitalized with bipolar depression (BD) is sadly ineffective at best for many of those people, and at worst may be harmful to some patients, according to research by investigators at Brown University in Providence, Rhode Island, presented at the American Psychiatric Association’s 2013 Annual Meeting. *Abstract NR5-06; presented May 19, 2013.* As true as that might be for some suffering with BD the use of mood altering medications and psychotherapy should not be avoided or discouraged.

There are considerable menus of pharmaceuticals cocktails (tricyclic antidepressants) utilized in the treatments for bipolar/ manic depressive conditions from vitamins, herbs, psychotherapies and even electroconvulsive treatments where electro magnet currents are applied to the skull with the

thought that the electrical currents will have good effects in the electro physiological activity's within the brain especially as it relates to the neurotransmitters serotonin, norepinephrine, and dopamine.

Neurotransmitter – amino acid transporting hormones released from the axon terminal of a presynaptic neuron which diffuses across the synaptic cleft to either excite or inhibit the target cell.

Common Neurotransmitters – Cortisol, Cortisone, Creatine, DHEA, Dopamine, Estrogen, Estradiol, Epinephrine, GABA, Histamine, Melatonin, Norepinephrine, PEA, Progesterone, Serotonin, Testosterone.

Common conditions evaluated – ADD/ADHD, Adrenal dysfunction, Autism, chronic fatigue, hormone dysfunction, malaise, mood irregularities, motivation issues, sleep disturbances. May be evaluated through blood, urine or saliva.

Diagnosis

Because of the potential significance of the neurotransmitters they should be evaluated the blood and urine tests as there can be differences between the levels in the blood and levels in the urine Traditional medicine does serum evaluations but sometimes neglects the levels in urine thus missing a key in diagnosis and possibly treatment.

Caution :But as potential good as one or a combination of the following non-drug options are they should never be replacements for prescribed medications.

Thoughts to consider

Healthy Gastrointestinal System. What is now being called **Gut and Psychology Syndrome (GAP Syndrome or GAPS)** and may very well be a significant factor in the many children (and adults) we are now seeing with mental and physical problems such as autism, hyperactivity and attention deficit, dyslexia, dyspraxia, depression, schizophrenia, **bipolar disorder**, obsessive-compulsive disorder, eating disorders, and more. Promoting healthy gut microflora. another avenue worth considering.

Preventing and Reversing Lithium Toxicity and Side Effects With Essential Fatty Acids. As we look at some natural treatment options it is very important to note that no nutraceutical is going to cure dyslexia, dyspraxia, depression, schizophrenia, bipolar disorder, obsessive-compulsive disorder, eating disorders therefore if one is contemplating adding nutraceuticals to their diet they should never do so as replacements of prescribed medications. Regardless of sincere some advice giver might be doing so is a major mistake with serious consequences.

Drugs Half Life

All drugs have varying half-lives thus certain percentages of a medication is retained in the body (primarily fat) thus when someone goes off a drug it can continue to have similar results. In the situation of medically prescribed Lithium and other tricyclic antidepressants some people stop taking their medications and seem to feel as good as they previously were when on the medication but then when the stored drug is depleted major medical issues can occurred

“Over a decade ago, a woman visited Tahoma Clinic on the advice of her psychiatrist. She was “severely bipolar,” requiring a maximum dose of lithium carbonate to keep her symptoms under control. Despite close monitoring of serum lithium levels to maintain a safe range, she was starting to show many signs of lithium toxicity, including hypertension, tremor, nausea, and proteinuria. She and her psychiatrist had tried other medications, but none provided the control of her bipolar symptoms that lithium did. She asked, “Is there an alternative to either the psych ward or the medical wing?” Fortunately, there was, and is. Without changing her lithium dose, she was asked to start on flaxseed oil, one tablespoon (15 cc's) three times daily along with 800 IUs of vitamin E

(mixed tocopherols) but this is not a recommendation but rather something you should to discuss with your medical physician.

One month later, her blood pressure had normalized, her tremor and nausea were gone, and there was no further protein in the urine. Her bipolar symptoms remained under control. She was advised to cut the flaxseed oil to one tablespoon daily along with 400 IUs of vitamin E. Several years later, her lithium toxicity hasn't returned.

We're grateful to Dr. David Horrobin for this clinical tip. During a lecture years ago on fatty-acid metabolism, he pointed out in passing that lithium could inhibit a vital step, but that this could be overcome by providing more "precursor" fatty acid to overwhelm that inhibition. For some this simple procedure works well in vivo as well as in vitro. To be on the safe side, a daily amount of flaxseed oil (or other essential fatty acid), along with vitamin E, should be recommended for anyone taking lithium. With low-dose lithium, a teaspoonful or two daily is usually sufficient. "As hopeful as doing so might seem one should never discontinue any prescribed medication nor embark on any other drug or nutritional supplement program without seeking the counsel of their medical doctor or psychotherapist.

Interventional Chiropractic Care

By and large a majority of Chiropractic physicians include metabolic care in their treatment protocols. Seeking the services of one of those practitioners may be of some varying degree of improved health to people suffering with bipolar issues but in our opinion never seen as the one and only adjunct. Even though chiropractic spinal care may not be curative, it may improve proper nerve and blood supply to those who suffer with brain and nervous system issues.

Nutritional Supplementation Considerations for Bipolar Disorder /Manic-Depressive Illness

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Dietary Considerations

Mediterranean-type Diet

Diet and the nutrient density of the foods we consume is inextricably ed to conditions such as heart disease, obesity, and diabetes. However, what we consume and the nutrient/phytonutrient density of what we consume also seems to have significant implications for the brain. Unhealthy diets are also directly connected to increased risk for psychiatric and neurologic conditions such as depression and dementia, whereas healthy diets seem to be protective.

According to a recent study published in the Can J Psychiatry (2012;57:85-92), There are "consistent associations between dietary patterns and symptoms of anxiety and depression..."People who suffer from mood disorders function better when they are eating better "coauthor of the study Bonnie Kaplan, PhD, from the University of Calgary in Alberta, Canada, told Medscape Medical News. "It really is true that you are what you eat "but we can't over emphasize the importance of having at minimum the following tests:

- 1. Touch For Health Applied Kinesiological Muscle Response Testing (TFH AKMRT),**
- 2. IgG and IgG4 Food Sensitivity**
- 3. Neurotransmitters**
- 4. Hair Mineral Toxic metals**
- 5. 24 Hour Urine Hormones**
- 6. Chem Scree (Blood Profile bad CBC**

And make sure that those test results are evaluated by a practitioner who is well versed in interpreting them and highly knowledgeable in ascertaining what if any dietary changes are indicated

A 2009 study found that people who follow Mediterranean dietary patterns—that is, a diet high in fruits, vegetables, nuts, whole grains, fish, and unsaturated fat (common in olive oil and other plant oils)—are up to 30% less likely to develop depression than those who typically consume meatier, dairy-heavy fare. *Ach Gen Psychiatry*. 2009;66:1090-1098.

Nutritional Formula Description & Supplementation Rationale

Lithium Orotate

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Bioavailable form of lithium documented of value in manic depressive cases. The value of high-dose lithium carbonate treatment is well documented, however, it has considerable potential for adverse side-effects and becomes toxic at doses not much higher than the therapeutic range.

According to a study published in *Nutr Perspectives* (January, 1988, pp. 10-11) entitled “Natural low dose lithium supplementation in manic-depressive disease,” the low-dose natural lithium proved beneficial, all patients improved in approximately 10 days and there were no side-effects.

It should be noted that the dosage of any food supplement is far below the dosages of medically prescribed lithium. Therefore even though as potentially good as Lithium Orotate can be it is highly advisable that you talk to your medical doctor about changing to **Lithium Orotate** from prescribed lithium which has much higher dosages that nutraceutical lithium Orotate therefore one should be very cautious in attempting to replace a medically prescribed lithium with food supplement based lithium Orotate. Never ever attempt to do so without consulting the physician who prescribed lithium.

“The human body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health and as true as that is we all have bio-individuality’s thus a key to health and wellness is learning what our individual bio-individualities are. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

Flax Seed Oil

Rich vegetable source of essential fatty acids. EFA’s and their derivatives serve a number of vital functions including transport and metabolism of both cholesterol and triglycerides, normal brain development and function required in the structure of cell membranes, increase metabolic rate, oxygen uptake and energy production, production of prostaglandins, and replenish skin oils to combat dryness and wrinkling. (See “Preventing and Reversing Lithium Toxicity and Side Effects With Essential Fatty Acids” section above.)

Vitamin E Complex

E Complex-1:1 is a unique natural vitamin E supplement that features a 1:1 ratio of alpha- to gamma-tocopherol. This ratio more closely resembles the tocopherol profile found naturally in vitamin E-rich plants. (See “Preventing and Reversing Lithium Toxicity and Side Effects With Essential Fatty Acids” section above.) Bipolar Disorder / Manic-Depressive Illness 81. The Best Foods for Healthy Brain Function and Mood What we eat influences our mental and neurologic health. Our understanding of how diet affects the brain has grown significantly.

PUFA’s

Research from the past several years suggests that consumption of monounsaturated fatty acids (found in olive oil, avocados, and nuts), polyunsaturated fatty acids (PUFAs; found in nuts, seeds, fish, and leafy green vegetables), and supplements containing Eicosapentanoic acid decreases depression risk over time.¹⁻³

To that end, adhering to the components of the Mediterranean diet that the IgG and IgG4 food sensitivity tests indicate—hopefully that the allowable foods will be rich in fruits, vegetables, nuts, whole grains, and fish and high in unsaturated fat—is associated with a 30% reduction in depression risk, compared with meat and dairy-heavy diets and diets high in trans-fatty acids; intake of the latter is associated with an increased depression risk over time.⁴

Conversely, low levels of PUFAs may increase the risk of developing postpartum depression, according to a 2012 literature review published in the *Canadian Journal of Psychiatry*.⁵ Keep in mind, however, that although there is strong evidence of an association between diet and depression, most studies to date have not proven causality, supporting the need for large, randomized primary prevention trials.⁶

Rethinking Fat

Beyond reducing depression risk, the unsaturated fatty acids common in the Mediterranean diet have other benefits for the brain. A 2012 review published in *Pediatrics* reported on the evidence of PUFA deficiency to attention-deficit/hyperactivity disorder, as well as findings from trials where these fats were used successfully to address ADHD symptoms.

Another small study showed that increasing omega-3 fatty acid consumption enhances working memory in young adults.⁸ Previous work has tied Mediterranean diets high in olive oil consumption with a lower risk for ischemic stroke,^{9,10} mild cognitive impairment, and Alzheimer disease—and particularly the latter two when associated with high levels of physical activity.^{11,12}

What about Salmon

Oily, cold-water fish like salmon, trout, and mackerel are especially good sources of PUFAs, namely omega-3 fatty acids. According to a 2012 study, two servings a week are associated with a modest but clinically significant reduction in stroke risk.¹³

A 2010 study suggested that consuming a moderate amount of oily fish was protective against the risk for psychotic symptoms, however, greater intakes were associated with an increased risk.¹⁴ This J-shaped relationship between fish or PUFA intake and mental health problems has also been suggested by other studies and is consistent with the importance of a balanced diet.^{15,16}

However, concurrent work from randomized controlled trials has suggested that fish oil may help prevent psychosis in high-risk individuals.¹⁷ A multicenter, randomized double-blind study is under way to determine whether omega-3 fatty acid supplementation can help prevent the onset of psychosis and improve symptoms and outcomes in those at high risk for schizophrenia.

Fruit to Fend Off Stroke 2012 was a good year for fruit. An analysis from the Nurses' Health Study found that high consumption of flavanones, a flavonoid subclass found in high concentrations in grapefruits and oranges, is associated with a 19% lower risk for ischemic stroke in women.¹⁸ A Finnish study, published in *Neurology* reported that a diet high in lycopene, a potent antioxidant found in tomatoes, may cut stroke risk in men.¹⁹

Previous work has shown that polyphenols, namely anthocyanins, found in berries and other darkly pigmented fruits and vegetables may slow cognitive decline by inducing autophagy (a process by which cells clear proteinaceous debris tied to memory loss) and reduce cardiovascular disease risk by reducing oxidative stress and attenuating inflammatory gene expression.²⁰⁻²² Each of these studies points to the importance of a healthy diet high in plant foods and low in processed foods for a range of health outcomes, both physical and mental.

Consider Cutting the Soda, Keep Up the Coffee

2012 saw more evidence that coffee might be the original wonder drug. A new observational study, to be presented at the American Academy of Neurology meeting in March shows that people who drink 4 cups of coffee a day are 10% less likely to develop depression.²³ Those who opted for four or more servings a day of diet soda or fruit punch were 30% and 38% more likely, respectively, to develop depression. Past work also suggests that the world's most widely used stimulant (coffee) cuts depression risk, possibly by altering serotonin and dopamine activity and through its antioxidant and anti-inflammatory properties.²⁴⁻²⁷

Alcohol: Always in Moderation or Avoiding Totally

The Greeks touted “nothing in excess,” a refrain that still rings true: Low to moderate* alcohol consumption has been associated with numerous potential physiologic benefits with neurologic implications including improved cholesterol profiles, beneficial effects on platelet and clotting function, and improved insulin sensitivity.²⁸ Last year a study found that limited alcohol use is associated with a lower risk for dementia^{28,29} and that moderate alcohol—especially antioxidant-rich red wine intake may protect against cerebrovascular disease.³⁰⁻³² A new study published in *Circulation Research* found that dealcoholized Merlot reduced blood pressure by approximately 6/3 mm Hg in a sample of 67 men at high cardiovascular risk, suggesting that the beneficial effects of wine consumption may not strictly be due to its alcohol content.³³ However, the health costs to the brain of alcohol consumption can quickly outweigh the benefits as heavy and long-term alcohol use can lead to alcohol abuse and dependence, impair memory function, contribute to neurodegenerative disease, and hinder psychosocial functioning.

**The US Food and Drug Administration defines “moderate alcohol consumption” as up to one drink per day for women and up to two drinks per day for men. One drink is equivalent to 12 fluid ounces of regular beer, 5 fluid ounces of 12% alcohol wine, or 1.5 fluid ounces of distilled spirits.*

Chocolate—and Still More Antioxidants Many recent studies have added to the already robust body of evidence suggesting that dark, flavonol-rich chocolate may have cardiovascular benefits. A meta-analysis published in *Cochrane Database of Systematic Reviews* reported that individuals who consumed 100 g of dark chocolate every day (a standard Hershey bar weighs 43 g) saw an average blood pressure drop of 2.77/2.20 mm Hg compared with control participants.³⁴ A study out of Finland, published in *Neurology* reported that individuals who eat at least 52 g of chocolate per week have a 17% lower risk for stroke, compared with those who eat less than 12 g per week.³⁵ The flavonols in dark chocolate likely contribute to the reported benefits by scavenging free radicals and improving endothelial and platelet function. But always check the label, as some processed chocolate contains trans-fats, which should be avoided.

What Not to Eat: Cut the Carbs

No doubt many people appear to consume large amounts of carbohydrates (especially the high density variety) but as possibly good as reducing carbohydrates might be one should be very careful in contemplating doing so. A healthy body food intact should consist of 40% carbohydrates, 40% protein and 20% fat.

It should also be remembered that we all have physical and physiological similarities but likewise individual differences therefore what may be good for some other person may in fact not be good for everyone else and with that in mind let's look at the following.

A study out of UCLA found that diets high in fructose can impair cognitive function, which is reversible with omega-3 fatty acid supplementation.³⁶ Coauthor Fernando Gomez-Pinilla, PhD, told *Medscape Medical News*: “High fructose consumption can induce some signs of metabolic

syndrome in the brain and can disrupt the signaling of the insulin receptors and reduce the action of insulin in the brain.” Other work published in JAMA suggests that fructose consumption modulates the neurophysiologic pathways involved in appetite regulation and encourages overeating.³⁷ An October 2012 study published in the Journal of Alzheimer’s Disease reported that a diet high in carbohydrates and sugar raises the risk for mild cognitive impairment in the elderly, while a diet high in fat and protein may reduce this risk.³⁸ Lead author Rosebud O. Roberts, MD, an epidemiologist at Mayo Clinic in Rochester, Minnesota, commented to Medscape Medical News that an “optimal balance” of carbohydrates, fat, and protein may help “maintain neuronal integrity and optimal cognitive function in the elderly.”

There is Confirmed Mounting Data

Mounting evidence in 12 reinforces that high consumption of red meat increases stroke risk. The largest meta-analysis to date looking at the thermogenic effects of red meat found that the risk for total stroke increased by up to 13% for each increase in a single serving of fresh, processed, and total amount of red meat consumed per day.³⁹

Earlier in the year, another study found that processed and unprocessed red meat is associated with a higher risk for stroke, while poultry was associated with a reduced risk.⁴⁰ A study by Sánchez-Villegas and colleagues found that a diet high in fruits, vegetables, grains, and fish led to a 30% lower depression risk compared with a meaty diet.⁴ But, meat quality might be a factor: Moderate consumption of unprocessed, free-range/grass-fed red meat may actually protect against depression and anxiety.⁴¹ Mental health nutrition expert Dr. Felice Jacka, a research fellow at Deakin University in Geelong, Australia comments in this report that despite the growing locavore movement, much of the livestock in the United States is raised on industrial feedlots, which “increases saturated fat and decreases very important good fatty acids, pasture-raised animals have a much healthier fatty acid profile.”

Références

1. Sánchez-Villegas, A., Verberne, L., & de Irala, J., et al. *Dietary fat intake and the risk of depression: The SUN project. PLoS One.* 2011;6:e16268.
2. Sánchez-Villegas, A., Toledo, E., de Irala, J., Ruiz-Canela, M., Pla-Vidal, J., & Martínez-González, M. A. *Fast-food and commercial baked goods consumption and the risk of depression. Public Health Nutr.* 2012;15:424-432.
3. Sublette, M. E., Ellis, S., Geant, A. L., & Mann, J. J. *Meta-analysis of the effects of Eicosapentanoic acid (EPA) in clinical trials in depression. J Clin Psychiatry.* 2011;72:1577-1584.
4. Sánchez-Villegas, A., Delgado-Rodríguez, M., & Alonso, A., et al. *Association of the Mediterranean dietary pattern with the incidence of depression: The Seguimiento Universidad de Navarra/University of Navarra follow-up (SUN) cohort. Arch Gen Psychiatry.* 2009;66:1090-1098.
5. Pierre, J. M. *Mental illness and mental health: Is the glass half empty or half full? Can J Psychiatry.* 2012;57:704-712.
6. Sanchez-Villegas, A., & Martinez-Gonzalez, M. A. *Diet, a new target to prevent depression? BMC Med.* 2013;11:3. [Pub ahead of print].
7. Millichap, J. G., & Yee, M. M. *The diet factor in attention-deficit/hyperactivity disorder. Pediatrics.* 2012;129:330-337.
8. Narendran, R., Frankle, W. G., Mason, N. S., Muldoon, M. F., & Moghaddam, B. *Improved working memory but no effect on striatal vesicular monoamine transporter type 2 after omega-3 polyunsaturated fatty acid supplementation. PLoS One.* 2012;7:e46832.

9. Fung, T. T., Rexrode, K. M., Mantzoros, C. S., Manson, J. E., Willett, W. C., & Hu, F. B. Mediterranean diet and incidence of and mortality from coronary heart disease and stroke in women. *Circulation*. 2009;119:1093-1100. *Bipolar Disorder / Manic-Depressive Illness*
10. Kastorini, C. M., Milionis, H. J., & Ioannidi, A., et al. Adherence to the Mediterranean diet in relation to acute coronary syndrome or stroke nonfatal events: A comparative analysis of a case/case-control study. *Am Heart J*. 2011;162:717-724.
11. Scarmeas, N., Stern, Y., Mayeux, R., Manly, J. J., Schupf, N., & Luchsinger, J. A. Mediterranean diet and mild cognitive impairment. *Arch Neurol*. 2009;66:216-225.
12. Scarmeas, N., Luchsinger, J. A., & Schupf, N., et al. Physical activity, diet, and risk of Alzheimer disease. *JAMA*. 2009;302:627-637.
13. Chowdhury, R., Stevens, S., & Gorman, D., et al. Association between fish consumption, long chain omega 3 fatty acids, and risk of cerebrovascular disease: Systematic review and meta-analysis. *BMJ*. 2012 Oct 30;345:e6698.
14. Hedelin, M., Löf, M., & Olsson, M., et al. Dietary intake of fish, omega-3, omega-6 polyunsaturated fatty acids, and vitamin D and the prevalence of psychotic-like symptoms in a cohort of 33000 women from the general population. *BMC Psychiatry*. 2010;10:38.
15. Sanchez-Villegas, A., Henriquez, P., & Figueiras, A., et al. Long chain omega-3 fatty acids intake, fish consumption, and mental disorders in the SUN cohort study. *Eur J Nutr*. 2007;46:337-346.
16. Jacka, F. N., Pasco, J. A., Williams, L. J., Meyer, B. J., Digger, R., & Berk, M. Dietary intake of fish and PUFA, and clinical depressive and anxiety disorders in women. *Br J Nutr*. 2012 Oct 10:1-8. [Pub ahead of print].
17. Amminger, G. P., Schäfer, M. R., & Papageorgiou, K., et al. Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders: A randomized, placebo-controlled trial. *Arch Gen Psychiatry*. 2010;67:146-154.
18. Cassidy, A., Rimm, E. B., & O'Reilly, E. J., et al. Dietary flavonoids and risk of stroke in women. *Stroke*. 2012;43:946-951.
19. Karppi, J., Laukkanen, J. A., & Sivenius, J. Serum lycopene decreases the risk of stroke in men. *Neurology*. 2012;79:1540-1547.
20. Brooks, M. New mechanism for berries' potential brain benefits uncovered. *Medscape Medical News*. August 31, 2010. Accessed January 10, 2013 at <http://www.medscape.com/viewarticle/727764>.
21. Polouse, S. Berry extracts and brain aging: Clearance of toxic protein accumulation in brain via induction of autophagy. Program and abstracts of the 240th National Meeting of the American Chemical Society; August 22-26, 2012; Boston, Massachusetts. Abstract 60.
22. Basu, A., Rhone, M., & Lyons, T. J. Berries: Emerging impact on cardiovascular health. *Nutr Rev*. 2010;68:168-177.
23. Chen, H. Sweetened beverages, coffee, and tea in relation to depression among older US adults. American Academy of Neurology 65th Annual Meeting; March 16-23, 2013; San Diego, California. Abstract 2257.
24. Lucas, M., Mirzaei, F., & Pan, A., et al. Coffee, caffeine, and risk of depression among women. *Arch Intern Med*. 2011;171:1571-1578.
25. Pasco, J. A., Nicholson, G. C., & Williams, L. J., et al. Association of high-sensitivity C-reactive protein with de novo major depression. *Br J Psychiatry*. 2010;197:372-377.
26. Ng, F., Berk, M., Dean, O., & Bush, A. I. Oxidative stress in psychiatric disorders: Evidence base and therapeutic implications.

Int J Neuropsychopharmacol. 2008;11:851-876.

27. O'Connor, A. Coffee drinking led to less depression in women. *New York Times*. February 13, 2012. Accessed January 11, 2013 at <http://well.s.nytimes.com/2011/09/26/coffee-drinking-led-to-less-depression-in-women/>.
28. Wayerer, S., Schäufele, M., & Wiese, B., et al; German AgeCoDe Study group (German Study on Ageing, Cognition, and Dementia in Primary Care Patients). Current alcohol consumption and its relationship to incident dementia: Results from a 3-year follow-up study among primary care attenders aged 75 years and older. *Age Ageing.* 2011;40:456-463.
29. Peters, R., Peters, J., Warner, J., Beckett, N., & Bulpitt, C. Alcohol, dementia and cognitive decline in the elderly: A systematic review. *Age Ageing.* 2008;37:505-512.
30. de Gaetano, G., Di Castelnuovo, A., Rotondo, S., Iacoviello, L., & Donati, M. B. A meta-analysis of studies on wine and beer and cardiovascular disease. *Pathophysiol Haemost Thromb.* 2002;32:353-355.
31. Matos, R. S., Baroncini, L. A., & Prêcoma, L. B., et al. Resveratrol causes antiatherogenic effects in an animal model of atherosclerosis. *Arq Bras Cardiol.* 2012;98:136-142.
32. Bertelli, A. A., & Das, D. K. Grapes, wines, resveratrol, and hearth health. *J Cardiovasc Pharmacol.* 2009;54:468-476.
33. Chiva-Blanch, G., Urpi-Sarda, M., & Ros, E., et al. Dealcoholized red wine decreases systolic and diastolic blood pressure and increases plasma nitric oxide: Short communication. *Circ Res.* 2012;111:1065-1068.
34. Ried, K., Sullivan, T. R., & Fakler, P., et al. Effect of cocoa on blood pressure. *Cochrane Database Syst Rev.* 2012; DOI: 10.1002/14651858. CD008893.pub2
35. Larsson, S. C., Virtamo, J., & Wolk, A. Chocolate consumption and risk of stroke: A prospective cohort of men and meta-analysis. *Neurology.* 2012;79:1223-1229.
36. Agrawal, R., & Gomez-Pinilla, F. 'Metabolic syndrome' in the brain: Deficiency in omega-3 fatty acid exacerbates dysfunctions in insulin receptor signaling and cognition. *J Physiol.* 2012;590:2485-2499.
37. Page, K. A., Chan, O., & Arora, J., et al. Effects of fructose vs glucose on regional cerebral blood flow in brain regions involved with appetite and reward pathways. *JAMA.* 2013;309:63-70, 85-86.
38. Roberts, R. O., Roberts, L. A., & Geda, Y. E., et al. Relative intake of macronutrients impacts risk of mild cognitive impairment or dementia. *J Alzheimers Dis.* 2012;32:329-339.
39. Kaluza, J., Wolk, A., & Larsson, S. Red meat consumption and risk of stroke. *Stroke.* 2012;43:2556-2560.
40. Bernstein, A. M., Pan, A., & Rexrode, K. M., et al. Dietary protein sources and the risk of stroke in men and women. *Stroke.* 2012;43:637-644.
41. Jacka, F. N., Pasco, J. A., & Williams, L. J., et al. Red meat consumption and mood and anxiety disorders. *Psychother Psychosom.* 2012;81:196-198

Blood Interpretation

NOTE: 1. Being that we frequently make note of Blood Profiles and CBC of which cholesterol is one of the typical markers and the importance of those makers being not only evaluated from a Clinical but also Homeostatic perspective we now that some time discussing.

2. For some lay person this material is rather sophisticated and that's understandable especially in that it was originally prepared by a health care provider. But as you look at things that are of particular interest to you and in all probability you will be discussing that particular interest with

your physician it should alert she/he that you are well informed and that if you have interest in she/he ordering collaborative tests that he/she will be inclined to do so.

3. You will also note that in most of the blood tests findings we do not include dietary options, exercise and various vitamins, minerals and herbal remedies. But in doing we follow our policy of not mentioning or prompting any commercial products that would contain those ingredients. If you have interest in any commercial products you can call/email us or talk to any other Board Certified and licensed health care provider who has a reputation as knowledgeable in the nutraceutical approach to food supplementation, exercise.

Cholesterol

While most authority's believe that cholesterol values should be analyzed after a 12-hour fast, growing evidence shows that it takes an 8-10 hours for the body to metabolize cholesterol therefore an 8-10 hour fast is all that is necessary.

Further, the physician must be aware that the patient's posture prior to the blood draw is significant. If the patient has been in a recumbent posture for more than 20 minutes, cholesterol values may be up to 15% lower than normal. Parameters regarding the ranges may vary from laboratory to laboratory.

Cholesterol is a blood fat that is the prime building block component to make hormones, enzymes, and antibodies along with iodine and protein.

Triglycerides

Also, most of the information relative to increased or decreased cholesterol can be extrapolated to triglycerides. However, in general, cholesterol is increased in most endocrine or organ hypo-function and decreased in most endocrine or organ hyper-function.

Major reasons of Hypercholesterolemia (dyslipidemia).

According to Dr. Mark Houston, the most common underlying reasons for dyslipidemia are:

- Chronic inflammation
- Immune dysfunction
- Oxidative stress of the vascular system.

How about high fat diets causing hypocholesteremia? True but it is so much the ingestion of fats that cause hypocholesteremia but the three preceding factors thus as important as minimizing the intake of fats attention should also be given to those three factors

The most common reasons for these vascular responses:

1. Chronic inflammatory macro- and micro-nutrient intake
2. Chronic infections (all types including bacteria, virus, fungi, TB, and parasites).
3. Toxins, POPs (persistent organic pollutants), and heavy metals
4. Metabolic, inflammatory, immune, and infectious Endotoxemia

The optimum cholesterol value is 160-180 mg/dL but for some unknown reason some people have low or high cholesterol for no known reason or health consequences.

If cholesterol is low:

Some of the sickest of patients have low cholesterol values

If low cholesterol is present:

- Rule out hyperthyroidism
- Rule out Hypometabolic/fatty liver (low SGPT)
- Suspect autoimmune disease: consider ANA, SEED rate, C-reactive protein, and rheumatoid factor tests
- Free radical pathology (possible cancer or other chronic degenerative diseases). If cholesterol is low with

a normal or low total WBC, low albumin, high globulin, high ferritin, high platelets, and high LDH or

SGPT (which may not be elevated early on), and occasionally the lymphocyte count is low.

- Uremia (patient is swollen and BUN is elevated)
- Hemolytic jaundice (total bilirubin is elevated)
- Acute infections (burns up cholesterol and the patient has elevated WBCs)
- Vegetarian diets
- Other: protein malnutrition, anemias, anorexia, intestinal obstruction, epilepsy
- Drugs that can cause low cholesterol: thyroxine, heparin, and statin medications (overuse)

Nutritional considerations low cholesterol

If fatty liver is suspected consider discussing the following food supplement options with a physician who has expertise in these areas. Secondly those markers should be monitored regularly. Nutritional support of the liver **NOTE:** 80% of all circulating cholesterol is manufactured by the liver. If hyperthyroidism is suspected, consider running a serum vitamin D profile and treat as indicated:

Iodine but a Thyroid panel should be run prior to doing so low basal temperature below 97.6F)

- If increased with a TSH below 2.5, and T3 and T4 is low, suspect anterior pituitary hypofunction
- If increased with a normal TSH, suspect a diet high in carbs and saturated fat
- If glucose is also elevated, hyper-insulinemia is possible
- Excess dietary protein if elevated cholesterol, increased BUN/creatinine ratio with normal triglycerides
- Liver/biliary hyperfunction especially if GGT, SGPT, or SGOT is greater than 30
- Diabetes, nephrosis, atherosclerosis, multiple sclerosis, leukemia, eclampsia and pregnancy, and immune

dysfunction all may increase cholesterol values.

Options For Nutritional Supplementation for Elevated Cholesterol

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

HDL Cholesterol

(Range should be 55 – 120; ideal range is 37 – 70)

HDL cholesterol is comprised mostly of protein and phospholipid. HDL along with APO-E will redistribute cholesterol to our cells for growth and steroid synthesis, and will return cholesterol to the hepatocytes. Normal range for HDL is 50 to 55 and greater. If HDL is too elevated, one will suspect the possibility of autoimmune disease. If it is too low (less than 35), cardiovascular risk climbs rapidly. It is found to be decreased in essential fatty acid deficit and liver dysfunction.

NOTE: A very high HDL cholesterol (above 60 in men and above 85 in women) is indicative of dysfunctional HDL (not protective), according to Mark Houston, MD. \

Nutritional Supplementation Options for Low HDL Cholesterol Values

Again we can't over emphasize the importance of discussing the following nutritional options with your medical doctor before you embark on utilizing them

- Niacin
- Vitamin E
- EPA/DHA.

•• L-Carnitine with Chromium

Chromium travels on transferrin as does iron thus transferrin are a term that describes a family of iron-binding proteins that include lactoferrin. The normal function of transferrin is to transport iron from the digestive tract bone marrow. But before arbitrarily giving large doses of chromium, make sure that there are adequate transferrin levels.

Restrict Intake of Hydrogenated Oils

Cholesterol/HDL cholesterol ratio is an important indicator of CVD risk. A ratio less than 3.1 is considered ideal. Ratios of 4.0 down to 3.1 are considered adequate. Ratios higher than 4.0 create an environment for increasing risk of CVD.

A healthy level of HDL decreases inflammation and the number of cells in the plaque, which reduces the risk of rupture, but a very high HDL cholesterol (above 60 in men and above 85 in women) is indicative of dysfunctional HDL (not protective), according to Mark Houston, MD.

Apolipoprotein B (Apo B)

Apo B is the primary substance in LDL and is thus associated with an increased incidence of CAD. Reinhart and others concluded that both Apo A-1 and B provide important information about the presence of CAD. It is also associated with an increased risk of arterial stenosis of the carotids.

Triglycerides

(Normal range is 80 – 115)

Triglycerides are esterified fatty oils that predominate in the core of chylomicrons and VLDL. It is essentially 10% fat and 90% sugar. Triglycerides are metabolized by the CNS and are essentially the fuel that runs the nervous system.

They have been associated with an impaired fibrinolytic system and are implicated in the progression of both coronary and peripheral atherosclerosis, independent of LDL. Further, elevated serum triglycerides have been specifically tied to the occurrence of atherothrombotic stroke and TIAs. A diet high in saturated fats can raise serum triglycerides as can a diet high in carbohydrates. Certainly, low thyroid function can contribute to elevated triglyceride values. A person who is correctly metabolizing their fats, proteins, and carbs will generally have about half as much triglycerides as cholesterol.

If Triglycerides are Elevated

- With an increased TSH greater than 4.0, suspect hypothyroidism
- If increased with a TSH below 2.5, suspect hypo-function of the anterior pituitary
- Some other conditions may increase the triglycerides including most endocrine hypo functioning
 - glands, liver-biliary dysfunction, immune dysfunction, severe free radical pathology, pregnancy, and
 - pancreatitis
- If elevated above 500, consider pancreatitis and/or an alcoholic
- Triglyceride/HDL ratio is >5, suspect insulin resistance
- Genetically elevated as found in Dys-B-lipoproteinemia, lipoprotein lipase deficiency, and lipoprotein lipase cofactor (Apo C-II) deficiency
- Drugs that can cause an elevated triglyceride value include caffeine, corticosteroids, and diuretics,
 - Oral contraceptives, dopamine, epinephrine

The following nutritional agents may be considered for those with **elevated triglyceride values**:
When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Cardiovascular risk reduction / potentially healthy lipids formulas but again consult with your medical doctor before embarking on them:

L-Carnitine

Omega-3 fatty acid complex:

EPA/DHA

Increase water soluble fiber:

Additional Considerations:

Consider:

- Limiting fats to 15–20% of calories with emphasis on EPA/DHA and monounsaturates
- Limiting carbohydrates (simple) including fruits and fruit juices
- Treat low thyroid, if found, accordingly (rule out halogen sensitivities)
- Treat low anterior pituitary, if found, accordingly (Prolan-H)

If triglycerides are found to be low, consider:

- Hyperthyroidism, especially if the TSH is found to be below 0.5 and if T3 and T4 are elevated
- Autoimmune disease if found with a low or normal cholesterol; may need to order ESR, ANA, C-reactive protein, and RF factor to rule out
- Also check for heavy metals through Hair Mineral or blood toxic Metal Analysis
- Vegetarians
- Lipase deficiency, if found with an elevated LDH, and depressed calcium.

The following nutritional agents may be considered for those with **low triglycerides**:

Iodine (kelp) and lithium:

- **Iodine.**
- **Lithium Orotate.**
- **Lipase a fat enzyme synthesizes in the pancreas:**

Fibrinogen

Fibrinogen is a globulin synthesized in the liver. It strongly effects blood coagulation, viscosity, blood rheology, and platelet aggregation. It has a direct effect on the vascular wall and is a prominent acute-phase reactant. Fibrinogen plays a key role in arterial occlusion by promoting atherosclerotic plaque, thrombus formation, endothelial injury, and hyperviscosity. A positive correlation exists between fibrinogen levels and mortality from brain infarction. Those with a higher risk of vascular-related events are those with elevated fibrinogen with high total cholesterol/HDL ratio or elevated triglycerides. Fibrinogen will increase with smoking, oral contraceptive use, obesity, stress, and aging. Fibrinogen may be elevated in nephrosis, carcinoma, pneumonia, acute infection, and pregnancy.

The following nutritional agents may be considered for those with elevated fibrinogen:

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Garlic,
Ginkgo,
EPA, GLA,
Nattokinase:
Okinase NSK-SD®
Turmeric,
Proteolytic enzymes,
Ginger:
Vitamins E and C:
Glycyrrhizin:
Licorice
Coumarin-containing botanicals (bupleurum, khella, red clover, yellow clover):

Additional Considerations:

- Reduce weight to ideal weight
- Stop smoking
- Consider stopping oral contraceptives

C-Reactive Protein

C-Reactive Protein is a very sensitive marker for inflammation, including the inflammation from the immunologic diseases, infection, or cell injury. It has been determined that inflammation is a crucial factor in the pathogenesis of atherothrombosis. It is a marker associated with production of inflammatory cytokines. These cytokines appear to encourage coagulation and damage to the vascular endothelium.

A study published in the New England Journal of Medicine (and confirmed many other times) found that plasma C-reactive protein (CRP) is a strong predictor of myocardial infarction (MI) and stroke. Men with CRP values in the highest quartile had three times the incidence of myocardial infarction and two times the incidence of ischemic stroke. These relationships remained steady over long periods, and were independent of other lipid and non-lipid factors, including smoking. Clearly, CRP is a strong predictor of the risk of future MI.

Other conditions that tend to raise C-reactive protein

Separate from the cardiovascular and peripheral vascular issues, elevated CRP is almost always present in rheumatic fever, rheumatoid arthritis, acute bacterial infections, and viral hepatitis. It is frequently seen in gout, advanced malignant tumors, active cirrhosis, peritonitis, burns, and carotenoid deficiency. It is sometimes seen to be elevated in MS, Guillain-Barre syndrome, IUDs, chicken pox, and scarlet fever. **If**

CRP levels are found to be elevated, consider:

- Address causes of acute-phase response (i.e., infections, inflammation, smoking)
- Test for antibodies to infectious agents such as *C. pneumoniae* or *H. pylori*
- Clinically address the suspected condition contributing to the elevated CRP

Nutritional consideration for elevated CRP levels:

Manage systemic inflammation: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation. Large dose ascorbate therapy. EPA/DHA providing support for people with chronic inflammatory conditions such as elevated CRP levels.

Homocysteine

(Normal range is <7.2)

Homocysteine is an intermediate amino-acid metabolite which is at the crossroads of two critical pathways in the body including methylation reactions and trans-sulfuration reactions. Indeed, it is an intermediate in the biosynthesis of cysteine from methionine, via cystathionine. Deficiency of vitamin B12, folic acid, and/or B6 can affect the enzyme pathways involved in cysteine formation, resulting in increased circulating homocysteine levels in the blood. It is an amino acid that acts as a molecular abrasive or cocklebur as it floats down the vessel raking the endothelium. This may be the event that begins the initial stage of atherosclerosis.

It is estimated that the United States loses 150,000 per year due to heart attack and stroke from elevated homocysteine values. We have known about this critical player in cardiovascular health since the 1950s. Homocysteine is an independent risk factor for cardiovascular disease separate from the other clinical entities listed above. In fact, for each 3.0 increment above 7.2, one's risk for heart attack increases by 35%. One study found that 4 years post-MI, 3.8% of patients with homocysteine levels below 9 had died, while 24% of those with levels of 15 or higher had died. Homocysteine may be elevated in other conditions. Some of these clinical conditions include deep vein thrombosis, diabetes, RA, osteoporosis, birth defects, kidney dialysis patients, depression, MS, Alzheimer's disease, etc.

Fasting Glucose

(Normal range is 80 – 100; ideal range is 65-85)

Glucose is very acidic. This is why diabetics have a tendency towards acidosis. The whole system surrounding how our bodies utilize glucose as well as the organs that participate in that utilization is quite involved.

If glucose level is found to be elevated, consider:

- Diabetes. Be sure to run a fasting serum glucose and a Hemoglobin A-1C (protein bound glucose), and a simple urinalysis (glucosuria usually does not occur until plasma value reaches 180)
- Along with decreased CO₂ (<25) and an increased anion gap (>12), suspect thiamine (B1) deficiency
- Other disease processes/conditions that may elevate glucose include: infections (if WBC count is >18,000), chronic renal disease, hyperthyroid, hyper function of the adrenals (Cushing's disease), MI, pregnancy (occasionally), inflammatory bowel conditions, asthma, pancreatitis, brain trauma, severe trauma of any sort, convulsions, severe liver disease, and the first 24 hours after a severe burn
- Drugs that may also cause one's serum glucose levels to elevate include: ACTH, corticosteroids epinephrine, furosamide, thiazides, phenytoin.

The following nutritional agents may be considered for those with elevated serum glucose:

- Modify the diet. Diets low in calories, high in fiber, but low in simple carbohydrates and saturated or trans-fatty acids may help.
 - Exercise: The uptake of glucose into muscle is a significant means of glucose disposal and takes place independently from the action of insulin.
 - B complex, including B6 to convert tryptophan to niacin and for gluconeogenesis), B1 (for conversion of pyruvic acid to acetyl CoA), B12 (for methylmalonate conversion to succinate for carbohydrate and fat metabolism), niacin (B3 to make GTF and NAD), magnesium, zinc (for insulin synthesis by pancreatic B cells and to address the post-receptor defect), chromium (to make glucose tolerance factor and address the pre-receptor defect), copper (for insulin binding), biotin (needed for glucose utilization in the cells), vanadium (has possible insulintropic effects)
- Botanicals including: gymnema, trigonella (fenugreek seeds), momordica (bitter melon), ficus (fig leaf):

If glucose level is found to be low, consider:

- Hypoglycemia (reactive). 60% of the population is hypoglycemic and the majority of those individuals will possess food allergies, particularly to the grains. Not uncommonly, the LDH will be decreased (below 150). LDH activity represents the active exchange of chloride with glucose and glucose with zinc and sodium (glycolysis), therefore, LDH activity is associated with pancreatic function and glucose metabolism.
- Many nutritional medicine IV infusions can cause a reactive hypoglycemic event. Follow protocol.
- **Insulinoma:** Tumors should be ruled out with unexplained decreased fasting glucose. An insulin/glucose ratio of greater than .03 is presumptive of insulinoma.
- Possible sprue or celiac disease **especially with a flat curve on GTT (25mg/100ml)**, although a flat curve on a GTT has also been seen with hypothyroidism and pituitary insufficiency, Addison's disease (with a concurrent decreased sodium and increased potassium).

Other conditions may cause a low, fasting glucose including:

Protein malnutrition, pregnancy (occasionally), Hypoadrenia, hypochlorhydria, and liver disease (destruction or insufficiency), certain types of heavy metal burdens.

Several medications may also cause low blood glucose levels including:

Acetohexamine allopurinol, aminosalicic acid, amodiaquine amphotericin B, steroids, androgens, choorpropamide, cyclophosphamide, desipramine, erythromycin, glycopyrrolate, haloperidol, halothane, hydrazine, imipramine, indomethacin, isoniazid, lincomycin, MAO inhibitors, mercaptopurine, metaxalone, methoxsalen, methoxyflurane, methyl dopa, methylthiouracil, nicotinic acid, nitrofurantoin, novobiocin, oleandomycin, oxazepam, oxyphenbutazone, paraldehyde, paramethadione, phenacemide, phenacetin, phenothiazines, phenybutazone, progestins and estrogens, propranolol, propylthiouracil, quinacrine, sulfonamides, tetracyclines thiosemicarbazones thiothixene, tolazamide, trimethadione, uracil.

- **Diet.** Eat numerous small meals throughout the day. Be aware that hypochlorhydria, biliary stasis, and hepatic insufficiency are common with glycemic problems (both high and low). A diet high in protein may be contraindicated. Refined carbs should be stopped, and fresh, raw fruits such as berries and leafy green vegetables should be a staple. If digestive problems are present, limit lean meat to 4 to 6 ounces per day.
- The same vitamins and minerals and herbals as listed above with elevated glucose values
- Address the underlying clinical condition that may be contributing

- Address the underlying drug therapy that may be influencing the low blood sugar status.

Clinical Observations:

One may need to run a Reinch test (hair mineral analysis for toxic, heavy metals). Some studies implicate heavy metals has a contributing factor in dysglycemic conditions.

Fasting blood glucose

Is generally able to identify (initial) hyperglycemic conditions, although in hypoglycemia, the blood glucose is often not below homeostatic ranges. A 5 to 6 hour glucose tolerance test (GTT) can be performed to identify reactive hypoglycemia. One must note that within that test that can be quite symptomatic for the patient being tested, that a GTT value of 15 points or more below the fasting level is indicative of reactive hypoglycemia.

Type I Diabetes

Those diabetic patients (Type I – insulin dependent or Type II) need to be monitored with a test called glycohemoglobin A-1C. This test will tell us what the patient's blood sugar levels are averaging over a period of 4 to 8 weeks.

Fasting Serum Insulin

(Ideal range is 0 – 15)

Insulin levels should be taken following a 12-hour fast and also 2 hours post-prandial (following a meal). The intake of excess calories and refined carbohydrates over a period of time will repeatedly stimulate insulin release and leads to dysinsulinemia. Prolonged dysinsulinemia then leads eventually to insulin resistance.

Insulin resistance is generally associated with relative glucose intolerance, elevated triglyceride levels, central obesity, hypertension, low levels of HDL, and elevated uric acid. The phenomenon of insulin resistance (metabolic syndrome) then increases the risk of developing diabetes type II, obesity, cardiovascular disease, hypertension, malignancies, and chronic inflammatory states.

If a person exhibits an elevated fasting serum insulin level:

We may suspect the clinical condition called metabolic syndrome. There is certainly a higher insulin output that may lead to type II diabetes mellitus. This will likewise, increase cardiovascular risk.

The following nutritional agents may be considered for those patients exhibiting elevated, fasting insulin levels:

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Increase exercise. Even moderate exercise will improve one's insulin sensitivity.

Increase mineral intake of chromium, magnesium, vanadium, and zinc, which are all important for the efficient manufacture and use of insulin (see details discussed above in the glucose section).

Consider increasing foods high in B complex biotin, and inositol for improved insulin response (again, see above).

If a person a low fasting serum insulin level:

We may suspect the clinical condition of type I diabetes mellitus with an associated elevation in fasting glucose or the phenomenon may in fact be a benign individual pattern.

The following nutritional agents may be considered for those people exhibiting a low, fasting insulin level: When we list food supplement options/considerations we are not in any way

attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.
Consider increasing the same minerals listed above.

L-arginine:

Botanicals: Gymnema S. Trigonella f. (fenugreek seeds) and insulin-mimetics such as Momordica c. (bitter melon):

If a person exhibits elevated 2 hour post-prandial serum insulin:

The patient may have metabolic syndrome/insulin resistance or possibly, if already clinically a type II diabetic, they may require an adjustment of their insulin dosing.

The following nutritional agents may be considered for those persons exhibiting elevated 2 hour post-prandial serum insulin: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Again, increase those minerals and vitamins listed above.

- **N-acetylcysteine:**

Diet: lower the caloric intake, increase fiber, and consume fewer concentrated/simple carbs.

Exercise appropriate to the physical status of the person. (See Exercise)

If the person exhibits decreased 2 hour post-prandial serum insulin:

The patient may either be a type I diabetes mellitus individual or simply possesses a benign idiopathic decreased insulin event.

The following nutritional agents may be considered for those people exhibiting a decreased 2 hour, post-prandial serum insulin:

Antioxidant support for the pancreatic islet cells (especially if recent onset) including vitamin E, C, carotenoids, selenium, and taurine: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Botanicals: bitter melons, fenugreek seeds, green tea, all may improve insulin output:

Exercise related to your physical ability and aerobic efficiency optimum – see Exercise..

Sodium

(Normal range is 140 - 144 mEq/L)

Sodium is the primary acidifying mineral of the body and is antagonistic to potassium. It is essential to the acid/base (pH) balance and intra-cellular fluid exchange for body water distribution affecting the heart, kidney, and adrenal cortex. Sodium pumps water and nutrients into the cell wall and is primarily under the control of the adrenal cortex. Chloride pumps water and nutrients through the cell wall and the potassium essentially moves them about inside of the cell. Sodium works in a very narrow range and is excreted readily by the kidneys. Sick kidneys will let too much pass through or not enough. Sodium is the most abundant cation in the extra-cellular fluid. It is the most important osmotic regulator of the extracellular fluid balance.

If the patient exhibits an elevated serum sodium level, consider: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Dehydration (patient did not drink enough water during their 12-hour fast prior to blood draw)
- Nephritis: look for elevated BUN and/or creatinine
- If elevated with a low potassium, consider adrenal hyperfunction; Adrenal adenoma?
- If elevated with elevated chloride, possible overuse of aspirin or softened drinking water

- Other factors that may elevate sodium include: diabetes, pyloric obstruction, CHF

The following drugs may elevate sodium levels:

- estrogen
- corticosteroids
- contraceptives

The following nutritional agents may be considered for those with an elevated serum sodium level: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Consider restricting sodium intake.

Raw, glandular kidney and L-arginine:

If the person exhibits a low serum sodium level, consider:

- Hypoadrenia especially if concurrent increased potassium, but not totally necessary; perform postural Ragland's blood pressure or pupillary Ragland's test.
- Possibly, full-blown Addison's disease
- Myxedema (hypothyroid)
- Acute infections
- If low with low chloride and elevated potassium, consider hypochlorhydria
- If low with low or high chloride and elevated potassium, consider bowel dysfunction
- Other factors that may cause a lowered sodium level include: pyloric spasm, diabetes, diarrhea, and may be observed as secondary to cirrhosis, CHF, and nephrosis.

It should be noted that ingestion of diuretics may cause low serum sodium levels therefore blood serum sodium should be monitored.

The following nutritional agents may be considered for those patients exhibiting a low serum sodium value: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Adrenal glandular support;

Celery and/or celery juice.

Reduction or elimination of diuretics where appropriate.

Treatment of the underlying contributing disease process.

Potassium

(Range should be 4.0 – 4.6)

Potassium is the chief ion found in the intracellular compartment. Only a small part of the total body potassium stores are contained in the serum. The concentration inside the RBC is at least 15 to 20 times greater than that found in the serum/plasma. Therefore, significantly lowered serum values can be considered very serious. Further, it serves as the primary oxidizing mineral of the body. It attracts water and nutrients into the cells. Potassium is also essential to maintenance of pH (blood and urine) and maintenance of osmotic pressure. Potassium should always be viewed in relation to the other electrolytes.

If the patient exhibits a low serum potassium level, consider the following: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- If low with low BUN, suspect a diet that is high in refined carbohydrates

•• If low with an increased sodium and/or chloride, suspect adrenal hyper function.
Other factors that may contribute to a low potassium serum level include: diarrhea and/or vomiting, fatigue, chronic fatigue, benign essential hypertension, metabolic alkalosis, several types of anemia, familial periodic paralysis, malignant growths, chronic nephritis, weak myocardium, and dry mouth

The following drugs may cause a low serum potassium level:

Diuretics

Desoxycorticosterone

Testosterone

The following nutritional agents may be considered for those people exhibiting a low serum potassium level: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Potassium:

MG/K

Reduce refined carbohydrate consumption.

Reduction or elimination of diuretics where possible.

Treat the underlying contributing clinical condition/disease.

If a people exhibiting an elevated serum potassium value, consider the following:

•• Adrenal cortical hypofunction: aldosterone will be decreased, sodium and chloride normal to decreased, plasma and salivary cortisol decreased, plasma renin increased, and urinary 17 ketosteroids decreased

•• Renal dysfunction if elevated BUN and creatinine and other electrolytes are out of the established Clinic parameters range.

Creatine and Chemotherapy

Creatinine is commonly elevated in kidneys problems and people who are on chemotherapy and other drugs thus it's important to regularly monitor people's blood creatinine levels. This is so especially in people prior to MRIs but if another MRI is going to be performed and was normal and another MRI is scheduled within 30 days very often another creatinine will not need to be performed.

Why should creatinine be checked prior to MRI?

Because the MRI requires a contrast agent (gadolinium) of the organ being evaluated and gadolinium can

be harmful to the functions of the patient's kidney.

Again the issue will be determined by the radiologist ordering the MRI and or technician who will be performing the MRI.

•• If high with increased Alpha 1 and 2 globulin, tissue destruction (cancer?) is possible; look further to see if there is a low albumin, elevated globulin, elevated ferritin, platelets, and LDH or SGPT

•• Bradycardia and/or congestive heart cells which may manifest as an abnormal T wave on EKG

•• Other conditions that may contribute to elevated potassium include: metabolic acidosis, acute bronchial asthma, diabetes, acute infections, and accidental hemolysis during venipuncture may increase potassium levels as much as 10 – 20%.

The following nutritional agents may be considered for those people exhibiting an elevated serum potassium value: When we list food supplement options/considerations we are not in any

way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Adrenal glandular support:

Raw kidney glandular and L-arginine;

Chloride

(Normal range is 100 – 106)

If the patient exhibits a disturbed chloride value, this indicates an imbalance of the water shifting mechanism. Elevated chlorides would mean that too much water is crossing the membrane.

Decreased chloride value along with decreased albumin (marked edema if albumin is below 3.5) means that there is deficient water crossing the membranes and will yield a pitting edema.

If the person exhibits a low value for chloride, you may want to consider the following:

- If low with CO₂ increased then metabolic alkalosis is probable
- If low with BUN or creatinine increased and other electrolytes imbalanced renal dysfunction is probable
- If low with low sodium then adrenal hypofunction is possible
- If low with low sodium and high potassium, bowel dysfunction/constipation is possible
- If low with low chloride and high potassium then hypochlorhydria is possible
- Other conditions that may exhibit a decreased chloride include: pyloric spasm diabetes, respiratory distress. Also excessive vomiting, acute and chronic fevers, excessive perspiration, emphysema, diabetic acidosis, heat cramps, diarrhea, pneumonia, infection.

The following nutritional agents may be considered for those people exhibiting a decreased chloride value: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Adrenal glandular support:

Digestive enzymes:

Kidney glandular along with l-arginine:

Betaine HCL (remember, chloride assists in the production of HCL by the chief cells of the stomach):

Table Salt / Sea Salt

Be aware of the possibility of underlying conditions.

If the person exhibits an elevated chloride value, you may want to consider the following:

- If high with low CO₂, then metabolic acidosis is probable (along with an elevated anion gap, source of acidosis is from renal dysfunction, diabetic ketoacidosis, lactic acidosis, or exogenous poisons ethylene glycol, salicylates, methanol, paraldehyde) or with a normal anion gap the cause is GI alkali loss due to diarrhea, ileostomy or colostomy, renal tubular acidosis, selective hyperaldosteronism, ingestion of acetazolamide or ammonium chloride
- If high with increased BUN and creatinine, and other electrolytes imbalanced, renal dysfunction (nephritis) is probable
- Rule out excess use of salicylates or table salt
- Other conditions that may exhibit an increased chloride value include: adrenal cortical hyperfunction, dehydration, hyperparathyroidism, cardiac decompensation, anemia, prostatic and other types of urinary obstruction

Carbon Dioxide (CO₂)

(Normal range is 26 – 28)

Generally speaking, if the patient exhibits an elevated CO₂, the patient is considered to be in a state of alkalosis (anything above 32 mEq/L, further, always order a pulmonary function test if elevated above 32).

Often in cases of metabolic alkalosis, there is need for HCL and associated factors including zinc, thiamine, and potassium. If CO₂ is high with low chloride, then metabolic alkalosis is probable. However, if CO₂ is elevated along with high LDH, and basophils, then asthma or some other obstructive lung condition may be possible.

Other Factors to consider

Other factors may cause an increased CO₂ value including: fever, hot baths, loss of HCL through vomiting, respiratory distress, adrenal cortical hyperfunction. Remember, alkalosis is a common finding in patients with food and environmental sensitivities.

If the patient exhibits a **low CO₂ value**, the patient is considered to be in a state of acidosis. Mild acidosis is considered to run between 18–24. Moderate acidosis is considered to run between 18–14. Severe acidosis is less than 14. The patient may be in a state of metabolic acidosis due to lactic acid or pyruvic acid or due to toxins.

Other factors that may decrease CO₂ include renal dysfunction, dehydration, diabetes (remember, sugar is very acidic), or respiratory alkalosis.

BUN (Blood Urea Nitrogen)

(Normal range is 13 – 18)

Nitrogen (N₂) is split off of protein in the liver, the result is urea nitrogen. BUN is a by-product of protein metabolism. BUN also assesses renal changes much faster in the less serious cases than creatinine. BUN is an excellent tool for determining renal dysfunction in the early stages. It will also assess amino acid and protein need during pregnancy. It is important that BUN be determined only on a 12-hour fast since there is an increase in blood values after ingestion of protein.

Your clinician must also be aware of the sign of “88.” This is where the BUN value falls to 8 and the serum protein value climbs to 8 thus making the sign of 88. This circumstance creates a favorable environment for the future development of cancer in the patient.

If the person exhibits an increased BUN value (because the body is either splitting off too much N₂, or the body is not excreting it like it should), consider the following:

- Renal impairment due to uremia, renal destruction, nephritis (acute or chronic), metallic poisoning of the kidneys (as found in patients receiving improperly supervised chelation therapy patients), or polycystic kidney.
- In cases of augmented nitrogen catabolism (the body is breaking down protein) as in intestinal obstruction, dehydration, pneumonia, peritonitis, bleeding from any occult source
- Other causes including Addison’s disease, uncontrolled diabetes, gout, rheumatoid arthritis, CHF, pregnancy.
- Certain drugs may increase BUN including: alkaline antacids, antimony salts, arsenicals, cephaloridine, furosemide, gentamicin, kanamycin, methyl dopa, and neomycin.

If the person exhibits a decreased BUN value (not splitting off enough N₂), consider the following: When we list food supplement options/considerations we are not in any way attempting

to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Acute liver destruction
- Acute hepatic insufficiency
- Nephrosis (the patient is losing everything through the kidney)
- Chronic wasting disease
- Amyloidosis
- Pregnancy

In both cases (elevated values or decreased values), the clinician must determine the underlying cause and clinically address it.

Creatinine

(Normal range is .6 – 1.0)

Creatinine is also a by-product of protein metabolism. It serves well as a glomerular filtration assessment test. Creatinine is found in skeletal muscle and heart muscle. Creatinine may be slightly lower in children and during pregnancy. Creatinine has a diurnal variation with the lowest values at about 7AM and the peak values around 7PM.

If the person exhibits an **elevated serum creatinine value**, consider the following:

- If high along with BUN and the patient's electrolytes are out of range, then poor kidney function is possible.
- If high with increased monocytes, normal BUN and electrolytes, then prostatic hypertrophy is possible
- A creatinine at 1.2 or higher in men, and subjective symptoms (urinary infrequency urgency, nocturia due to incomplete emptying, hesitancy and intermittence with decreased size and force of the urinary stream, incontinence, terminal dribbling, sensation of incomplete emptying, or complete urinary retention may ensue) may indicate BPH, especially in males over 45 years of age: further, in cases of BPH, always rule out food allergies
- Elevated levels will occur while the body is clearing heavy metals if pushed too fast; **DO NOT CHELATE IF CREATININE IS > 1.1**
- Other clinical factors that may elevate BUN include: CHF, starvation-dehydration, uncontrolled diabetes
- Creatinine may be low in the patient with amyotonia congenita (usually a child).

Again, the clinician must establish the reason(s) for the elevated creatinine and treat accordingly.

BUN/Creatinine Ratio

(Normal range is 13 – 17)

If the patient exhibits an **elevated BUN/Creatinine ratio**, consider the following:

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Catabolic states including fever, tissue trauma, burns, internal bleeding, circulatory failure leading to fall in renal blood flow and then to shock and acute CHF
- Acute and chronic renal failure
- Urinary tract obstruction (BPH)
- High protein diet
- Diabetes insipidus

- Whenever antidiuretic hormone (vasopressin) produced in the hypothalamus is deficient, it causes the kidneys to decrease the reabsorption of water, thus decreasing the fluid content of the body, increasing the BUN/creatinine ratio.

If the person exhibits a decreased BUN/creatinine value, consider the following: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- If low, suspect edema due to posterior pituitary dysfunction (check for low sodium and chloride). There will be an inappropriate secretion of anti-diuretic hormone (ADH). Remember, ADH (vasopressin) is produced in the hypothalamus and stored in the posterior pituitary. When released, it increases water reabsorption by the kidneys, thus increasing the fluid content of the body and decreasing BUN/creatinine ratio.

- Other factors that may decrease BUN/creatinine ratio include:

Pregnancy, low protein – high carbohydrate diets, hypochlorhydria.

Remember, normal concentrations of BUN and creatinine are: 10x BUN; .1x creatinine

If BUN and creatinine rise together adhering to the above ratio in the presence of an elevated uric acid, the patient is experiencing renal failure. If, however, the BUN is rising exponentially and the creatinine is remaining stationary, the patient may have hardening of the arteries, perirenal azotemia (no calcium, could kill the patient), or internal bleeding.

Uric Acid

(Normal range is 4 – 6)

If BUN and creatinine rise together adhering to the above ratio in the presence of an elevated uric acid, the patient is experiencing renal failure. If, however, the BUN is rising exponentially and the creatinine is remaining stationary, the patient may have hardening of the arteries, perirenal azotemia (no calcium, could kill the patient), or internal bleeding.

If the person exhibits an elevated uric acid value, consider the following (indicates increased purine catabolism and metabolic block before nitrogenous waste can be excreted as urea) consider the possibility of:

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Gout (rule out hypochlorhydria in gout)

- If high with high ESR and basophils, atherosclerosis is possible

- Possible heavy metal burden (run hair analysis)

- Other conditions that may elevate uric acid include: RA, liver dysfunction, renal dysfunction (such as acute or chronic nephritis, urinary obstruction, metallic poisoning of the kidney), cancer (conditions accompanied by massive and rapid destruction of cell nuclei as when the body is feeding on itself), pernicious anemia, hyperparathyroidism, polycythemia, diabetes, CHF, hypertension

- Possible use of prescription or recreational drugs including adrenocortical steroids, busulfan nitrogen mustard, purine analogue antimetabolites, pyhrazinamide, quinethazone, thiazides, vencristine sufate.

The following nutritional agents may be considered for those patients exhibiting an elevated uric acid value: When we list food supplement options/considerations we are not in any way

attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

For gout consider black cherries.

Consider HCL if hypochlorhydric:

Pancreatic enzymes;

Folic acid;

If the patient exhibits a **decreased uric acid value**, consider the following:

- If low, suspect poor enzymation
- Also, if low, suspect molybdenum deficiency leading to a sulfur detox pathway impairment (may have a history of allergic reaction to the sulfur based antibiotics (Septra or Bactrim) or wine due to the urinary sulfites. Can be readily checked with a urinary sulfite dipstick. There should be no urinary sulfites showing up on a UA. Sulfites, in the presence of a normal functioning pathway would be oxidized all the way to sulfates. Further, if uric acid is low along with a low MCV (less than 88) and MCH, then molybdenum need is even more probable.
- If low along with elevated MCV, MCH, MCHC, and RDW, suspect B12 and/or folate deficiency

The following nutritional agents may be considered for those people exhibiting a decreased uric acid value:

Molybdenum:

Broad spectrum, plant based digestive enzymes:

B complex

Calcium

(Normal range is 9.7 – 10.1)

99% of our body's calcium is stored in our bones. It is the most abundant macro-mineral in the body. Calcium is absorbed from the upper small intestines and the amount of absorption depends upon the acidity in that region as well as the amount of phosphate present.

Serum proteins influence the calcium level. Generally, calcium is increased in hyper-proteinuria and decreased in hypo-proteinemia.

Calcium is used rapidly for tissue repair due to trauma and infections. It is used in conjunction with vitamin A, C, magnesium, phosphorus, iodine, and unsaturated fatty acids.

About 55% of serum calcium is in the ionized form and 45% is the non-diffusible form which is bound to protein (mostly albumin).

Your physician must make sure that a person's calcium level never goes above 11.0 (indicating an extremely morbid clinical condition).

Lactose and vitamin D will enhance calcium absorption. High fiber, phytates, cellulose, oxylates, hyaluronic acid, and low hydrochloric acid output will all hinder calcium absorption.

If a person exhibits an increased calcium value, consider the following:

- Hyperplasia or tumor of the thyroid
- Hyperparathyroidism
- Hypervitaminosis D
- Multiple myeloma
- Bone metastases

The following nutritional agents may be considered for those patients exhibiting an increased calcium value: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical

doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly there are some drugs that calcium (dairy products or food supplements) that contain calcium and many state not to be ingested within two hours prior to taking the drug nor two hours after taking the drug.

HCl:

Calcium citrate

Run serum vitamin D.

Treat underlying disease state.

If a person exhibits a decreased calcium value, consider the following:

- Diarrhea
- Malnutrition
- Hypoparathyroidism
- Vitamin D deficiency
- Nephrosis
- Pneumonia
- Severe infections of any type
- Low calcium and elevated phosphorus may be poor gall bladder emulsification
- Low calcium and triglycerides and elevated LDH may be pancreatic enzyme deficiency as may altered calcium, elevated uric acid, and protein

The following nutritional agents may be considered for those people exhibit a decreased calcium value: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

HCl:

Calcium citrate:

Pancreatic enzymes (plant based):

Vitamin D:

Treat underlying disease process.

Much has been written about the type of calcium to be used based upon urinary pH measured 2 hours after a typical meal.

- If the urinary pH is >7.5 consider: HCL, ascorbic acid, calcium chloride, lactate, or phytates.
- If the urinary pH is 6.8 – 7.5 consider: calcium Orotate, lactate, ascorbic acid.
- If the urinary pH is 6.4 – 6.8 consider: calcium citrate, phosphate, or proteinate
- If the urinary pH is 6.0 – 6.4 consider: calcium citrate, gluconate, or carbonate
- If the urinary pH is 5.6 – 6.0 consider: calcium citrate, gluconate, carbonate, or vitamin D
- If the urinary pH is 5.1 – 5.6 consider: calcium citrate. Don't use vitamin C for 24–36 hours, and then you may use a buffered vitamin C.

Phosphorus

(Normal range 3.4 – 4.0)

Phosphorus is quite important in bone physiology and also in the formation of biologically active compounds such as phospholipids, nucleic acids, ATP, Creatine phosphate, and complexes required for the utilization of glucose within the body.

Generally speaking, phosphorus is an indicator of digestive function. Further, it is a good indicator of intestinal pH. If low, the gut is acidic; if elevated, the gut is alkaline. However, certainly, several factors are important players in regulating serum phosphorus, including PTH and the functional state of the kidneys as well as diet (soft drinks?).

If the person exhibits an **increased serum phosphorus level**, consider the following:

- Hypoparathyroidism
- Renal insufficiency
- Hypervitaminosis D
- Normally found elevated in children and in bone repair
- Portal cirrhosis
- Bone neoplasm
- Edema
- Diabetes
- Ovarian hyper-function
- When elevated with decreased calcium, consider poor gall bladder emulsification
- When elevated with elevated calcium, consider hydrochloric acid deficiency or Hypervitaminosis D

The following nutritional agents may be considered for those person exhibits an elevated phosphorus: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Hydrochloric acid:

Folic acid & B12:

Bile salts:

Kidney support:

Reduce vitamin D supplementation if indicated by serum analysis.

The cause (s) of any possible underlying disease should determine and be treated .

If the person exhibits a decreased serum phosphorus level, you may want to consider the following:

- Osteomalacia
- Myxedema (thyroid problems)
- Hyperparathyroidism
- Lobar pneumonia
- Decreased duodenal pH with lack of pancreatic bicarbonate
- Low phosphorus, low calcium, low bilirubin, consider poor fat absorption
- Commonly, vitamin D deficiency
- If low, with an altered (high or low) serum globulin, hypochlorhydria is probable
- Diets high in refined sugars
- Elevated blood viscosity
- Ovarian hypo-function
- Diabetes
- Protein malnutrition

The following nutritional agents may be considered for those people exhibiting decreased **serum phosphorus:** When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Vitamin D (some people may require up to 60,000 IU/D for a short period):

Pepsin-bromelain-lactase:

Lipase:

HCl:

Reduce refined carbs.

Treat underlying disease process.

The normal calcium to phosphorus ratio is 10 parts of calcium to 4 parts of phosphorus. This ratio may be heavier on the calcium side in sub-acute primary hypothyroidism and also in secondary hypothyroidism due to the anterior pituitary.

Usable calcium = 2.5 x phosphorus (normal range is 7.9 – 10.1)

Calcium-phosphorus index = usable calcium (above) x phosphorus (or) phosphorus squared x 2.5 (normal range is 30.0 – 40.0)

Alkaline Phosphatase

(Normal range 60 – 80)

Alkaline phosphatase is one member of a group of zinc metalloprotein enzymes. Therefore, it is a zinc dependent enzyme. Alkaline phosphatase is found in several tissues including liver, bone, intestinal mucosa, and placenta.

If the person exhibits an **increased alkaline phosphatase level**, consider the following possible clinical scenarios:

- Primary bone lesions including carcinoma of bone, sarcoma, Osteomalacia, metastatic disease to the bone, Paget's disease, Hodgkin's with bone involvement, multiple myeloma
- Liver involvement including liver abscesses, hepatitis (viral or toxic), primary liver disease (cirrhosis, liver cancer, primary sclerosing cholangitis, parenchymal jaundice, etc.)
- Biliary duct obstruction
- Normally increased 2 to 4 hours after a fatty meal
- Normally increased in patients who are Lewis positive secretors of blood type O and B
- Normally found in growing children (bones are growing)
- Normally elevated in bone fracture healing (may be increased up to 500 to 800)
- During attempts at bone repair (osteoporosis)

The following nutritional agents may be considered for those people exhibiting an **elevated alkaline phosphatase**: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure.

Herbal liver support & raw liver glandular:

Ascorbates:

The cause (s) of any possible underlying disease should determine and be treated .

If the patient exhibits a decreased alkaline phosphatase level, consider the following :

- Anemia
- Hypothyroidism
- Celiac disease
- Severe chronic nephritis
- Usually a zinc deficiency
- Estrogen therapy
- Hypothyroidism, occasionally

The following nutritional agents may be considered for those people with a decreased alkaline phosphatase: When we list food supplement options/considerations we are not in any

way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Zinc (may take 18 months for alkaline phosphatase to achieve a normal range while on Zn):

If your serum blood test and/or Hair Mineral Analysis shows a zinc deficiency and you're on HRT (Hormone Replacement Therapy) ask your medical doctor for an opinion regarding removing from HRT thus regardless if the person is on Hormone replacement Therapy regular a 24 Hour Urine Hormone Analysis should be conducted.

The cause (s) of any possible underlying disease should determined and be treated .

Total Protein

(Normal range is 7.1 – 7.6)

Albumin and total globulin are the components that make up total protein. One can see that it is possible to have a normal total protein, yet have abnormal indices of globulin or albumin.

If a person exhibits **elevated total serum protein levels**, you may consider the following:

- Neoplasm
- Multiple myeloma
- Pneumonia
- Poor enzymation (low protease enzyme output), when elevated protein, elevated uric acid, and altered calcium level
- Hypochlorhydria
- Dehydration
- High protein and high calorie diet if elevated protein, elevated A/G ratio, and elevated cholesterol
- Liver/biliary dysfunction
- Rheumatoid arthritis

Aa climbing total protein level is a serious clinical condition.

The following nutritional agents may be considered for those people with an elevated serum protein level:

Protease enzymes (plant based):

HCl:

Calcium, vitamin D:

Possibly reduce protein consumption.

Treat underlying disease process.

If the person exhibits a decreased serum protein level, you may consider the following:

- Hyperthyroidism
- Birth control pills
- Edema (gross edema will manifest when the persons serum protein level falls below 5)
- Malnutrition
- Leukemia
- Liver disease: fatty liver congestion when decreased protein, decreased cholesterol and SGPT; hepatic insufficiency when decreased protein and BUN and altered SGPT
- Digestive tract inflammatory disease states (colitis, Cohn's, gastritis, ileitis, etc.)
- CHF
- Renal dysfunction (usually due to diabetes or hypertension)
- Poor protein assimilation when decreased protein and calcium

The following nutritional agents may be considered for those people with a decreased serum total protein level:

If due to hyperthyroid, consider iodine:

- Iodine.

If due to birth control pills, consider alternate forms of birth control.

If due to liver disease (fatty liver), consider inositol and choline:

If the kidneys are involved, consider L-arginine and raw kidney glandular:

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

If due to hypertension, consider diet.

- CoQ-10

- L-Carnitine

The cause (s) of any possible underlying disease should be determined and be treated .

Albumin

(Normal range is 4 – 4.5)

The albumin within the body is almost entirely produced by the liver. Albumin is responsible for approximately 80% of the colloid osmotic pressure between blood and tissue fluids.

If the person exhibits an **increased serum albumin level**, you may consider the following:

- Dehydration

The following may be considered in the treatment for the dehydrated person:

Consider increasing fluids.

If the person exhibits a decreased serum albumin level, you may consider the following:

- Since most of the albumin is produced by the liver, if low, clearly liver disease must be considered, including hepatitis, cirrhosis,

or acute cholecystitis

- Kidney-related disorders including nephrosis and nephritis

- Malnutrition or visceral protein loss

- Below 3.5 indicates a possible serious pathology (neoplasm)

- Digestive inflammatory diseases (usually secondary to the need for HCL)

- Hyperthyroidism

- Pregnancy

The following nutritional agents may be considered for those patients with a **decreased albumin level**: When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Address liver condition(s) appropriately (methionine, choline, and inositol):

If kidney, consider L-arginine and raw kidney glandular:

Albumin levels and ratios, with other entities, play a significant role in assessing the person's morbidity risk. Three (3) of the ominous signs include albumin in the equation. Perhaps the most ominous of the four ominous signs is an albumin that is 3.5 or below, with a total absolute lymphocyte count less than 1,500. The patient with this ominous sign possesses a 4 times greater risk for morbidity and a 20 times greater risk for mortality than the general population..

Globulin

(Normal range is 2.8 – 3.5)

Several components make up the total globulin serum level of the patient. They include the alpha 1 fraction, alpha 2 fractions, beta fraction, and the gamma fraction. Therefore, varying levels of any of these fractions can influence total globulin levels. Globulin is a sophisticated form of protein. It indicates the amount of circulating colloidal protein that is used to manufacture antibodies, blood cells, and enzymes. Globulin combines with phosphorus, copper, iodine, and iron in order to have functioning IgG, A, M, and E immunoglobulins.

If the person exhibits an increased globulin level, you may consider:

- Infection
- Neoplasm (early malignancy or multiple myeloma)
- Parasitic infections
- Hepatitis
- HCL deficiency

A climbing total globulin is a serious clinical matter and the following nutritional agents may be considered for those people with an **increased globulin level:**

If due to infection, must discern what type and treat accordingly.

If due to infectious hepatitis, consider Wright and Gaby protocol:

Consider the possibility of Silymarin and Betaine HCL:

If the person exhibits a decreased globulin level, you may consider:

- Anemia
- Chronic viral or bacterial infections
- Hemorrhage
- Liver dysfunction

A decreased total globulin may suggest increased use of globulin by the liver, spleen, thymus, kidneys, or heart.

The following nutritional agents may be considered for those people with a decreased globulin level:

If due to anemia, is it secondary to an “occult” bleed? It should be treated accordingly. When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

If due to chronic viral or bacterial infections, upregulate immune status with C, Zn, Germanium, CoQ-10, colostrum, thymus, etc.:

If due to hemorrhage within upper GI tract, consider olive oil, gastromet, gastricumeel, elhasecalin.

If due to liver dysfunction, discern what type and treat accordingly.

Albumin/Globulin Ratio: (A/G Ratio)

(Normal value is 1.2 – 1.5)

A low (reversed, or inverted) A/G ratio less than 1.0, is one of the 4 ominous signs. These people may have a serious, developing, or currently manifesting pathological process.

If the person exhibits a decreased A/G ratio, consider the following:

- Neoplasm, including multiple myeloma or metastatic disease
- Infectious disease including AIDS
- Intestinal disease

- Liver disease
- Renal disease
- The cachexic patient

The physician must determine what pathology is developing or already present, and treat accordingly.

If the person possesses an elevated A/G ratio, this phenomenon is not considered to be clinically significant.

Calcium/Albumin Ratio: (Ca/A ratio)

(Normal value is 2.2 – 2.5)

If the person exhibits a decreased Ca/A ratio, it is considered usually as clinically insignificant

If the ratio is elevated greater than 2.7, this is considered one of the 4 ominous signs, due to malnutrition or visceral protein loss secondary to a potential pathological process.

GGT (Gamma-glutamyl transferase)

(Normal range is 1 – 40)

GGT is generally considered to not be quite as sensitive a marker as SGPT. GGT is responsible for transporting amino acids across the cell membranes from the extracellular to the intracellular component. This function requires 3 molecules of ATP and 1 molecule of glutathione. GGT is commonly elevated in alcoholics.

If the person exhibits an **increased GGT level**, consider the following:

- Hepatic disease
- Pancreatic disease especially if > 300.
- Cardiovascular disease
- Diabetes
- Epilepsy
- Severe trauma

The following nutritional agents may be considered for those people possessing an elevated GGT:

In all of the following situation those people should consult with a medical doctor

If due to biliary tree obstruction, consider gallbladder protocol but the person should be seen by a medical specialist.

If due to liver disease, treat accordingly (methionine, raw liver, hepatoplex, etc.): but the person should be seen by a medical specialist.

If due to pancreatitis, no alcohol or , digestive enzymes: but the person should be seen by a medical specialist.

Treatment should be a responsible disease process but the person should be seen by a medical specialist.

Most commonly there is no typical medical concern when there is no significant clinical concern with a lowered level of GGT.

SGOT: (also known as AST)

(Normal levels are 18 – 26)

SGOT is found in liver, skeletal muscle, brain, heart, and kidneys. It will elevate with degenerative destructive organ processes. *In cardiac related conditions, SGOT will not return to normal as quickly as SGPT.

If the person exhibits an elevated SGOT level, one may consider the following:

- Myocardial infarction (confirm with treponin)
- Hepatic conditions (parenchymal damage)
- Pancreatitis
- Pulmonary embolism
- Myositis / skeletal muscle damage
- Mononucleosis
- Neoplasm
- Alcoholism
- Diabetes
- Essential hypertension
- Rheumatoid arthritis

The following nutritional agents may be considered for those people possessing an elevated SGOT:

Broad spectrum, plant-based enzymes [amylase, protease, lipase, cellulase] for pancreatic involvement:

If liver is involved, consider the pathology and treat accordingly.

If cardiac (MI or coronary artery insufficiency), consider IV chelation, DMSO, and glutathione for free radical damage control for the expanding infarcted penumbra. Also magnesium, taurine, Co-Q10, L-carnitine, hawthorne:

Pursue any traditional and alternative diagnostic tests to determine any underlying clinical condition, and treat accordingly.

If there is any question regarding the possibility of taking food supplementations it should be discussed with your medical and Chiropractic physicians.

If the person exhibits a decreased SGOT level, one must consider the following:

Vitamin B6 deficiency (pyridoxine):

SGOT is a B6-dependent enzyme. In other words, for the body to manufacture SGOT, there must be adequate levels of circulating B6.

The following nutritional pharmacotherapy agents may be considered for people with **decreased SGOT:**

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Pyridoxine (B6), B12, Folic acid:

SGPT: (also known as ALT)

(Normal range is 18 – 26)

SGPT is an enzyme that is found in liver, kidneys, heart, and skeletal muscle.

If the patient exhibits an **elevated SGPT level**, one may consider the following:

- Hepatic related disorders where the liver is swollen, alkaline, and inflamed (especially hepatitis)
- Pancreatic conditions
- Neoplasm

- Alcoholism
- Congestive heart failure (CHF)
- Myocardial infarction (MI)
- Hypertension (RA)
- Asthma

The following nutritional agents may be considered for the people with elevated SGPT:

If due to hepatitis, Silymarin, hepatoplex, beta carotene, etc.:

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

If due to pancreatic problems, place on broad spectrum, plant-based digestive enzymes: You should see to it that your physician determines the underlying pathology and treat accordingly.

If the person exhibits a **decreased SGPT level**, one may consider the following:

- Fatty liver congestion

The following nutritional agents may be considered for the people with **decreased SGPT levels:**

Lipotropic factors including methionine, inositol, choline:

Alkaline B vitamins keeping in mind that alkaline vitamins end with INE.

NOTE: When SGPT is greater than SGOT (and must be higher than the laboratory reference ranges, not the homeostatic ranges that we quote), this typically indicates an extra-hepatic condition such as hepatitis, extra-hepatic obstruction (i.e., gall stones in bile duct), and toxic hepatitis.

When SGOT is greater than SGPT (and again, it is higher than the laboratory reference ranges), we are typically looking at an intrahepatic condition such as primary liver cancer, cirrhosis, primary sclerosing cholangitis. Clearly, the latter scenario is associated with increased risk for mortality.

LDH (Lactic Dehydrogenase)

(Normal range is 120 – 160)

Total LDH is an enzyme that may elevate in virtually any destructive process or trauma in the body. The enzyme is widely distributed in heart and skeletal muscle, liver, kidney, and red blood cells. Anytime an elevated total LDH is discovered, it is clinically prudent to order an LDH isoenzymes study. There are 5 isoenzymes with some crossover noted between sets.

- LDH Isoenzyme 1 is found in heart and RBCs
- LDH Isoenzyme 2 is found in heart, lymph, and RBCs
- LDH Isoenzyme 3 is found in pulmonary, spleen, adrenal, and kidney
- LDH Isoenzyme 4 is found in liver, skeletal muscle, prostate / uterus
- LDH Isoenzyme 5 is found in liver and skeletal muscle.

A decreased LDH Isoenzyme 5 will often occur in people who have experienced long-term, insidious exposure to noxious gases (CO, etc.). Beware if your patient complains of unexplained illness, fatigue, loss of memory, etc. Check for leaks. Further, if this isoenzyme is decreased, it can indicate a heavy metal burden.

By encouraging your doctor to order LDH isoenzyme study, it is possible to narrow a developing disease process by organ system early on in its development.

If the person exhibits an elevated total LDH, isoenzyme study should be conducted and treatment of the afflicted organ/tissue accordingly.

NOTE: Hemolysis blood draw samples have a large amount of LDH, SGOT, and SGPT in them. Be aware of that when drawing blood in your offices.

If the person exhibits a decreased LDH, one may consider the following:

- Hypoglycemia

The following nutritional agents may be considered for those patients with **decreased total serum LDH levels:** When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Hypoglycemic nutrients including: Chromium, Zinc, Vanadium, Magnesium, B vitamins, etc.:

Total Bilirubin

(Normal range is .5 – .7)

Total bilirubin is an end-product of hemoglobin breakdown by the spleen, liver, and bone marrow. The liver will alter bilirubin to a form that is excreted through the bile or by the kidneys. When the patient's value goes above 1.2, consider a liver/gallbladder flush if stones are confirmed and are < 1.5 cm in diameter, and non-calcified.

If the person exhibits an **elevated total bilirubin**, consider the following:

- Biliary obstruction
- Hemolytic anemia
- Liver injury
- Chronic cholecystitis
- Thymus involvement if total bilirubin is elevated with altered lymphocyte count
- Spleen hyperfunction if elevated T. bili, Hgb, Hct, and low RBC count

The following nutritional agents may be considered for those people with an elevated total bilirubin:

An abdominal flat-plate X-Ray should be made to see if stones are calcified (if calcified, and patient is acute, consider surgical referral). If stones are not calcified, begin with bile viscosity thinning agents such as apple cider for 4 to 10 days. Then contemplate a liver-gallbladder flush. (See appendix) When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Raw thymus glandular:

Raw spleen glandular:

Determination should be made regarding the possibility of any underlying pathology and treat appropriately.

There is virtually no significance with a **lowered total bilirubin** with the exception of possible secondary aplastic anemia.

CPK (Creatine Phospho Kinase)

(Normal range is 30 – 180)

An enzyme that is often elevated total CPK should have a CPK isoenzyme study ordered.

CPK is elevated in cardiac conditions, muscular dystrophy, muscle damage/degeneration, brain damage/inflammation, and strenuous exercise; also other conditions include hypothyroidism, edema, and influenza and cancer (brain/lung) patients who taking Alectinib (alecensa).

CPK isoenzymes are broken down into three (3) categories:

- **CK:MM** — derived from skeletal muscle
- **CK:MB** — derived from heart muscle
- **CK:BB** — derived from brain and nerve tissue and may also be a useful marker for prostate, breast, ovarian, colon, lung, and digestive tract cancers.

Serum Iron (Fe)

(Normal range is 85 – 120)

Serum iron is just that, the inorganic form of circulating iron in the blood.

If the person exhibits an **increased serum iron**, consider the following:

- Hemochromatosis
- The patient is on iron therapy
- Liver dysfunction (hepatitis)
- Iron conversion anemias
- Water supply?
- Cooking utensils?
- May result from deficiency in RBC production and/or RBC destruction
- In presence of decreased hematocrit (Hct), possible intrinsic factor deficiency

NOTE: Iron is vital to spleen function and reticulo-endothelial activity.

The following nutritional agents may be considered for those with **elevated serum iron levels:** When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Discontinue iron therapy
- Address liver involvement
- Determine the underlying cause and treat appropriately

If the person exhibits a decreased total serum iron level, consider the following:

- If the serum iron is below 40 – 50, must rule-out pathological bleeding. *Hemoccult test?*
- Chronic infections
- Nephrosis
- Hypochromic anemias

The following nutritional agents may be considered for those with **decreased serum iron levels.** When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Spleen Glandular:

Iron and Vitamin C:

NOTE: A transferrin and serum ferritin analysis should be run and monitored

We also encourage you to see Iron as it offers other valuable information

Thyroid Profile

T3: (tri-iodothyronine)

(Normal range is 36.0 – 40.0)

T3 comprises approximately 10–15% of the total circulating hormone. Approximately 1/3 of T4 is converted to T3. T3 is produced mainly from the peripheral conversion of T4.

Generally speaking, T3 has a higher biological activity than T4, yet will bind to protein less efficiently than T4. T3, in serum, exists in both a bound form and a free form, however, less than 1% is in the free-form.

If the person exhibits an increased T3 value, consider the following:

- Hyperthyroidism
- Thyrotoxicosis
- Hypoproteinemia
- Nephrosis
- Neoplasm

If a person exhibits a **decreased T3 value**, consider the following:

- Hypothyroidism
- Myxedema
- Pregnancy
- Birth control pills

T4: (tetra-iodothyronine)

(Normal range is 7.0 – 9.0)

T4 is the major hormone secreted by the thyroid making up 85–90% of the hormone. T4 exists as both a bound and non-bound form. T4 is predominately bound to thyroid binding globulin (TBG), pre-albumin, and albumin.

If the person exhibits an **increased T4 value**, consider the following:

- Hyperthyroidism
- Thyrotoxicosis
- Birth control pills
- Pregnancy
- Neoplasm

If the person exhibits a **decreased T4 value**, consider the following:

- Hypothyroidism
- Myxedema
- Hypoproteinemia
- Nephrosis
- Simmonds disease

T7: (also known as FTI [free thyroid index])

(Normal range is 2.6 – 3.6).

T7 essentially reflects the metabolic impact of the thyroid hormone on the body. T7 can be calculated by the following equation:

$$T7 = T3/100 \times T4.$$

It is interesting to note that many people may in fact look like and complain of symptoms associated with hypothyroidism, yet have normal or nearly normal thyroid indices. When the blood work appears somewhat unremarkable, yet you are still clinically thinking that this person may have hypothyroidism, consider running a serum vitamin D profile and having the patient do the basal body temperature study.

Basal Body Temperature Studies for Thyroid Function:

Of all the problems that can affect health, none can be more common, more easily corrected, yet more untreated and unsuspected, than low thyroid gland functioning, called hypothyroidism.

Thyroid function may have an effect on many of the degenerative disease processes that we encounter, such as hardening of the arteries, cholesterol abnormalities, high blood pressure, skin disorders, menstrual abnormalities, low resistance to infections, and many other conditions. A simple test has been devised to evaluate thyroid activity, this is performed simply by taking the axillary (under arm) temperature every morning for ten (10) consecutive days.

Instructions For Taking Basal Body Temperature:

- Use an ordinary oral or rectal thermometer
- Shake down the thermometer the night before, and place it on your night stand
- The first thing in the morning BEFORE you get out of bed, place the thermometer under your arm for ten (10) minutes
- Record the temperature reading and date in the places below

DATE	TEMPERATURE

After the completion of the ten (10) day cycle, please bring that chart to you next appointment.

Signature: _____

Normal Range: 97.6 to 98.2

- Averages below indicate hypothyroidism.
- Averages above indicate hyperthyroidism.

Blood Sugar Dys-regulation — Cardiometabolic Syndrome (CMS) (also known as Metabolic Syndrome (MetS), Syndrome X, Insulin Resistance, Pre-diabetes), and Type 2 Diabetes

Metabolic Syndrome (MetS)/Cardiometabolic Syndrome (CMS) is a cluster of interrelated clinical symptoms/health problems that increase an individual’s risk for many chronic diseases including atherosclerosis and type 2 diabetes mellitus (T2DM).

- In addition to increasing susceptibility to cardiac events, MetS confers increased risk of non-alcoholic fatty liver disease, a condition that is rising in prevalence in Western countries and is associated with an increased risk of cirrhosis, liver cancer, and liver failure.
- Incidence of certain malignancies, including colorectal and prostate cancer, increases with the presence of MetS.
- Polycystic ovary syndrome, the most common endocrinopathy of reproductive-age women, is strongly associated with MetS.

•• Furthermore, sexual dysfunction, gout, chronic renal disease, and microalbuminuria have each been associated with MetS.

•• Approximately 34% of adults in the US meet criteria for MetS diagnosis, and individual propensity for developing MetS increases dramatically with age.

Central to Metabolic Syndrome (MetS) / Cardiometabolic Syndrome (CMS) is insulin resistance, the inability of the body to efficiently use insulin to help burn blood sugar (glucose). It is often accompanied by abdominal obesity.

Central Metabolic Syndrome (MetS) / Cardiometabolic Syndrome (CMS)

CMS involves insulin resistance, the inability of the body to efficiently use insulin to help metabolize (burn) blood sugar (glucose). It is often accompanied by abdominal obesity.

How it Develops:

The more refined carbohydrates (High Glycemic Index Foods) you consume, the faster your blood sugar rises after a meal. In normal health the body response is to secrete large amounts of insulin to help move that blood sugar into cells.

But insulin (a powerful hormone synthesized by the pancreas) also promotes fat storage, increased blood pressure, and elevated cholesterol and triglyceride levels. Approximately 55% of Americans are overweight, a sign of metabolic syndrome. In addition, 25% of thin people have insulin resistance, the cornerstone of metabolic syndrome. Based on these numbers, more than 65% of American adults either have or are at risk of metabolic syndrome. All of this blood sugar and insulin generates large numbers of hazardous free radicals, which predisposes the aging of the body and set the stage for heart disease, cancer, Alzheimer's, and other diseases.

Due to the prevalence of obesity and the aging population, and given the relationship among MetS, T2DM, and cardiovascular disease (CVD), a long-term solution is urgently needed.

Although pharmaceutical treatment options are available for managing symptoms related to MetS, lifestyle change programs are the recommended "first line of therapy" for the prevention or management of metabolic syndrome.

In Moderate to Severe Blood Sugar Dys-regulation:

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

People who have chronic issues such as Blood Glucose regulation very often have unbeknownst to them food hypersensitivity's that predispose them to canker sores. What does that suggest? It suggests a IgG and IgG4 Food Sensitivity test as well as a Chem Screen and CBC blood profile.

Metabolic Syndrome / Cardiometabolic Syndrome (CMS) Diagnosis

Metabolic Syndrome is a cluster of symptoms that increase the risk for CVD or T2DM. American Heart Association and the Nation Heart, Lung, and Blood Institute recommend that Metabolic Syndrome be identified as the presence of three or more of these components:

1) Elevated waist circumference:

•• **Men** — Equal to or greater than 40 inches (102 cm)

•• **Women** — Equal to or greater than 35 inches (88 cm)

2) Elevated triglycerides:

Equal to or greater than 150 mg/dL

3) Reduced HDL (good) cholesterol:

•• **Men** — Less than 40 mg/dL

•• **Women** — Less than 50 mg/dL

4) Elevated blood pressure:

Equal to or greater than 130/85 mm Hg or use of medication for hypertension

5) Elevated fasting glucose:

Equal to or greater than 100 mg/dL (5.6 mmol/L) or use of medication for hyperglycemia

Contributing Factors to Metabolic Syndrome / Blood Sugar:

- Obesity
- Autoimmunity
- Lack of exercise
- High refined sugar diet
- High fat diet
- Endocrinopathies
- Food sensitivities
- Viral infection
- Atherosclerosis

Contributing Factors to Metabolic Syndrome / Blood Sugar:

- Obesity
- Autoimmunity
- Lack of exercise
- High refined sugar diet
- High fat diet
- Endocrinopathies
- Food sensitivities
- Viral infection
- Atherosclerosis

Diet is one of the most important factors contributing to Metabolic Syndrome / Blood Sugar Dys-regulation.

Consider the Low Glycemic Index Mediterranean type diet

Try to eat every 2 hours if possible. (Make sure it is something healthy). Use of the Mediterranean diet among non-diabetics at high cardiovascular risk halved the incidence of new-onset diabetes over four years compared with a low-fat diet; published online October 7, 2010 in *Diabetes Care*.

A diet high in monounsaturated fatty acids, fruits, vegetables, whole-grain cereals, and low-fat dairy products, coupled with fish, poultry, nuts, legumes, and a low consumption of red meat—also known as the Mediterranean diet, is associated with a lower prevalence and slower progression of metabolic syndrome, according to the results of a new meta-analysis.

•• Kastorini, C. M., Milionis, H. J., & Esposito, K., et al. The effect of Mediterranean diet on metabolic syndrome and its components.

J Am Coll Cardiol. 2011; 57:1299-313.

According to James A. Levine, MD, PhD, professor of Medicine at Mayo Clinic: Research documents that walking for as little as 15 minutes after each meal significantly lowers the post-meal glycemic response.

Nutritional Supplementation Considerations for Blood Sugar Dys-regulation — Cardiometabolic Syndrome (CMS), also known as Metabolic Syndrome (MetS), Syndrome X, Insulin Resistance, Pre-diabetes, and Type 2 Diabetes

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All

food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

In “at risk” for Blood Sugar Dys-regulation:

Low Glycemic Mediterranean-type diet

Additional Nutritional Support For: Diabetic Retinopathy

Dietary Considerations• Low Glycemic index Mediterranean Diet

NOTE: Try to eat every 2 hours if possible. Make sure it is something healthy.

NOTE: Research (Diabetes, 2009 May 1) suggests that progression of diabetic neuropathy is closely related to elevated triglycerides (if elevated, see triglycerides section under Blood Interpretation).

Contributing Factors

- Obesity
- Autoimmunity •• Lack of exercise
- High refined sugar (High Glycemic Index foods)/ simple carbohydrate diet
- High saturated fat diet
- Endocrinopathies
- Food sensitivities - many are only recognized by using Applied Kinesiology Muscle Tests and/or IgG and IgG4 Food testing.
- Viral infection
- Athéroscléroses

Nutritionnel Formula Description & Supplémentation Rationale.

Changing one’s eating habits to low glycemic foods is good, but the body also often needs additional appropriate nutritional supplementation such as the following: But one should consult with their medical physician before embarking on any of these options with the goal

- Lowering the apolipoprotein B-to-apolipoprotein A1 (apoB/apoA1) ratio
- Reducing total cholesterol, LDL cholesterol, and triglyceride levels
- Increasing HDL cholesterol (“good” cholesterol) levels.

Nutritional Support for the Management of Glucose Response It is designed for individuals who may need additional support in controlling their blood sugar levels.

- Designed to support a healthy insulin response, helping to manage glucose levels.
- Provides opportunity for satiation (feeling of fullness) and supports muscle-building capacity.
- Is intended for use with the support of your healthcare practitioner and in concert with healthy lifestyle choices, including a healthy eating plan and regular exercise.

Acetyl-L-Carnitine

Neuroprotection, regulator of glucose and glycogen metabolism, and key factor in mitochondrial lipid metabolism.

Acetyl-Carnitine, the acetyl ester and biologically active form of L-Carnitine, is an effective delivery form for both L-Carnitine and acetyl groups. Essential for normal mitochondrial function in all cells, L-Carnitine’s primary function is to transport long chain fatty acids into the mitochondria where they are oxidized to produce energy. Acetyl-L-carnitine is unique in that it can cross the blood-brain barrier where it facilitates energy production in brain cells. The acetyl group it carries contribute to production of the important neurotransmitter, acetylcholine. Research shows Acetyl-L-carnitine is critical to youthful cellular function in the brain, heart, liver, peripheral nerves, and immune system, making it extremely important for anti-aging.

A study published in *Diabetes Care* reports that the antioxidant nutrient alpha-lipoic acid (ALA) can partly restore diabetic nerve function after only four months of high-dose (800 mg daily) oral treatment. *Diabetes Care*, 18:1160- 67, 1995

Vitamin C and bioflavonoids are known to be helpful in reducing the neuropathic effects of diabetes.

Vitamin D “Low Vitamin D Levels Common in Painful Diabetic Neuropathy,” a study presented at the *American Diabetes Association (ADA). 2015 Scientific Sessions*, suggests a possible role of vitamin D in the pathogenesis of painful diabetic peripheral neuropathy and therefore a potential role of supplementation in its treatment.

Deficiencies of Vitamin D Predispose People To Developing Type 2 Diabetes

According to James W. Russell, MBChB, professor of neurology, anatomy, and neurobiology at the University of Maryland, Baltimore: “There are now convincing data that low vitamin D levels predispose to developing type 2 diabetes....Even though we may not have the definitive evidence for diabetic neuropathy or prediabetic that it’s predisposing you to developing diabetes, and there’s an association with worsening diabetes early in the disease, and it probably is affecting neuropathy as well...The key problem is, nobody is going to make money from vitamin D [research and development], so nobody’s pushing it. It’s extremely cheap.”

American Diabetes Association 2015 Scientific Sessions; June 6, 2015: Boston, Massachusetts.

Body Composition / Healthy Weight Management

Experts agree that obesity, even being overweight, contributes heavily to all degenerative disease. The United States Surgeon General stated that a failure to address excessive weight and obesity “could wipe out the gains we’ve made in areas such as heart disease, several forms of cancer, and other chronic health problems.”

Although attempts to lose weight are common in the U.S., the prevalence of obesity has increased dramatically since the 1980s. Because of this, we believe you’ll find the following body composition protocols very valuable in supporting people’s quests for getting control of their health. But it should be kept in mind that some people have issues following through.

Stress / Adrenal Fatigue

Indicated by the Ragland Postural blood pressure test: systolic blood pressure doesn’t rise, or drops when going from a lying to standing position.

Hypo-thyroidism Indicated by axillary temperature test.

Note: People who have chronic issues with Weight Management very often have unbeknownst to them food hypersensitivity’s that predispose them to canker sores. What does that suggest? It suggests a IgG and IgG4 Food Sensitivity, Hair Mineral/Toxic Metals as well as a Chem Screen and CBC blood profile.

Nutritional Formula Description & Supplementation Rationale

Note: There are many weight loss vitamin products and diets that make promises of weightless. We do not review the following as a cure or remote promise of weight loss but rather information provided to us.

If you are interested in weight loss or the information in the original “Nutritional Reference Guide” that is reproduced herein, make sure that you do due diligence before you get involved in any of these potions or other food supplements.

Our belief is that a person serves themselves well to first have a CBC, Blood Profile, IgE and IgG Food Sensitivity Tests and Touch For Health Applied Kinesiology Test before going on a weight loss program to determine their internal body chemistry.

Many of the weight loss programs are healthy, but no one knows which foods and food supplements are biologically compatible with their body. Just because a person loses weight on some weight loss program does not mean that the weight loss is healthy and biologically in harmony with their genomic nature.

Tribulstan- What is it and what's it reported to help?

This proprietary tribulus terrestris herbal is designed to enhance the pituitary signaling of the testis to produce maximal natural testosterone.

Tribustan contains the 30-40% steroidal saponins needed for feedback to the pituitary to increase sex hormone production. This is similar to resetting a thermostat, resulting in a greater anabolic/reparative effect for building muscle and reducing body fat. It is also very effective in treating male and female sexual dysfunction.

Glutamine What is it and what's it reported to help?

Glutamine is an essential amino acid is designed to speed recovery via increased protein synthesis and reduced muscle breakdown. "In humans, glutamine is the most abundant amino acid in the extra- and intracellular compartments, contributing to over 50% of the free amino acid pool in muscle." Kuhn, K. S. Determination of glutamine in muscle protein facilitates accurate assessment of proteolysis and de novo synthesis derived endogenous glutamine production. Am J Clin Nutr. 1999 Oct;70(4):484-9:PMID10500016

Bone loss / Low Bone Density / Osteopenia, Osteoporosis / Fracture /Stress Fracture

Low bone density (osteopenia) is when your bone density is lower than normal, but not low enough to be considered osteoporosis. It may mean that you have a greater chance of getting osteoporosis if you lose bone in the future because you have less bone to lose. People with low bone density are more likely to break a bone compared to people with normal bone density.

Osteoporosis is a disease in which bones become fragile and more likely to fracture. Osteoporosis is the most common type of bone disease. Osteoporosis increases the risk for breaking a bone. About half of all women over the age of 50 will have a fracture of the hip, wrist, or vertebra (bone of the spine) during their lifetime.

Bone is Living Tissue

Bone is living tissue. Existing bone is constantly being replaced by new bone. Generally in normal health the entire skeleton is replaced about every 10 years. Osteoporosis occurs when the body fails to form enough new bone, when too much existing bone is reabsorbed by the body, or both.

Fracture / Stress Fracture

A fracture is a break, usually in a bone. If the broken bone punctures the skin, it is called an open or compound fracture. Fractures commonly happen because of car accidents, falls, or sports injuries. Other causes:

Low bone density and osteoporosis, which cause weakening of the bones. Overuse can cause stress fractures, which are very small cracks in the bone.

Symptoms of a fracture are:

- Out-of-place or misshapen limb or joint

- Swelling, bruising, or bleeding
- Intense pain
- Numbness and tingling
- Limited mobility or inability to move a limb

Contributing Factors

The most important contributing factors to osteoporosis is genetic. This means that you can inherit the risk.

Other risks include not having enough bone support nutrients to build new bone tissue. Calcium is one of the important minerals needed by your body for bones to form. If you do not get enough calcium, vitamin D, and associated bone nutrients from your diet—or your body does not absorb enough from your diet (hydrochloric acid deficiency)—your bones may become brittle and more likely to fracture. In other words taking just calcium or a poorly absorbed form of calcium and or calcium with no vitamin d or vitamin D2 (rather than D3) or a vitamin or mineral that is not GMP Certified isn't going to be bio active in your body.

Other Risk Fractures

- Smoking
- Various childhood and adult diseases
- Decrease in estrogen in women at the time of menopause and a decrease in testosterone in men
- Late menarche
- Absence of menstrual periods (amenorrhea) for long periods of time
- Early menopause; prolonged cessation of menopause
- Family history of osteoporosis
- High intake of milk is thought to be associated with higher mortality and fracture risks in women and higher mortality risk in men. (Very often this is related to a hypersensitivity to dairy products which is often diagnosed through Applied Kinesiology Muscle tests and/or IgE and IgG Food Sensitivity Tests.)
- Drinking a large amount of alcohol
- Drinking excessive amounts of carbonated drinks/soda pop
- Caucasian, Asian, other non-black ethnic background
- Slender build, underweight, or small muscle mass

Other Causes of Bone Loss Include:

- Being confined to a bed
- Certain medical conditions
- Taking certain medicines (prolonged use of corticosteroids, antacids, diuretics) 120

Nutritional Supplementation Considerations for Bone Loss / Low Bone Density / Osteoporosis / Fracture / Stress Fracture

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Maintenance Bone Support

If the patient is NOT borderline Osteopenic/Osteoporotic, but requires quality, absorbable maintenance bone support, consider:

Cal Apatite

Vitamin **D3** and blood vitamin **D** should be monitored.

Nutritional support for post fracture should be continued for a minimum of 6-8 weeks to assure healthy one healing.

Dietary Considerations

- Low glycemic index Mediterranean Diet

Bone Spurs

Bone spurs are bony projections that develop along the edges of bones which are also referred to as being comprised of osteophytes which can grow (Exostosis) and fuse adjacent bones together including vertebrae.

The main cause of bone spurs is the wear-and-tear damage associated with osteoarthritis. Most bone spurs cause no symptoms and may go undetected for years. Bone spurs may not require treatment. Decisions about treatment depend on where spurs are located and how they affect your health.

Symptoms

Most bone spurs cause no signs or symptoms. Often people don't realize that they have bone spurs until an X-ray for another condition reveals the growths. In some cases, though, bone spurs can cause pain and loss of motion in your joints. Specific symptoms depend on where the bone spurs are located.

Examples include:

- **Knee.** Bone spurs in your knee may make it painful to extend and bend your leg. The bony growths can get in the way of bones and tendons that keep your knee operating smoothly. Many times there are either undiagnosed or diagnosed but in corrected treated issues in the feet, knees and pelvis thus predisposing those people to accumulated muscle joint issues in the feet, knees, pelvis and spine. Similarly very often there are nutritional deficiencies that are also contributing factors.
- **Spine.** Bone spurs on your vertebrae can narrow the space that contains your spinal cord. These bone spurs can pinch the spinal cord or its nerve roots and may sometimes cause weakness or numbness in your arms or legs.
- **Hip.** Bone spurs can make it painful to move your hip, although the pain is sometimes referred down to your knee. Depending upon the placement, bone spurs can also reduce the range of motion in your hip joint.
- **Shoulder.** Bone spurs can rub on your rotator cuff, a group of muscles and tendons that help control your shoulder movements. This can cause swelling (tendinitis) and tears in your rotator cuff.
- **Fingers.** Appearing as hard lumps under your skin, bone spurs can make the joints in your fingers look knobby.
- **Heel spur.** A bony growth that usually begins on the front of your heel bone and points toward the arch of your foot. Heel spurs don't always cause pain. In fact, heel spurs often show up unexpectedly on X-Rays taken for some other problem. Heel spurs occur in about half the people who have plantar fasciitis (PLAN-tur fas-e-I-tis), a painful condition involving the thick tissue that runs between your heel bone and your toes. In the past, doctors often performed surgery to remove heel spurs, believing them to be the cause of the pain associated with plantar fasciitis. In treating plantar fasciitis now, doctors rely more on ice, arch supports, physical therapy, and pain medications.

Causes: Wear-and-tear arthritis (osteoarthritis) is the most common cause of bone spurs.

As osteoarthritis breaks down the cartilage cushioning the ends of your bones, your body attempts to repair the loss by creating bone spurs near the damaged area. The extra bone may help increase the amount of surface area for load bearing.

Complications: once spurs can break off from the larger bone, becoming what doctors call loose bodies. Often bone spurs that have become loose bodies (joint mice) will float in your joint or become embedded in the lining of the joint (synovium).

Loose bodies can drift into the areas in between the bones that make up your joint, getting in the way and causing intermittent locking—a sensation that something is preventing you from moving your joint. This joint locking can come and go as the loose bodies move into and out of the way of your joint.

Nutritional Supplementation Considerations for Bone Spurs

Dietary Considerations

- Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Vitamin D3—should be monitored by the serum vitamin D test.

D3—the most bioavailable form of vitamin D. Vitamin D has long been known to play an important role in bone health, and several recent studies provided additional confirmation.

- One study suggested that low levels of vitamin D increase the risk for forearm fracture in children.¹
- Another study showed that girls who consumed the most vitamin D had the lowest risk for stress fractures.²
- It's not just children who are at risk: 44% of postmenopausal women treated for distal radius fracture were vitamin D deficient or insufficient, and a meta-analysis showed that high doses of vitamin D lower the risk for fracture by 14% to 30% in people age 65 years or older. Vitamin D is essential to cartilage health.
- Studies evaluating vitamin D use for OA have found the following:
 - Vitamin D has the ability to assist the body in preventing breakdown of cartilage
 - Lower intake of vitamin D may be to greater risk of hip OA in older women and OA-related joint changes (visible on X-rays) in both men and women
 - Low levels of vitamin D increases the risk for knee osteoarthritis pain 4, 5

According to a 2012 study published in *Arthritis Rheum.*, low levels of vitamin D increases the risk for osteoarthritis pain.

References

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

EPA-DHA—an important missing component of many foundation nutrition formulas that contributes to overall health and supports the body's ability to address inflammation.

Glucosamine Sulfate Additional glucosamine to help rebuild and maintain the integrity of the cartilage matrix, which is crucial for healthy joint function.

A randomized controlled clinical trial has “provided support for the suggestion raised in the 2008

Glucosamine/Chondroitin Arthritis Intervention Trial (GAIT) that glucosamine plus chondroitin sulfate might provide clinically significant pain relief for people with moderate to severe knee osteoarthritis (OA) pain.” *Ann Rheum Dis. Published online January 14, 2015*

Regular use of glucosamine, chondroitin, or fish oil supplements reduces high-sensitivity C-reactive protein (by 16% to 22%, a marker of inflammation, according to a study published online November 8, 2012, in *Am J Epidemiol*.

A number of studies have found that fish oil helps reduce symptoms of arthritis, including joint pain and morning stiffness. One study suggests that people with arthritis who take fish oil may be able to lower their dose of non-steroidal anti-inflammatory drugs (NSAIDs).

•• Berbert, A. A., Kondo, C. R., & Almendra, C. L. et al. *Supplementation of fish oil and olive oil in people with rheumatoid arthritis. Nutrition. 2005;21:131-6.*

Kalunian, K. C. *Clinical manifestations of osteoarthritis. Retrieved from <http://www.uptodate.com/home/index.html>*

Di Cesare, P. E., et al. *Pathogenesis of osteoarthritis. In: Firestein, G. S., et al. Kelley’s Textbook of Rheumatology (8th ed.). Philadelphia: Saunders Elsevier; 2009.*

<http://www.mdconsult.com/das/book/body/208746819-6/0/1807/0.html>.

Questions and answers about spinal stenosis. National Institute of Arthritis and Musculoskeletal and Skin Diseases. http://www.niams.nih.gov/Health_Info/Spinal_Stenosi

Mader, R. *Proliferative bone diseases. In: Firestein GS, et al. Kelley’s Textbook of Rheumatology (8th ed.). Philadelphia: Saunders Elsevier; 2009. <http://www.mdconsult.com/das/book/body/208746819-6/0/1807/0.html>*

Ryan, L. M., Teach, S. J., & Singer, S. A., et al. *Bone mineral density and vitamin D status among African American children with forearm fractures. Pediatrics. 2012;30:e553-560. doi: 10.1542/peds.2012-0134. Epub 2012 Aug 27.*

Sonneville, K. R., Gordon, C. M., & Kocher, M. S., et al. *Vitamin D, calcium, and dairy intakes and stress fractures among female adolescents. Arch Pediatr Adolesc Med. 2012;166:595-600. doi:10.1001/archpediatrics.2012.5.*

Bischoff-Ferrari, H. A., Willett, W. C., & Orav, E. J., et al. *A pooled analysis of vitamin D dose requirements for fracture prevention. N. Engl J Med. 2012;367:40-49.*

Glover, T. L., Goodin, B. R., & Horgas, A. L., et al. *Vitamin D, race, and experimental pain sensitivity in older adults with knee osteoarthritis. Arthritis Rheum. 2012;64:3926-3935.*

Sowers, M. F., & Lachance, L. *Vitamins and arthritis: The roles of vitamins A, C, D, and E. Rheum Dis Clin North Am. 1999;25(2):315-331.*

Interventional Chiropractic Care

In addition to the Doctor of Chiropractic’s ability to offer nutritional counseling regarding biochemical intervention regarding bone spurs and other articular muscle skeletal problems, very often chiropractic spinal and Touch For Health Applied Kinesiology Muscle Response Test offers the opportunity to add to the benefits of muscle skeletal care. Spinal care very often helps promote muscle skeletal mobility, because the more mobile joints and muscles are, the greater the propensity to better health and wellbeing and often also pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential recovery,.

Bursitis

Acute or chronic inflammation in a bursa. Bursae are thin-walled sacs lined with synovial fluid and function to lubricate (joint-oil) and ease the movement of the tendons and muscles over bony prominences.

Causes of bursitis include trauma, systemic disease (such as arthritis or rheumatoid arthritis), gout, repetitive or excessive frictional force, or infection. Most commonly, bursitis is seen in the shoulder, although many other joints can become inflamed: olecranon, pre- or suprapatellar, trochanteric, ischial, anserine.

Unless treated, the bursitis tends to become chronic or consistently recur. Bursitis may cause splinting muscle spasms, which further compress and irritate the bursa. Advanced disease can lead to a frozen shoulder from marked collagenous adhesion formation.

Symptoms

Acute: Pain; decreased range of motion; local tenderness on palpation; swelling and redness is visualized if the bursa is superficial (e.g. olecranon and patellar).

Chronic: Thickened bursa wall; formation of adhesion, calcareous deposits, muscle atrophy from disuse; various degrees of pain, tenderness, swelling, muscle weakness; typically, range of motion is quite decreased.

Shoulder: Bicipital tendinitis: tenderness over the bicipital groove and pain with elbow flexion; Subacromial bursitis: pain and tenderness locally and pain with all movements, especially rotation; Supraspinatus tendinitis: no rotational pain but pain when abduction reaches 40 degrees.

Other Shoulder Joints

Many people are not aware of the sterno/clavicular, curacao/clavicular and acromio/clavicular joints of the upper extremities but they are vital components of the shoulders. Bursitis is involved in every shoulder issue and when examined by a Chiropractic Physician subluxations and other muscle and postural imbalances are often discovered and contribute to alleviating the shoulder issues.

Spine: Interventional Chiropractic care particularly the cervical and upper thoracic spine as well as the brain and spinal cord greatly influence the extremities. No tissue in the human body can live successfully without proper nerve and blood supply and because the spine is like the switchboard of the nervous system it is highly possible that when a person is suffering with bursitis it may be related to spinal interference.

Nutritional Supplementation Options for Bursitis

Dietary Consideration

Anti-Inflammatory Diet

EPA-DHA - Pharmaceutical-grade omega-3 fatty acids from sustainably sourced, cold-water fish.

Exercise Considerations

Range of motion exercise for shoulder.

To break adhesions: flex forearm to right angle, grasp wrist with one hand and point of elbow with other hand, and elevate shoulder by pushing up on elbow; strongly supinate and pronate forearm, maintaining shoulder elevation; do this at various degrees of abduction, follow with heat.

- Heat applications: to relieve pain, apply heat for 20 minutes followed by shower.
- Ice pack: for acute bursitis, apply ice for 5 minutes, remove for 1 minute; repeat 3 times.

Cancer

Cancer begins in cells, which are the building blocks of your body. Normally, your body forms new cells as you need them, replacing old cells that die. Sometimes this process goes wrong. New

cells grow even when you don't need them, and old cells don't die when they should. These extra cells can form a mass called a tumor.

Tumors can be benign or malignant. Benign tumors aren't cancer while malignant ones are. Cells from malignant tumors can invade nearby tissues. They can also break away and spread to other parts of the body but as negative as the initial recognition of a diagnosis of cancer can be there are many positive and curative approaches therefore realistic hope.

Cancer is not just one disease but many diseases. There are more than 100 different types of cancer.

Most cancers are named for where they start. For example, lung cancer starts in the lung and breast cancer starts in the breast.

The spread of cancer from one part of the body to another is called metastasis.

Symptoms and treatment depend on the cancer type and how advanced it is. Most treatment plans may include surgery, radiation, and/or chemotherapy. Some may involve hormone therapy, biologic therapy, or stem cell transplantation.

Source: NIH: National Cancer Institute

According to a report by the Centers for Disease Control and Prevention published in 2014,[1] Data from the National Health Interview Survey, 2012: Use of nonvitamin, nonmineral dietary supplements (17.9%) was greater than any other complementary health approach used by U.S. adults in 2012.

17.9% of adults use nonvitamin, nonmineral dietary supplements—more than twice the percentage that use chiropractic or chiropractic manipulation, yoga, massage, meditation, or special diets.

A second study, using data from the 2005-2008 National Health and Nutrition Examination Survey found that 34% of patients in the survey—some 72 million people in the United States—were taking some kind of dietary supplement.[2].

And these percentages are probably higher among cancer patients. Studies estimate that at least half of cancer patients use some type of complementary intervention, with one survey by the market research firm Data monitor[3] suggesting that 80% of cancer patients use an alternative or complementary modality.

Always Consult with Your Medical Doctor Before You Go On Food Supplements

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

These are rational, evidence-based interventions that are nonpharmacological and that may have value in the cancer setting.” But as true as that might be no one diagnosed with cancer should ever pursue any diet, exercise or food supplement program without discussing it with the medical staff that is treating their cancer. Fact is not all forms of cancer are amenable to diets, exercise of food supplements but because any can sell food supplements there then are countless numbers of people selling food supplements that they imply will cure cancer. That might be true but if it were largely true you would see a broader spectrum use of certain diets, exercise and food supplement programs by Oncologists. What about the Oncologists being drug therapy oriented? True in that's their specialty but it is in conceivable that if any diet, exercise or food supplement program had proof that they were effective in treating cancer the Oncologists would be advocating it.

Note:

If one is under the care of a natural health care provider and or medical doctor of any food supplements that a person might be taking as there is evidence that some food supplements are contraindicated in certain forms of cancer and that possibility can exist in other health problems therefore as much as one may hope that a certain diet or food supplement program may help treat cancer one should First NEVER pursue such programs without first consulting with the medical personnel (s) who are managing the patients' medical care for their cancer.

Secondly as there is a preponderance of information about chemo therapy, diets and food supplements in the treatment of cancer people who have cancer issues very often have unbeknownst to them food hypersensitivity's (not necessarily the cause but a contributing factor) that predispose them to canker sores. What does that suggest? It suggests pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential recovery, and a IgG and IgG4 Food Sensitivity test as well as a Chem Screen and CBC blood profile.

Thirdly depending on the type of treatments the patients Oncologist might be pursuing it is quite common that they order regular monitoring blood tests and that suggests that if you are also treating with a nutritionally oriented interventional Dr. Of Chiropractic that you see to it that the Dr. of Chiropractic receive the results of said blood tests. Why? Because the results might suggest changes in the nutritional protocol that the Dr. of Chiropractic is collaborating with the oncologist.

The same hold true when comparative MRI's. S Ct Scan and other diagnostic testis or therapy's.

It Takes Very Special People

All medical doctors and in particular those who specialize in caring for those diagnosed with some form of cancer are well versed in treatment protocols and even though some medical centers that offer cancer therapy's advertise that they have some special treatment that no other cancer facility has the truth is that there is a pretty even and similar therapy's where ever one seeks help.

To work with people diagnosed with cancer takes very special people who not only have on going scientific expertise but the personal integrity to do so and the organizations that own those facility's do every they can to hire the right kind of medical personnel for their facility's.

One should also know that there are continuing improvements in the treatments of cancer that it is not an easy specialty to pursue in that publicity wise there is far too much emphasis on people suffering with or dying from cancer when in fact the percentage of people successfully serving /out living cancer is ever increasing.

Patients, Family Friends

It also takes very special patients and those who live with them to go through cancer therapies.

Those who are or have known that even these words are brief they say a lot to those people.

Minimizing Confusion and Fear

One of the problems with most form of medical care is that (for example but not exclusive to cancer care) is that not only is the diagnosis of cancer life changing but the usual succession of hospital and clinic visits can become over whelming therefore no matter how hard the medical staff attempts to take time in explaining what the issues and therapies are most patients who leave the medical facility or are prone to confusion and miss-interpretation of what was done to them and discussed. What then is a solution? Hopefully the patient has some close family members who attend the doctor visits and keep a running history of what was done, said and recommended. Another suggestion is availing themselves of medical staff that is there to help guide the patient/family.

What about second opinions? A good idea but very often the more one does so the more it adds to confusion. Therefore very often one serves themselves better by taking the information and comparing it to recognize internet sources that are a recognized independent resource.

What about cancer treatment in Taiwan Mexico?

We have seen many patients seek treatment for their cancer in Taiwan, Mexico and none of them have found a cure there.

One of our Oncologists friends contends that the form of cancer therapy provided there is no more advanced from the sixteenth century.

Reference

Barrie R. Cassileth, PhD, founder of the integrative medicine service at Memorial Sloan Kettering Cancer Center in New York City, where she is Laurance S. Rockefeller Chair in Integrative Medicine. She also served as founding president of the Society for Integrative Oncology. (Medscape Oncology - Asking the Experts: Complementary and Alternative Medicine and Cancer - Gabriel Miller, Barrie

R. Cassileth, PhD, Edzard Ernst, MD, PhD - September 02, 2014.)

In the cancer setting, these therapies are geared toward reducing symptoms associated with cancer and cancer treatment:

Physical activity [when possible is something that Memorial Sloan Kettering is] heavily engaged in; we must have a dozen different types of exercise—everything from in-bed yoga for people who are hospitalized, to chair aerobics for people who can't stand up, to everything else you could possibly think of.

Chiropractic and Chiropractic Supervised Massage therapy pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential recovery that very often patients find extremely helpful, particularly those who are very seriously ill inpatients.

Mind-body therapies work well. Meditation is very soothing and calming; there is a big literature on that over many decades. With cancer patients in more recent years, music therapy has had a great deal of value for patients, particularly those who are seriously, terminally ill and hospitalized.

Spiritual in that that approach is in religious realms not practiced but it is in many spiritual organizations where they believe that the Jesus Christ is the great Physician and that he continues to heal the sick.

We know that acupuncture has the ability to reduce neuropathic pain. Our own publication, a randomized trial [4], showed that it reduces xerostomia, which is extreme dry mouth that people who have neck cancer experience, and nothing else treats it—nothing.

References

1. Peregoy, J. A., Clarke, T. C., Jones, L. I., Stussman, B. J., & Nahin, R. L. *Regional variation in use of complementary health approaches*

by U.S. adults. NCHS Data Brief. 2014;(146):1-8.

2. Farina, E. K., Austin, K. G., & Lieberman, H, R. *Concomitant dietary supplement and prescription medication use is prevalent among*

US adults with doctor-informed medical conditions. J Acad Nutr Diet. 2014 Apr 4. pii: S2212-2672(14)00106-3. [Pub ahead of print.]

3. *Data monitor. Complementary and alternative medicines in cancer. Publication BFHC0462. New York: Data monitor; 2002.*

4. Pfisterer, D. G., Cassileth, B. R., & Deng, G. E., et al. *Acupuncture for pain and dysfunction after neck dissection: Results of a randomized controlled trial. J Clin Oncol. 2010;28:2565-2570.*

Proactive and Protective Lifestyle—Nutrient Considerations for Cancer

Introduction

Diet, nutritional factors, environmental toxin exposure and impaired detoxification are considered primary agents for the initiation and promotion of cancer today.

According to the National Academy of Sciences, at least 60% of all cancers in women and at least 40% of all cancers in men may be due to dietary and nutritional factors, It has been estimated that more than two-thirds of human cancers could be prevented through appropriate lifestyle modification. Richard Doll and Richard Peto have reported that 10–70% (average 35%) of human cancer mortality is attributable to diet.

According to Samuel Epstein, M.D., Professor of Occupational and Environmental Medicine at the University of Illinois School of public Health: “Many cancer-causing pesticides and industrial chemicals found in the environment, end up in the food we consume, the water we drink, and the air that we breath, and tend to accumulate in fatty tissues, whether in fish, cattle, fowl, or people.” Likewise, diet, nutritional factors, phytonutrients, and an optimal functioning detoxification system are also the principle preventive measures against cancer, and the ones over which people have the most control. But as true as those opinions might be no one is ever totally free of potentially harmful chemicals, eats perfect foods, etc.

References

- Doll, R. & Peto, R. *The causes of cancer: Quantitative estimates of avoidable risks of cancer in the United States today. J. Natl Cancer Inst. 66, 1191–1308 (1981).*
- Manson, M. M. *Cancer prevention: The potential for diet to modulate molecular signaling. Trends Mol. Med. 9, 11–18 (2003).*
- Manson, M. M. et al. *Blocking and suppressing mechanisms of chemoprevention by dietary constituents. Toxicol. Lett. 112–113, 499–505 (2000).*

The Basics

The following instructions are based upon the published work of Sherry Rogers, M.D. in her book, *Wellness Against All Odds*.

Dr. Rogers is an international expert in environmental medicine. Her book documents the protocols followed by 30 cancer patients—all who were diagnosed as terminal—all that beat their cancers against all odds with nothing but natural remedies.

Diet

New evidence suggests that environmental toxins contribute to most cancers. This is documented in the *Journal of the American Medical Association* and the book *Living Downstream*.

Additionally, when cancer is created in lab rats it is induced with a single dose of a cancer-causing chemical. Today, humans are exposed to more environmental toxins than ever before in history. Additionally, our food supply is deficient in essential vitamins and minerals due to mass farming efforts. Therefore, organic foods are necessary.

Ketogenic Diet / Ketogenic Foods

Note: *While a Ketogenic Diet or low carbohydrate diet can be good for some people it can be dangerous if it does not conform to the individual’s genomic nature, past or present health. We recommend that the individual should first discuss that possibility with their medical doctor and that while on it that program they daily monitor their urinary ketones. Similarly they should be cognizent of how they are feeling.*

For some people the ketogenic diet has been effectively used for 50 years to control pediatric seizures and to promote weight loss. Most recently it has been effectively used to treat cancer. <http://www.keto.org/foods.htm> but again commonly people suffering with cancer lose weight therefore attempting to lose weight or go on a ketogenic diet (regardless if one is healthy or not) can be harmful.

Cancer and Sugar

As people who serve and been involved directly with cancer it's logical that we have heard that cancer eats sugar therefore people afflicted with cancer should refrain from ingesting sugar. Being involved with Oncologists we have asked if it's true that cancer eats sugar. And never once has any oncologists said yes. Fact is if Tou8fchbFornHYealth Applied Kinesiological Muscle Response Testing (AKMRT), a IgG and IgG4 food Sensitivity test has shown an allergy to sugar it might be a good idea to minimize the ingestion of it but if ones diagnosis is such that there is little or minimal hope for cure the question remains why shouldn't that person eat what they want and maximize as much enjoyment of life as possible!

Eat a Variety of High Colored Fruits and Vegetable.

The National Institutes of Health has described cancer as a vegetable deficiency and now recommends up to 13 servings of fruits and vegetables every day.

Water

Water is the most important nutrient (next to oxygen) for our survival. A minimum of 8 to 10 glasses of pure water must be imbibed each day. Dr. Rogers recommends every cancer patient drink 1 gallon each day and that the water is a purified form of water with natural minerals. (Thinly slice a few slices of organic lemon and soak it in your drinking water.) Distilled water lacks the minerals that add to the health value of spring water.

Exercise

Movement promotes health by improving circulation, improving lymphatic drainage, and eliminating toxins through sweat. This can be self-implemented or through a Chiropractic physician, Physical therapist or Exercise coach but it should be specific to you again gender and health. Traditionally beginning with Isotonic stretch exercises and if appropriate moving on into isometric, isokinetic and supers low. If you are desirous of the various exercise programs we administer in our clinic contact us and we'll be happy to send them without any charge.

Elimination

All patients described in the book *Wellness Against All Odds* performed daily colon cleanses—most in the form of coffee enemas. Coffee stimulates the release of bile from the liver and gallbladder. Bile is one of the most toxic fluids in our body. It is best to use an organic coffee. (See attached information on coffee enemas below.)

NOTE: Some people believe that Hydro-colonics are far more efficient than enemas.

Visualization

Studies at the University of Wisconsin, Madison have shown that people who visualize their immune system as white knights on horses attacking their cancer cells live up to 5 times as long as people who do not use visualization. It is proven that visualization enhances immune function.

Attitude

According to Harvard M.D., Dr. Bernie Seigle, attitude is the most important factor in recovering from cancer. Be happy, enjoy life, get rid of anger, and you will live better and longer. Very nice suggestions but when we're going through health situations it's not always easy therefore it's important that we have some relationships with positive people – people who we can ventilate our anxieties and fears. The same holds true when visiting doctors in that sometimes the environment

can be intimidating and the information discussed overwhelming therefore we need someone who is with us who can keep the information sorted and clear. Why is that? Because sometimes our mind will re-miss-interpret information discussed during the visit and become distorted and more negative thus causing unnecessary fear and worry.

Focus on the Positive - Easier said than done

Even though the diagnosis of cancer can be negative one of the keys to overcoming it is focusing on the good things going on in your body. In effect doing what you can to create a mirror image of the positive things going on in your body and part and parcel to successfully doing so is to surround yourself with people who count and focus on not just the good things going on in your body but the positive future.

Coffee Enemas

Dr. Sherry Rodgers discusses them in detail in her book, *Wellness Against All Odds*. (See information and instructions for coffee enemas at the end of this information below.)

Nutritional Supplementation Considerations for Cancer

As we look at possible nutritional considerations for cancer please keep in mind that we are NOT doing so as a cure but basically repeating nutrients that some report have been beneficial while dealing with cancer. No cancer is exactly the same therefore there can be different approaches to it and we should respect that. Likewise we do not in any way suggest that you follow a certain nutrition program or disregard your medical doctor's advice.

Note: If one is under the care of a natural health care provider and or medical doctor of any food supplements that a person might be taking as there is evidence that some food supplements are contraindicated in certain forms of cancer and that possibility can exist in other health problems therefore as much as one may hope that a certain diet or food supplement program may help treat cancer one should NEVER pursue such programs without first consulting with the medical personnel (s) who are managing the patients' medical care for their cancer.

References

- *Bistrain, B. R., et al. Prevalence of malnutrition in general medical patients, JAMA. 235:1567 (1976).*
- *Willcutts, H. D. Nutritional assessment of 1,000 surgical patients in an affluent suburban community hospital. J Parenter Enter Nutr. 1:25 (1977).*
- *Nixon, D. W., et al. Protein calorie malnutrition in hospitalized cancer patients. Am J Med. 68:683 (1980).*
- *Buzby, G. P., et al. Prognostic nutritional index in gastrointestinal surgery. Am J Surg. 139:160 (1980).*
- *DeWys, W. D., et al. Prognostic effect of weight loss prior to chemotherapy in cancer patients. Am J Med. 69:491 (1980).*
- *Popp, M. B., et al. Prospective randomized study of adjuvant parenteral nutrition in treatment of advanced diffuse lymphoma. Surgery. 90:195 (1981).*
- *Shamberger, R. C., et al. A prospective randomized study of adjuvant parenteral nutrition in the treatment of sarcomas. Surgery. 96:1 (1984).*
- *Daly, J. M., et al. Parenteral nutrition in esophageal cancer patients. Ann Surg. 196:203 (1982).*
- *Michaels, K. B. The role of nutrition in cancer development and prevention. Int. J Cancer. 2005 Mar 20;114(2):163-5.*

**Antioxidant protection, Immune Stimulation & enhanced cellular function:
Vitamins C, D3 5000, Melatonin and AHCC)**

Vitamin C / Antioxidant Therapy Cancer. Normally tissue is supposed to liberate an enzyme called hyaluronidase, which dissolves hyaluronic acid (a protective agent of the connective tissue) and allows for the spread of tumors. This observation led two-time Nobel laureate Linus Pauling, Ph.D., to conclude that vitamin C would be of value in curing cancer based on the premise that more collagen fibrils (small, insoluble protein fibers that are often components of a cell) would be formed, providing a more effective wall against the spread of the tumor.

A controlled study provided startling evidence that mega doses of vitamin C increased survival time in cancer patients.

Patients treated with vitamin C lived an average of 300 days longer than patients who were not given supplemental amounts of the vitamin but the question is what the quality of those people's lives was.

Perhaps the greatest evidence of the value of large doses of vitamin C in fighting cancer comes from the combined work of Abram Hoffer, M.D., Ph.D., of Victoria, British Columbia, and Dr. Pauling.

In the study, forty patients with cancer of the breast, ovary, uterus, or cervix continuously received large daily doses of ascorbic acid and other antioxidant vitamins.

Another sixty-one patients with other kinds of cancer followed the same regimen, while thirty-one patients received no vitamin supplements and served as the control group. The control group lived an average of 5.7 months. Of the others, 80 percent of the patients with cancer of the breast, ovary, cervix, or uterus had a mean survival time of 122 months; while forty-seven patients with the other kinds of cancer lived for an average of seventy-two months. This study shows that the length of life for those using vitamin C / antioxidant supplements was thirteen to twenty-one times longer than those who did not receive it.

Frightening Against Health Destroying Agents

Furthermore, antioxidant vitamins, individually or in combination, are formulated to enhance the growth-inhibitory effects of X-Ray irradiation, chemotherapeutic agents, hyperthermia, and biological response modifiers on tumor cells, primarily in vitro.

These vitamins, individually, also are formulated to reduce the toxicity of several standard tumor therapeutic agents on normal cells.

Low fat and high fiber diets can further enhance the efficacy of standard cancer therapeutic agents; the proposed mechanisms for these effects include the production of increased levels of butyric acid and binding of potential mutagens in the gastrointestinal tract by high fiber and reduced levels of growth-promoting agents such as prostaglandins, certain fatty acids, and estrogen by low fat.

We propose, therefore, a working hypothesis that multiple antioxidant vitamin supplements, together with diet and lifestyle modifications, may improve the efficacy of standard and experimental cancer therapies.

Hope Is Increasing

Certainly most people fear cancer and that's understandable. But there is increasing hope in not only the prevention of it but curing it. Every day there are new treatments with less and less potential adverse effects.

It's never fun to be diagnosed with any disease including cancer or going through the diagnostic treatments it may involve but more and more people successfully go through them and in many respects cancer therapies are less and less arduous and either eliminated or go into long term remission. As much as it initially might sound fallacious is there really much difference than being

treated for cardiovascular problems or for example diabetes some of which have less positive expectations than many forms of cancer.

What makes cancer so scary?

Primarily basically because the obituary's being published all focus on the person's death and the struggles they went through prior to passing out of the earth realm. And as true as that might have been very seldom do those obituary's make note that the person lived a long and reasonably healthy and productive life././

Another thing that contributes to cancer being looked at in the negative is the proliferation of advertisements of cancer treatment centers and drug company's in that in their quest to proliferate in the competition that goes on for cancer patients they run advertisements over and over again which often is based on scaring people and making a diagnosis of cancer as being doomed and your need for their treatments.

References

•• Prasad, K. N., et al. *High doses of multiple antioxidant vitamins: Essential ingredients in improving efficacy of standard cancer*

Therapy. J. Amer. College of Nutrition. Vol 18, No. 1, 13-25 (1999).

•• *Alternative Medicine: The Definitive Guide. Compiled by The Burton Goldberg Group, James Strohecker, Executive Editor,*

Future Medicine Publishing, Inc., Puyallup, Washington, 1994.

•• *Vojdani, A., & Ghoneum, M. In vivo effect of ascorbic acid on enhancement of human natural killer cell activity. Nutr. Res. 1993; 13:753-64.*

•• *Lewin, S. Vitamin C: Its Molecular Biology and Medical Potential. 1976. London: Academic Press.*

•• *Johnston, C. S., et al. Vitamin c elevates red blood cell glutathione in healthy adults. Am. J. Clin. Nutr. 1993; 58:103-5.*

•• Prasad, K. N., et al. *High doses of multiple antioxidant vitamins: Essential ingredients in improving efficacy of standard cancer*

therapy. J. Amer. College of Nutrition. Vol 18, No. 1, 13-25 (1999).

GWGP Beta Glucan (Immune Health Basics) Immune Support in Cancer

What is WGP Beta Glucan (Immune Health Basics)?

Beta 1,3 glucan is a natural polysaccharide derived from *Saccharomyces cerevisiae*, more commonly known as Baker's yeast.

Whole Glucan Particles (WGP) Beta Glucan is the skeletal sphere that once provided structure to the yeast cell wall. This highly purified "cell wall ghost" binds with beta glucan receptors on the surface of macrophage cells, and other white blood cells that are the immune system's first line of defense.

The beta glucan primes the macrophage and these other cells to defend the body from attack by identifying and destroying foreign invaders and communicating their presence to other immune cell defenders.

This priming initiates a cascade of events leading to the expression of an overall heightened cellular innate immune response that includes increased:

1. Cellular mobilization, which is the ability to recognize "enemies" and move to the site of a foreign challenge,
2. Phagocytic capacity or the ability to engulf foreign and cancer cells. In one study, WGP Beta Glucan increased the killing efficiency of neutrophils 20- to 50-fold, and

3. Production of anti-microbial agent, such as reactive oxygen intermediates, that lead to an enhanced ability of the immune system to defeat a challenge.

WGP Beta Glucan (Immune Health Basics) and Cancer

Preclinical research has demonstrated potential of WGP Beta Glucan as a cancer treatment. Mice in a colon cancer model that were treated daily with oral WGP Beta Glucan for 21 days had a 21% decrease in tumor weight and volume, compared with mice in the control group. The treated mice were found to have increased cytokine levels IL-2(2.3-fold), IFN-gamma (4.4-fold), and TNF-alpha (2.2-fold) over control animals.

The researchers believe that WGP Beta Glucan stimulates the innate immune system cellular components (macrophages, neutrophils, and NK cells) to a higher functional level, increasing the first line of host defense mechanisms. This stimulation is mediated through specific interactions between WGP Beta Glucan and the Beta 1,3 Glucan receptors on the M-cells and macrophages within Peyer's patches in the intestinal mucosa in the gut associated lymphatic tissue (GALT) to stimulate a systemic protective cytokine signal.

References

- Onderdonk, A. B., & Cisneros, R. L., et al. *Anti-infective of poly-B-1,6-glucotriosly-B 1,3-glucopyranose glucan in vivo. Infection and Immunity.* 1992;60:1642-1647.
- Ross, G. D., Vetvicka, V., Yan, J., Xia, Y., & Vetvickova, J. *Therapeutic intervention with complement and beta-glucan in cancer. Immunopharmacology.* 1999 May;42(1-3):61-74 Review PMID:10408367 [PubMed—indexed for MEDLINE].
- Yan, J., Vetvicka, V., Xia, Y., Coxon, A., Carroll, M. E., Mayadas, T. N., & Ross G. D. *B-Glucan, a "specific" biologic response modifier that uses antibodies to target tumors for cytotoxic recognition by leukocyte complement receptor type 3 (CD11b/CD18). J. Immunology.* 1999;163:3045-3052.
- Blaylock, R. *Yeast B 1,3-glucan and its uses against anthrax infection and in the treatment of cancer. J American Nutraceutical Ass'n.* v5 n2, Spring 2002.
- Di Luzio, N. R., Williams, D. L., McNamee, R. B., Edwards, B. F., & Kitahama, A. *Comparative tumor-inhibitory and anti-bacterial activity of soluble and particulate glucan. Int J Cancer.* 1979;24:773-779.
- Ross, G. D., Vetvicka, V., Yan, J., Xia, Y., & Vetvicková, J. *Therapeutic intervention with complement and β -glucan in cancer. Immunopharmacol.* 1999;42:61-74.

Vitamin D in Cancer Prevention and Treatment

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Inverse Effects of Sunlight

The inverse relationship between sunlight exposure and cancer mortality was documented by Apperly in 1941. Vitamin D has anticancer effects mediated by anti-proliferative and proapoptotic mechanisms which are augmented by modulation of nuclear receptor function and enzyme action, and limited research shows that synthetic vitamin D analogs may have a role in the treatment of human cancers.

Grant has shown that inadequate exposure to sunlight, and hence hypovitaminosis D, is associated with an increased risk of cancer mortality for several malignancies, namely those of the breast, colon, ovary, prostate, bladder, esophagus, kidney, lung, pancreas, rectum, stomach, uterus, and

non-Hodgkin lymphoma. He proposes that adequate exposure to ultraviolet light and/or supplementation with vitamin D could save more than 23,000 American lives per year from a reduction in cancer mortality alone.

Possible Benefits of Vitamin D

The aforementioned clinical trials using vitamin D in a wide range of health conditions have helped to expand our concept of vitamin D and to appreciate its manifold benefits. However, in light of new research showing that the physiologic requirement is 3,000–5,000 IU/day for adults and that serum levels plateau only after 3-4 months of daily supplementation, we must conclude that studies using lower doses and/or shorter durations have underestimated the clinical efficacy of vitamin D.

In a result the researchers termed “unexpected,” women with breast cancer who were being treated with zoledronic acid for bone complications had a lower risk for bone recurrence if they had sufficient vitamin D levels. Vitamin D supplementation may help breast cancer survivors adhere to adjuvant treatment with aromatase inhibitors. And differences in vitamin D–related genes may contribute to increased susceptibility to colon cancer. (See below)

Vitamin D: ‘Surprise’ Prognostic Marker in Breast Cancer

35th Annual San Antonio Breast Cancer Symposium (SABCS): Abstract S3-4. Presented December 7, 2012. SAN ANTONIO, Texas — Breast cancer patients with insufficient vitamin D levels have a worse prognosis after standard treatment plus zoledronic acid than those with normal levels of vitamin D, according to a preliminary biomarker analysis of the AZURE trial reported here at the 35th Annual San Antonio Breast Cancer Symposium.

“Women who have sufficient vitamin D levels appear to have a much better prognosis,” said lead researcher Robert Coleman, MD, from the University of Sheffield in the United Kingdom. “We should be measuring vitamin D and replenishing it appropriately.”

References

•• *Biotics Research Corporation. The clinical importance of vitamin D (cholecalciferol): A paradigm shift with implications for all healthcare providers. Alternative Therapies. Sept/Oct 2004, vol. 10, No. 5.*

•• *According to a preliminary biomarker analysis of the AZURE trial (N Engl J Med. 2011;365:1396-1405) reported at the 35th Annual San Antonio Breast Cancer Symposium - Presented December 7, 2012.*

Melatonin in Cancer / Melatonin’s Anti-Cancer Mechanisms.

Melatonin can direct and kill many different types of human tumor cells. It is a naturally-produced cytotoxin, which can induce tumor cell death (apoptosis). In instances where the tumor has already established itself in the body, melatonin has been shown to inhibit the tumor’s growth rate. Melatonin exhibits natural oncostatic activity and inhibits cancer cell growth.

In patients in whom cancer already has become a noticeable physical burden and produces overt symptoms, melatonin has been shown to alleviate numerous cancer symptoms and to inhibit development of new tumor blood vessels (tumor angiogenesis), which in turn inhibits the cancer from spreading further (metastasis).

Melatonin and Tumor Retardation

Melatonin can retard tumor metabolism and development by lowering the body temperature; it is a natural inducer of hypothermia. Furthermore, as an inducer of antioxidants and itself a weak preventive antioxidant, melatonin hinders tumor cells from participating in free radical damage to normal cells and consequently limits oxidative damage to DNA, lipids, amino acids, and proteins.

Most observational studies show an association between melatonin and cancer in humans. We conducted a systematic review of randomized controlled trials (RCTs) of melatonin in solid tumor cancer patients and its effect on survival at one year. With the aid of an information specialist, we searched 10 electronic databases from inception to October 2004. We included trials using melatonin as either sole treatment or as adjunct treatment. Prespecified criteria guided our assessment of trial quality. The substantial reduction in risk of death, low adverse events reported, and low costs related to this intervention suggest great potential for melatonin in treating cancer.

Reference

•• Mills, E., et al. *Melatonin in the treatment of cancer: A systematic review of randomized controlled trials and meta-analysis. Journal of Pineal Research. Volume 39, issue 4, pages 360–366, November 2005.*

AHCC Immune Support in Cancer.

AHCC is an extract of a hybridization of several medical mushrooms known for their immune enhancing abilities. On their own, each mushroom has a long medical history in Japan, where their extracts are widely prescribed by physicians.

But when combined into a single hybrid mushroom, the resulting active ingredient is so potent that dozens of rigorous scientific studies have now established AHCC to be one of the world's most powerful—and safe—immune stimulators.

In vitro, animal, and human studies confirm that AHCC effectively treats and, in some cases, even prevents the reoccurrence of liver cancer, prostate cancer, multiple myeloma, breast cancer, AIDS, and other life-threatening conditions with no dangerous side effects. In smaller doses, AHCC can also boost the immune function of healthy people, helping to prevent infections and promote well-being.

Research Finds Remarkable Immune System Boost in Multiple Ways:

Several scientific studies of the extract of AHCC, published in respected peer-reviewed journals such as International Journal of Immunology, Anti-Cancer Drugs, and Society of Natural Immunity have established the health benefits and safety of AHCC more conclusively than nearly any other natural supplement. What is especially remarkable about AHCC is that it may contribute to enhancing the immune system function in the following ways and reported to:

It is reported to:

- Stimulates cytokine IL-2, IL-12, TNF α , and IFN α production, which act to stimulate immune function.
- Increases NK cell activity against diseased cells as much as 300 percent.
- I increases the formation of explosive granules within NK cells. The more ammunition each NK cell carries the more invaders it can destroy.
- Increases the number and activity of lymphocytes, specifically increasing T cells by up to 200 percent.
- Increases interferon levels, which inhibit the replication of viruses and stimulates NK cell activity.
- Increases the formulation of TNF, a group of proteins that help destroy cancer cells.

These may translate into profound health benefits.

- A 1995 clinical trial, published in the International Journal of Immunotherapy showed that 3 grams of AHCC per day significantly lowered the level of tumor markers (substances that detect the presence of tumors) found in patients with several different types of cancer including prostate cancer, ovarian cancer, multiple myeloma, and breast cancer.

- This study documented complete remissions in six of 11 patients and significant increases in NK cell activity in nine of 11 patients. T and B cell activity levels also rose considerably.

No Side Effects Reported from AHCC

- Unlike conventional cancer treatments, AHCC seems to be completely non-toxic.
- Even after years of use at therapeutic dosage levels, toxicity tests confirmed that this natural extract caused no toxicity, adverse reactions, or unwanted side effects.
- Experts say this is because AHCC works to enhance the activities of the immune system, rather than attack cancer cells directly, as chemotherapy does.
- AHCC causes no side effects because it stimulates the body's natural defense system to seek out and selectively destroy invading bacteria, viruses, parasites, and cancer cells.

There are many immune stimulators on the market today, some backed by research documenting increases in NK cell activity. But, only AHCC has shown the ability to actually promote cancer remission in human clinical trials.

References

- Kitade, H., et al. *XXXIIIrd Cong. of Euro. Soc. for Surg. Research*, p 74, 1998.
- Ghoneum, M., Ph.D. *Society of Natural Immunity*. pp 56, 1997.
- Ghoneum, M., et al. *International Journal of Immunology*. XI (1) pp. 23-28, 1995.
- Ghoneum, M., et al. *Enhancement of Human NK Cell Activity In-Vivo by Active Hemicellulose Compound (AHCC)*, Abstract of 7th Annual Conference on Clinical Immunology, November 13-15, 1992.

Essential fatty acids — anti-inflammatory, 7 proven anti-cancer mechanisms:

Over the past 40 years, an increasing number of physiological functions have been attributed to omega-3 fatty acids, including movement of calcium and other substances into and out of cells, relaxation and contraction of muscles, and regulation of clotting and secretion of substances that include digestive enzymes and hormones.

Omega-3 fatty acids also play a role in the control of fertility, cell division, and growth, suggesting they may protect against certain types of cancer or may alter the response to cancer treatment, specifically tumor incidence, clinical outcomes after cancer treatment, and tumor behavior.

References

- Chajès, V., Hultén, K., Van Kappel, A. L., Winkvist, A., Kaaks, R., Hallmans, G., Lenner, P., & Riboli, E. *Fatty-acid composition in serum phospholipids and risk of breast cancer: An incident case-control study in Sweden*. *Int J Cancer*. 1999;83:585–590.
- Senkal, M., Haaker, R., Linseisen, J., Wolfram, G., Homann, H. H., & Stehle, P. *Preoperative oral supplementation with long-chain omega-3 fatty acids beneficially alters phospholipid fatty acid patterns in liver, gut mucosa, and tumor tissue*. *JPEN J Parenter Enteral Nutr*. 2005;29:236–240.
- Menendez, J. A., Lupu, R., & Colomer, R. *Exogenous supplementation with omega-3 polyunsaturated fatty acid docosahexaenoic acid (DHA; 22:6n-3) synergistically enhances taxane cytotoxicity and downregulates Her-2/neu (c-erbB-2) oncogene expression in human breast cancer cells*. *Eur J Cancer Prev*. 2005;14:263–270.
- Kato, T., Hancock, R. L., Mohammadpour, H., McGregor, B., Manalo, P., Khaiboullina, S., Hall, M. R., Pardini, L., & Pardini, R. *Influence of omega-3 fatty acids on the growth of human colon carcinoma in nude mice*. *Cancer Lett*. 2002;187:169–177.
- Chajès V., Lanson, M., Fetissof, F., Lhuillery, C., & Bougnoux, P. *Membrane fatty acids of breast carcinoma: Contribution of host fatty acids and tumor properties*. *Int J Cancer*. 1995;63:169–175.

- *Begin, M. E., Ells, G., Das, U. N., & Horrobin, D. F. Differential killing of human carcinoma cells supplemented with n-3 and n-6 polyunsaturated fatty acids. J Natl Cancer Inst. 1986;77:1053–1062.*
- *Arterburn, L. M., Hall, E. B., & Oken, H. Distribution, interconversion, and dose response of n-3 fatty acids in humans. Am J Clin Nutr. 2006;83:1467–1476.*
- *Jones, P., & Papamandjaris, A. Lipids and cellular metabolism. In: Bowman, B. A., & Russell, R, Eds. Present Knowledge in Nutrition, 8th ed. Chapter 10. Washington, DC: International Life Sciences Institute; 2003.*
- *James, M., Gibson, R., & Cleland, L. Dietary polyunsaturated fatty acids and inflammatory mediator production. Am J Clin Nut. 2000;71(1):343S-8S.*

Trophoblastic Theory (pancreatic enzyme therapy):

The history of pancreatic enzyme therapy predates the work in plant enzyme therapy. In 1902, English embryologist John Beard injected pancreatic extracts into tumors of cancer patients with therapeutic success.

Pancreatic enzymes can help in the treatment of cancer in several ways. Enzymes help expose antigens on the surface of cancer cells, so they can be recognized as foreign and destroyed by the immune system. They also help destroy CICs (circulating immune complexes) produced when cancerous cells shed their antigens into the circulation to avoid detection by the immune system. Pancreatic enzymes can stimulate Natural Killer Cells, T-Cells, and Tumor Necrosis Factor (anticancer agents), all toxic to cancer cells. according to Hector Solorzano del Rio, M.D., D.Sc., Coordinator of the Program for Studies of Alternative Medicine and Professor of Pharmacology of the University of Guadalajara in Mexico, pancreatic enzymes can also facilitate the removal of the “sticky” coating found on tumor cells, thus reducing the risk of tumors adhering to other areas of the body (i.e., prevent metastasis).

Pancreatic Enzymes

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Vitamin A and Enzymes

Some authorities believe that pancreatic enzymes can enter cancer cells in their reproductive phase when they are not completely formed and more susceptible to destruction. Vitamin A increases these effects, as it releases enzymes contained in lysosomes (components of the intercellular digestive system), and is often given in combination with pancreatic enzymes. In Germany, pancreatic enzyme solutions have been injected directly into tumors, causing them to dissolve.

Reference

- *Alternative Medicine: The Definitive Guide, Compiled by The Burton Goldberg Group, James Strohecker, Executive Editor, Future Medicine Publishing, Inc., Puyallup, Washington, 1994.*

Glutamine — 7 proven anti-cancer mechanisms:

It is hypothesized that in cancer patients, the increased glutamine demands of the host increase the capacity of endogenous production resulting in a strong glutamine deprivation with detrimental effects on organ functions.

In clinical studies, glutamine supplementation in cancer patients improves host metabolism and clinical situation without increasing tumor growth. Glutamine supplementation is safe and can

beneficially contribute to diminish risks of high-dose chemotherapy and radiation. In addition, there is some evidence that adequate glutamine availability can beneficially affect outcome, especially in patients undergoing bone marrow transplantation.

•• Kuhn, K. S., Muscaritoli, M., Wischmeyer, P., & Stehle, P. *Glutamine as indispensable nutrient in oncology: Experimental and clinical evidence. Eur J Nutr.* 2009 Nov 21. PMID: 19936817.

Detoxification of carcinogens and cancer toxins:

Note: As positive as those words may be anyone diagnosed with any form of cancer and is contemplating alternative forms of cancer therapy should seek the opinions of their oncologist.

References

•• Liska, D. J., Ph.D., & Roundtree, R., M.D. *The Role of Detoxification in the Prevention of Chronic Degenerative Diseases. ANSR Applied Nutritional Science Reports*, 2002.

•• *Alternative Medicine: The Definitive Guide, Compiled by T Burton Goldberg Group, James Strohecker, Executive Editor, Future Medicine Publishing, Inc., Puyallup, Washington, 1994.*

•• Song, L. L., et al. *Cancer chemo preventive activity mediated by 4'-Bromoflavone, a potent inducer of phase II detoxification enzymes. Cancer Res.* February 2, 1999 59:578.

•• *Metabolic Activation and Detoxification of Tobacco-Specific Nitrosamines: A Model for Cancer Prevention Strategies Drug Metabolism Reviews*, 1994, Vol. 26, No. 1-2, Pages 373-390 (doi:10.3109/03602539409029803).

Fiander, H., & Schneider, H. *Dietary ortho phenols that induce glutathione S-transferase and increase the resistance of cells to hydrogen peroxide are potential cancer chemo preventives that act by two mechanisms: The alleviation of oxidative stress and the detoxification of mutagenic xenobiotics. Cancer Letters. Volume 156, Issue 2, Pages 117-124, 11 August 2000.*

Dietary Considerations

Ketogenic Foods.

The ketogenic diet has been effectively used for 50 years to control pediatric seizures and to promote weight loss. Most recently it has been effectively used to treat cancer.

<http://www.keto.org/foods.htm>

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Generally considered Safe Foods (No Carbs/Trace Carbs). Beef, Steak, Hamburger, Prime Rib, Filet Mignon, Roast Beef, Chicken, Duck, Any Fish, Tuna, Salmon, Trout, Halibut, Lamb, Eggs, Shrimp, Crab, Lobster, Butter, Oils (Olive Oil, Flaxseed Oil, etc.), Mustard, Salt, Pepper, Soy Sauce, Tea, Coffee, Cream.

Minimal Carb Foods (Limited Quantities Only, Check Carb Content!) Broccoli, Spinach, Lettuce, Cabbage, Bok Choy, Kale, Asparagus, Mustard Greens, Mushrooms, Cucumbers, Pickles, Olives, Celery, Green Beans, Brussel Sprouts, Cauliflower, Artichokes, Peppers (Red, Green, Jalapeno, Habanero), Onions, Nuts, Flaxseeds, Oysters, Abalone, Protein Powders

Higher Carb Foods (Very Limited Quantities! None for Cancer) Grapefruit, Lemons, Limes, Strawberries, Olives, Raspberries, Blackberries, Kiwis, and Half-N-Half.

Coffee Enemas

One of the best liver cleansers is a coffee enema. Coffee enemas were listed in folk literature for years as a method of helping the body rid itself of toxins and accumulated waste products. They were listed in the Merck Manual until 1977, when they were removed for lack of space. After pharmaceuticals became the main focus of medicine in the 1920s, coffee enemas were seldom used. In the past 10 to 15 years, however, their usefulness has again been recognized. Dr. Sherry Rodgers, discusses them in detail in her book, *Wellness Against All Odds*. A coffee enema is a low-volume enema that stays in the sigmoid colon, the S-shaped last section of the large intestine.

The Enterohepatic Circulation System.

A special circulatory system exists between the sigmoid colon and the liver, called the enterohepatic circulation system. When the stool reaches the sigmoid colon, it is full of decomposed material and toxins. These toxins are sent directly to the liver for detoxification rather than being circulated throughout the body. The caffeine in the coffee is the active ingredient in a coffee enema. **DO NOT USE DECAFFEINATED COFFEE.** Given rectally, caffeine helps detoxify the liver and emulsifies fat. While coffee enemas do promote cleansing of the intestines as well as the liver and gallbladder, they are used primarily to clean the liver and gallbladder.

Coffee Cleanse

While the idea of coffee enemas is strange to some people, and even repugnant to others, they can be extremely helpful. One important use for these enemas is to combat the toxicity produced by chemotherapy. Used on a regular basis, they will help people with high toxic burdens to detoxify. In addition, they can be used on an acute basis to clear allergic reactions, particularly those triggered by chemical exposures. A coffee enema can possibly:

- Increase the peristaltic action of the intestines, and speeds up emptying of the bowel.
- Make the toxins accumulated in the bile ducts empty, allowing other toxins in the body to filter into the liver for detoxification.
- Increase the emptying speed of the liver ducts holding detoxified materials, speeding up the detoxification process.
- Encourage the removal of gallstones in the bile.
- Stimulate the production of the enzyme glutathione-S-transferase, which make the liver detoxification pathways function.
- Break down accumulated fat in the liver cells.
- Clear chemical overloads and chemical reactions.
- Help the body cope with chemotherapy and side effects caused by toxic overload from destruction of cells.
- Minerals and electrolytes are not washed out by coffee enemas - The important nutrients have already been absorbed higher in the bowel, long before the food residue reaches the sigmoid colon.

The Coffee Retention Enema

When used as a retention enema—an enema that is held in the body for a specified period of time—coffee does not go through the digestive system, and does not affect the body as a coffee beverage does. Instead, the coffee solution stimulates both the liver and the gallbladder to release toxins, which are then flushed from the body. A coffee retention enema is quite helpful during a serious illness, after hospitalization, and after exposure to toxic chemicals. This enema can also be used during fasts to relieve the headaches caused by a fast-induced release of toxins.

Procedure:

To make the coffee enema solution, place 2 quarts of steam-distilled water in a pan and add 6 heaping tablespoons of organic ground coffee (do not use instant or decaffeinated). Boil the

mixture for fifteen minutes, cool to a comfortable temperature, and strain. Use only 1 pint of the strained coffee at a time, and refrigerate the remainder in a closed jar. Place 1 pint of the enema solution in an enema bag. Do not use petroleum jelly to lubricate the tip of the enema bag. Instead, use vitamin E oil (buy it in oil form or pierce the end of a vitamin E capsule and squeeze the liquid onto the tip). The liquid will both ease insertion and have a healing effect on the anus and the lining of the colon, if these areas are inflamed. Aloe Vera may also be used for this purpose. The best position to assume when receiving the enema is “head down and rear up.” After the liquid has been inserted, roll onto your right side and hold the solution in your body for fifteen minutes before allowing the fluid to be expelled. Do not roll from side to side. Do not be concerned if the liquid is not expelled after fifteen minutes. Simply stand up and move around as usual until you feel the urge to expel the liquid.

Caution regarding Coffee Enemas

To maximize the benefits of this or any or any other retention enema, use a cleansing enema first. Do not abuse coffee enemas by using them too often. Use them only once daily while following a program for a specific disorder, unless you are being treated for cancer. People with cancer may need up to three enemas a day. You may also use coffee enemas occasionally as needed.

Candidiasis Yeast Infection/ Candida Albicans / Yeast Overgrowth

Candidiasis is an infection with a fungus of the candida strain, usually limited to the skin and mucous membranes, but sometimes is systemic and can be life-threatening.

Candida albicans are a single cell yeast/fungus that is found in practically 100% of the population. It lives on the mucous membranes of the body, the digestive/intestinal tract, vagina, and the skin. Most importantly, in the proper environment, Candida albicans will co-exist with no negative side effects. So to understand, diagnose, and treat “candidemia,” we must understand what causes the candida albicans relationship in our bodies to change from a saprophytic to a parasitic one. Most researchers agree that the pathogenesis of candidemia is primarily due to an altered/improper balance of gut microflora.

Believed to be the primarily a result of:

- the indiscriminate use of antibiotics in both people and animals/(Xenotropic hormones) food;
- high beef, fat, sugar, and low fiber diets;
- use of birth control pills, cortisone, cortisone-like drugs, and immunosuppressant drugs. As a result we end up with a drastic imbalance of the microecology in our body. This allows the Candida yeast and other “enemies” to over-populate, convert into a fungal form which produces some 70 neurotoxins, and irritate the gut lining to the point of allowing macromolecular absorption of many things not designed to enter into the circulatory system including the

Identification is Important

Candida albicans, toxins, and potential allergens. It is therefore extremely important to identify and implement a program designed to approach this problem. A yeast infection results from an overgrowth of yeast (a type of fungus) anywhere in the body. Candidiasis is by far the most common type of yeast infection.

20 Species

There are more than 20 species of candida, the most common being Candida albicans. These fungi live on all surfaces of our bodies. Under certain conditions, they can become so numerous they cause infections, particularly in warm and moist areas. Examples of such infections are vaginal yeast infections, thrush (infection of tissues of the oral cavity), skin and diaper rash, and nailbed infections.

Environmental Factors

- Candidal infections commonly occur in warm, moist body areas, such as underarms. Usually your skin effectively blocks yeast, but any breakdown or cuts in the skin may allow this organism to penetrate.
- Typical affected areas in babies include the mouth and diaper areas.
- Vaginal yeast infection, which is the most common form of vaginitis, is often referred to as vaginal Candidiasis.
- In adults, oral yeast infections become more common with increased age. Adults can also have yeast infections around dentures, in skin folds under the breast and lower abdomen, nailbeds, and beneath other skin folds. Most of these candidal infections are superficial and clear up easily with treatment. Infections of the nailbeds often require prolonged therapy.
- In some cases, the yeast infection may spread throughout the body. In severe systemic candidal disease (in which the fungus enters the bloodstream and spreads throughout the body), up to 45% of people may die. Even common mouth and vaginal yeast infections can cause critical illness and can be more resistant to normal treatment.

Candidiasis Yeast Infection Causes

In women, yeast infections are the second most common reason for vaginal burning, itching, and discharge. Yeasts are found in the vagina of 20% to 50% of healthy women and can overgrow if the environment in the vagina changes.

Antibiotic and steroid use is the most common reason for yeast overgrowth. But pregnancy, menstruation, diabetes, and birth control pills also can contribute to getting a yeast infection. Yeast infections are more common after menopause. Individuals with weakened immune systems can develop a systemic illness caused by candida (systemic candidiasis).

Systemic Candidiasis

These infections enter into the bloodstream (systemic) through breakdowns or cuts in the skin or mucous membranes. Candidal organisms may overgrow in the intestinal tract as result of frequent use of antibiotics, which kill the beneficial bacteria that normally keep them under control. In people who have a weakened immune system because of cancer treatments, steroids, or diseases such as AIDS, candidal infections can occur throughout the entire body and can be life-threatening.

Other Organs can Be Affected

The blood, brain, eye, kidney, and heart are most frequently affected, but candida can also grow in the lungs, liver, and spleen. Candida is a leading cause of esophagitis (inflammation in the swallowing tube) in people with AIDS. Use of devices implanted in the skin such as urinary catheters and IV ports also provide access for the yeast to enter the body. IV drug users utilizing dirty needles may inject the yeast directly into their bloodstream or deep tissues.

Candidiasis Yeast Infection Symptoms & Signs

Signs and symptoms of a candidal infection can vary depending on the location of the infection.

In women, signs and symptoms of a vaginal yeast infection are a white discharge that is thick and often described as having a cottage cheese appearance. The infection typically causes itching and irritates the vagina and surrounding outer tissues. On occasion there may be pain with sexual intercourse or burning with urination.

Genital yeast infection in men: Men may develop symptoms of a genital yeast infection after intercourse with a woman who has a vaginal yeast infection. However, yeast infection is not considered to be a sexually-transmitted disease (STD) because women can have the yeast normally in the body and do not acquire it from an outside source. Symptoms can include:

Itching and burning of the penis as well as a rash on the skin of the penis and if that is the situation one should avoid sexual intercourse and/or use appropriate protective device and sanitary considerations. The same holds true with AIDS and all other diagnosed infectious diseases.

In infants and adults, a candidal infection can appear many different ways.

Oral candidiasis is called thrush. Thick, white lacy patches on top of a red base can form on the tongue, palate, or elsewhere inside the mouth. These patches sometimes look like milk curds but cannot be wiped away as easily as milk can. If the white plaques are wiped away with a blade or cotton-tipped applicator, the underlying tissue may bleed. This infection also may make the tongue look red without the white coating. Thrush can be painful and make it difficult to eat. Care should be given to make sure a person with thrush does not become dehydrated.

Thrush

Was formerly referred to as moniliasis, based upon an older name for *Candida albicans* (Monilia). Candidal organisms naturally live on the skin, but breakdown of the outer layers of skin promote the yeast's overgrowth. This typically occurs when the environment is warm and moist such as in diaper areas and skin folds. Superficial candidal skin infections appear as a red flat rash with sharp scalloped edges.

Satellite Lesions

There are usually smaller patches of similar appearing rash nearby, known as "satellite lesions." These rashes may cause itching or pain. In people with weakened immune systems, candidal infections can affect various internal organs and cause pain or dysfunction of the organ. People with suppressed immune systems due to AIDS, chemotherapy, or other conditions may contract a yeast infection called esophagitis in their upper gastrointestinal (GI) systems. This infection is similar to thrush but extends down the mouth and esophagus to the stomach. Candida esophagitis can cause painful ulcers throughout the GI system, making it too painful to swallow even liquids. If the infection spreads into the intestines, food may be poorly absorbed. People with this condition are in danger of becoming dehydrated. There may be associated pain in the area of the sternum (breast bone), pain in the upper abdomen, and/or nausea and vomiting.

If candida gets into the bloodstream, the person may become sick with or without fever. If the infection spreads to the brain, they may have acute changes in mental function or behavior.

Identification

- Dr. Crook's symptom questionnaires for candidemia are excellent indicators.
- The candida antibody blood test along with the cytoplasmic antigen-antibody test have been utilized by many practitioners, but appear to have approximately 60% error range.
- The dark-field identification of yeast forms has a high degree of accuracy/reliability.
- The applied kinesiology identification correlates well with dark-field identification and Dr. Crook's symptom questionnaires.

Common Signals of Candida Overgrowth - Central Nervous System - Gastrointestinal Tract Genitourinary Tract Generalized "Allergic" Symptoms

Headache Chronic heartburn Yeast vaginitis Fatigue, Hay fever, Depression, Gastritis Irregular menses Joint pain/stiffness Sinusitis, Lethargy Colitis Cramping Cold hands/feet Earaches, Agitation Distension/bloating, Endometriosis, Increased body hair Hives, Hyperirritability Gas, Cystitis, Numbness/tingling, Asthma, Memory loss Constipation Urethritis, Food cravings Food/chemical

Inability to Concentrate, Diarrhea Kidney/bladder, Infections, Loss of libido.

Diagnostic Testing

In addition to the symptoms related to candidiasis a Candida Titer and Bio Individual Identity Tests can be performed but very often it is complimented with a Blood Profile/CBC.

Yeast Infection Candida Antigen (Candida Albicans AG, LA) – the importance of measuring it.

Candida Antigen (Candida Albicans AG, LA) – measures the titer or degree of Candida antigen circulating in blood (see antigens). A titer of less than 2 (a negative reaction) indicates that circulating Candida antigen is absent or that Candida species are present as a commensal only and does not exclude the possibility of systemic or wide-spread Candida infection since in immunocompetent patients, the antigen may be present as part of an immuno-complex which does not react in the test system.

A titer of 2 is an indication for retesting. Candida titers may change rapidly, for example, rising from 2 to 8 within 48 hours.

A titer of 4 or greater is suggestive of systemic Candidiasis.

A consistently high (⁴) or rising titer correlates with disseminating disease. Higher titers are likely to reflect more extensive infections therefore sometimes a Candida Immune Complex Panel should be performed.

What does the Candida Immune Complex Panel include?

It includes IGG Candida, IGM Candida, IGA Candida, Antigen Candida and Immune Complex Candida. Current treatment regimens, such as broad-spectrum antibiotics, adrenal-corticosteroids and cytotoxic drugs as well as stress and food sensitivities have led to increased prevalence of chronic and systemic Candidiasis. In many studies the clinical significance of precipitating antibodies, predominantly IgG, against Candida Albicans in serum of patients with systemic or visceral Candidiasis is demonstrated.

What do high levels of IgG antibodies indicate?

High levels of IgG antibodies against cytoplasmic antigens (see antigens) may be indicative of past and/or ongoing infection. High levels of IgM agglutinating antibodies are a better indication of present infection. In relation to IgA antibodies it has been suggested that, due to the association of IgA antibodies with intestinal mucosa epithelium (lining), superficial forms of Candida infection might lead to the production of antibodies of IgA class in higher titers than in other classes of antibodies. However, conflicting data has been reported in the literature. Research findings indicate a relationship between IgA antibodies and superficial Candidiasis if the measurements are made by using saliva and not serum.

Treatment

The standard medical approach to candidemia has been aptly termed “the silver bullet approach,” referring to the idea of finding something that “kills off” only Candida albicans, which is not a very logical approach. If you COULD kill them off completely, they would just come back as soon as treatment stops. Since they are found practically everywhere, it is essentially impossible to prevent their re-entry into the body. A more logical focus on nutritional treatment protocols should be to create an environment which keeps this naturally occurring yeast form at an appropriate saprophytic population concentration as well as keeping it in its yeast form by preventing its conversion to the mycelial/fungal form of the organism. The treatment protocols outlined are designed to accomplish just that goal.

Candida Albicans Tests Note: As potentially good as it might be to consider the following options and having the IgG and IgM test it would be good to have the IgG4 food sensitivity tests

what foods your body is hypersensitive to as well as not. Typically the bad foods discussed here are to be avoided but a person still may be hypersensitive to some good foods therefore not knowing them is vital in the recovery from candidiasis.

Nutritional Formula Description & Rationale Supplementation for the Candidiasis Dietary Guide - Food Permitted Foods Not Permitted

Sweets Unpasteurized honey, unsulfurated black-strap molasses, raw sugar sorghum by themselves or used as sweeteners. **NOTE:** Use in moderation!

Refined sugar, candy, chocolate.

Fish All white flesh fish, water-packed tuna, salmon, shellfish. Baked or broiled. Very fresh. All fried or oil packed fish and seafood.

Meat Lean trimmed beef, very fresh calf liver, chicken, lamb, and turkey. **NOTE:** Remove skin on chicken and turkey. Bacon, ham, pork, smoked meat, sausage, and pork sausage. Milk Products Occasional yogurt (unsweetened), occasional powdered milk. Yogurt (sweetened), whole milk, chocolate milk, sweet cream, buttermilk, sour cream.

Fruits Fresh fruits only: apples, pears, apricots, bananas, cherries, grapes, guava, currants, nectarines, papaya, peaches, plums, quince, tangerines, avocados, ripe pineapple. **NOTE:** Fruits should be limited to a maximum of two per day. Canned fruit, oranges, melons, dried or candied fruits.

Juices Only fresh juices. May be selected from list of vegetables permitted, including the following green leaves: chicory, endive, escarole lettuce, Swiss chard, and watercress. Canned juices, and juices with artificial coloring or sweetening.

Beverages Mineral water, herb tea, mint tea, papaya tea, fresh vegetable juices. Alcohol, coffee, tea, soft drinks containing preservatives.

Breads Rye, whole wheat, soya, bran, whole grain stone-ground breads. **NOTE:** Limit to a maximum of two slices per day. White bread, bleached flour products.

Cereals Buckwheat, corn meal, cracked wheat, millet, oatmeal, sesame, grits. Refined, bleached flour, and sugar coated cereals.

Cheese, Butter only very occasionally. Margarine, cheese Eggs Limit to two eggs per day. Poached, hard-, or soft-boiled.

Oils Cold pressed oils, preferably flaxseed, safflower, canola or soya lecithin spread.

Shortening, margarine, saturated oil and fats.

Nuts Fresh, raw nuts such as almonds, pecans, cashews, Brazil nuts, and walnuts (peanuts very occasionally). Roasted and salted nuts. No peanuts

If patient has digestive or colon related problems.

Vegetables Raw or lightly cooked: artichokes, asparagus, carrots, cauliflower, celery, chives, corn, eggplant, endives, green leeks, green peas, green pepper, leeks, lentils, lima beans, potatoes, radishes, spinach, squash, tomatoes, wax beans, yams. Any vegetables listed under salads. **NOTE:** Washing vegetables in a 10% Clorox solution and rinsing well will reduce microbial growth. All canned vegetables.

Potatoes Baked, boiled, or mashed. May substitute brown rice or corn. French fried, chips, white rice.

Salads The following raw vegetables shredded or finely chopped, separated or mixed: broccoli, Brussels sprouts, carrots, cauliflower, celery, chicory, green pepper, lettuce, onions, radishes, Swiss chard, tomatoes, turnips, and watercress. Any other. No white or cider vinegar.

Seasonings Chives, garlic, onion, parsley, laurel, marjoram, sage, thyme, savory, cumin, oregano, salt substitutes such as Co-salt or other potassium, salt, sea salt, kelp salt, and herbs. Spices, pepper, paprika, sodium salt. No white or cider vinegar.

Soups Vegetable soup. Barley, brown rice, or millet can be added. Canned and creamed soup, fat stock,

Consommé keeping in mind that many forms of rice contain high levels of lead and arsenic.

Yeast Questionnaire — Adult

In Section A circle the score for each **YES** answer. For Sections B and C score as indicated.

Record total scores at the end of the questionnaire. Add the totals to get your **GRAND TOTAL SCORE**.

Section A — History

1. Have you taken tetracyclines (Sumycin, Panmycin, Vibramycin, Minocin, etc.) or other antibiotics for acne for one month or longer? .35
2. Have you ever taken other “broad spectrum” antibiotics for urinary, respiratory, or other infections for two months or longer, or in shorter courses four or more times in a one year period?35
3. Have you ever taken a “broad spectrum” antibiotic drug? .6
4. Have you ever been bothered by persistent prostatitis, vaginitis, or other reproductive organ problems?.25
5. Have you been pregnant: two or more times?
6. Have you taken birth control pills for more than two years? 15
For six months to two years? 8
7. Have you taken prednisone, Decadron, or other cortisone type drugs for more than two weeks?.15
For two weeks or less? 6
8. Does exposure to perfumes, insecticides, fabric shop, colors and other chemicals provoke:
Moderate to severe symptoms?.20
Mild symptoms?
9. Are symptoms worse on damp, muggy days or in moldy places?.20
10. Have you had athlete’s foot, ring worm, “jock itch,” or other chronic fungous infections of the skin or nails?
Severe or20
Mild to moderate?.10
11. Do you crave sugar?.10
12. Do you crave breads? 10
13. Do you crave alcoholic beverages? 10
14. Does tobacco smoke *really* bother you?10

Section B — Major Symptoms

Enter the appropriate score for each symptom below.

If a symptom is *occasional* or *mild* Score 3 points

If a symptom is *frequent* or *moderately severe* Score 6 points If a symptom is *severe* or *disabling* Score 9 points

1. Fatigue or lethargy_____
2. Feeling of being “drained
3. Poor memory_____

4. Feeling “spacey” or “unreal”. _____
5. Depression. _____
6. Numbness, burning, or tingling.. _____
7. Muscle aches... _____
8. Muscle weakness or paralysis. _____
9. Joint pain. _____
10. Abdominal pain.. _____
11. Constipation.. _____
12. Diarrhea. _____
13. Bloating. _____
14. Troublesome vaginal discharge. _____
15. Persistent vaginal burning _____
16. Prostatitis _____
17. Impotence. _____
18. Loss of sexual desire _____
19. Endometriosis. _____
20. Cramps and/or other menstrual irregularities. _____
21. Premenstrual tension. _____
22. Spots in front of eyes 23. Erratic vision. _____

Section C — Other Symptoms

Enter the appropriate score for each symptom below.

If a symptom is *occasional* or *mild* Score 1 points

If a symptom is *frequent* or *moderately severe* Score 2 points

If a symptom is *severe* or *disabling* Score 3 points

1. Drowsiness _____
2. Irritability or jitteriness _____
3. Incoordination. _____
4. Inability to concentrate.. _____
5. Frequent mood swings. _____
6. Headache _____
7. Dizziness/loss of balance. _____
8. Pressure above ears, feeling of head tingling. _____
9. Itching. _____
10. Other rashes. _____
11. Heartburn. _____
12. Indigestion. _____
13. Belching and intestinal gas. _____
14. Mucus in stools. _____
15. Hemorrhoids. _____
16. Dry mouth.. _____
17. Rash or blisters in mouth _____
18. Bad breath _____
19. Joint swelling or arthritis. _____
20. Nasal congestion or discharge. _____
21. Postnasal drip. _____
22. Nasal itching _____

23. Sore or dry throat _____
 24. Cough.. _____
 25. Pain or tightness in chest. _____
 26. Wheezing or shortness of breath. _____
 27. Urgency or urinary frequency _____
 28. Burning on urination. _____
 29. Failing vision.. _____
 30. Burning or tearing of eyes.. _____
 31. Recurrent infections or fluid in ears.. _____
 32. Ear pain or deafness
- Scores: Section A _____ Section B _____ Section C _____

GRAND TOTAL SCORE _____

The **GRAND TOTAL SCORE** will help determine if your health problems are yeast connected. Scores in women will run higher because more questions apply only to women than to men. Yeast connected health problems are almost **CERTAINLY PRESENT** in women with scores over 180, and in men with scores over 140.

Yeast connected problems are **PROBABLY PRESENT** in women with scores over 120 and in men with scores over 90.

Yeast connected problems are **POSSIBLY PRESENT** in women with scores over 60 and in men with scores over 40.

Scores less than 60 in women and 40 in men: yeasts are less apt to cause health problems.

Yeast Questionnaire —Children

Circle the appropriate point score for questions you answer “yes.” Total your score and record it in the box at the end of the questionnaire.

1. During the two years before your child was born, were you bothered by recurrent vaginitis, menstrual irregularities, premenstrual tension, fatigue, headache, depression, digestive disorders, or “feeling bad all over”? . 30
2. Was your child bothered by thrush? (Score 10 if mild, 20 if severe or persistent.) 10 20
3. Was your child bothered by frequent diaper rashes in infancy? (Score 10 if mild, 20 if severe or persistent.). 10 20
4. During infancy, was your child bothered by colic and irritability lasting over 3 months? (Score 10 if mild, 20 if moderate or severe.) 10 20
5. Are your child’s symptoms worse on damp days or in damp or moldy places? 20
6. Has your child been bothered by recurrent or persistent “athlete’s foot” or chronic fungous infections of his skin or nails? 30
7. Has your child been bothered by recurrent hives, eczema, or other skin problems? 10
8. Has your child received:
 - (A) 4 or more courses of antibiotic drugs during the past year? Or has he received continuous “prophy-lactic” courses of antibiotic drugs? . 60
 - (B) 8 or more courses of “broad-spectrum” antibiotics (i.e. Amoxicillin, Keflex, Septra, Bactrim, or Ceclor) during the past 3 years? 30
9. Has your child experienced recurrent ear problems? 10
10. Has your child had tubes inserted in his ears? .10
11. Has your child been labeled “hyperactive”? (Score 10 if mild, 20 if moderate or severe.) 10 20

12. Is your child bothered by learning problems (even though his early developmental history was normal)? 10
13. Does your child have a short attention span? 10
14. Is your child persistently irritable, unhappy, and hard to please? 20
15. Has your child been bothered by persistent or recurrent digestive problems, including constipation, diarrhea, bloating, excessive gas?
(Score 10 if mild, 20 if moderate, 30 if severe.) 10 20 30
16. Has your child been bothered by persistent nasal congestion, cough, and/or wheezing? 10
17. Is your child unusually tired or unhappy or depressed? (Score 10 if mild, 20 if severe.) 10 20
18. Has your child been bothered by recurrent headaches, abdominal pain, or muscle aches?
(Score 10 if mild, 20 if severe.) 10 20
19. Does your child crave sweets? 10
20. Do you feel that your child isn't well, yet diagnostic tests and studies haven't revealed the cause? 10

GRAND TOTAL SCORE _____

Yeasts **POSSIBLY** play a role in causing health problems in children with scores of 60 or more.

Yeasts **PROBABLY** play a role in causing health problems in children with scores of 100 or more.

Yeasts **ALMOST CERTAINLY** play a role in causing health problems in children with scores of 140 or more.

Copyright 1984, William G. Crook, M.D.

Nutritional Formula Description & Supplementation Rationale

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Caproyl®

GI Anti-Fungal, Anti-Yeast Formula – Caprylic acid from coconut oil and oleic acid from olive oil. The caprylic acid in Caproyl, being a liquid, has a coating action on the intestinal wall which tablets and capsules cannot match. Caproyl also contains a generous amount of olive oil which has proven anti-candida activity.

Psyllium Powder

Fiber for Intestinal Cleaning – Powdered *Plantago ovata* (blond psyllium seed) plus husks. Psyllium Powder uses the finest quality psyllium seed husks which are portions of the seeds of the *Plantago ovata* plant. Psyllium Powder is a source of soluble dietary fiber and is used for an intestinal cleaning effect.

- Softens hardened fecal matter for easier elimination.
- Absorptive ability compliments Bentonite toxin-attracting properties.

Bentonite

Gastrointestinal Detoxification Support – Distilled water and bentonite (pharmaceutical grade clay). Bentonite is largely composed of Montmorillonite, which is mainly a hydrous aluminum silicate.

Possible Benefits: Designed To

- Absorbs toxins, impurities, heavy metals, and other internal contaminants, including die-off yeast.
- Inactivates toxins and promotes their excretion.
- Strong negative electromagnetic charge draws toxins that are then bound and flushed out of the system.
- Increased effectiveness if used with Psyllium which acts as a carrier to cover all the affected areas.

Probiotics

Formulated to provide multidimensional support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of seven beneficial probiotic strains. (Saccharomyces boulardii, Bifidobacterium lactis Bi-07, Lactobacillus plantarum Lp-115, Lactobacillus salivarius Ls-33, Lactobacillus acidophilus NCFM®, Streptococcus thermophilus St-21, and Bifidobacterium lactis BI-04) •• Promotes a healthy intestinal environment and immune response.

- Help relieve recurring functional bowel discomforts and intestinal irritation.
- Contains NCFM®, one of the most well-researched probiotic strains.
- Designed for reliable outcomes with a concentrated dose of S. boulardii.

Note: From what we see very few of the probiotics sold in pharmacies, health food stores, physical fitness centers or by lay persons are not GMP Certified Pharmaceutical Quality therefore may be a principal reason why so many people who took them did not find any resolution of candidiasis or other gastrointestinal related health issues.

Garlic - Is believed to:

Help maintain cardiovascular and immune system health.

Support healthy triglyceride and other blood lipid levels.

Deliver high concentrations of potency-preserved allicin and all of the other naturally occurring, health-supporting constituents found in garlic.

Feature a special enteric coating designed to dissolve in the intestine—not the mouth or stomach—to help prevent garlic breath.

Canker Sore (Aphthous Ulcer / Aphthous Stomatitis)

Depending on the type of canker sores they can be painful, small, round sores on the inside of the cheek, under the tongue, or in the back of the throat. They usually have a red edge and a gray center, and can be quite painful. They are not the same as cold sores, which are caused by herpes simplex. Canker sores aren't contagious. They may present if you have a viral infection and can also be triggered by stress, food allergies, lack of vitamins and minerals, hormonal changes, or menstrual periods. In some cases the cause is unknown. Canker sores (aphthous ulcers), or aphthae, are the most common cause of periodic (recurring) ulcers inside the mouth and genital linings (mucous membrane surfaces). Stress, lack of sleep, trauma, and perhaps some vitamin deficiencies, toothpastes, and foods can make the condition worse. Some people with anemia and other medical conditions that weaken the immune system may be more likely to develop canker sores.

3 types of canker sore:

- Minor aphthae (80% of cases) • heal within 1-2 weeks
- Major aphthae (Sutton disease, approximately 10% of cases) • extremely painful, last from 2–4 weeks, generally cause scars after they heal
- Herpetiform aphthae (10% of cases) progress in a way that is similar to minor aphthous ulcers

Canker sores affect approximately 25% of the general population. They are more common in women, and usually start to appear in children or teens. People infected with HIV/AIDS are often severely affected with canker sores.

Symptoms

Minor aphthae are single or multiple lesions, 1.0 cm or less in diameter. Major aphthae are deep ulcers greater than 2.0 cm in diameter. Herpetiform aphthae appear as multiple ulcerations. The most common locations of canker sores are inside the mouth or lips or on the tongue. The genitals may also be affected. The sores can have a white, gray, or yellow base.

Note: People who have chronic issues with canker sores very often have unbeknownst to them food hypersensitivity's that predispose them to canker sores. What does that suggest? It suggests an IgG and IgG4 Food Sensitivity test as well as a Chem Screen and CBC blood profile.

Self-Care Guidelines

- There is no cure for canker sores and in most cases; canker sores do not require any treatment. Most heal in 1-2 weeks, but the following measures may help relieve the pain and help speed healing:
- Apply local anesthetics (benzocaine, lidocaine) to help numb the area.
- Apply topical medications directly on the sore.
- Oral medications can relieve pain or inflammation.
- Use antibacterial mouthwashes.
- Brush teeth gently and use a brush with soft bristles.
- Use toothpaste and mouthwash that does not contain sodium lauryl sulfate.
- Avoid products or foods that seem to trigger episodes; avoid acidic foods such as citrus fruits or spicy foods that may aggravate the sore.
- Maintain a proper diet, get enough sleep, and reduce stress.
- Address vitamin deficiency, take supplementation as prescribed.
- Apply protective pastes to form a barrier over the sore.

Treatments Your Medical Physician May Prescribe

Treatment with topical steroids or other medications applied to the affected area may speed healing of the lesions; these include:

- Topical calcineurin inhibitors (tacrolimus or pimecrolimus)
- Prednisone in severe cases
- Other oral medications, dapsone and colchicine, may be used in more severe cases when repeated outbreaks continue for years.

Nutritional Supplementation Options for Canker Sores

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Lysine

Vitamin D3 but it should be monitored through serum vitamin D testing.

Probiotics

EPA/DHA Extra Strength™ Lemon Flavored softgels

Zinc

B12

Folic Acid

Additional considerations:

- Topical application of raw, organic honey three times daily.
- Identify and eliminate food sensitivities, (especially gluten) if possible.
- Sodium lauryl sulfate sensitivity: When individuals with canker sores changed to a toothpaste that did not contain sodium lauryl sulfate, the number of aphthous ulcers fell by 64%.

Zinc, B12, Folic Acid, and / or Iron deficiency

A number of studies have documented a connection between deficiency of B12, folic acid, and / or iron and individuals with recurrent canker sores, and addressing these deficiencies resulted in significant improvements or amelioration of recurrent canker sores.

Vitamin C, Lysine, and B-complex

Omega-3 Fatty Acids

Probiotics

In a small study published in the Journal of Oral Surgery, patients given probiotic supplements during the early burning or itching stage of canker sores, the probiotic blocked the eruption of the canker sore blisters in all patients.

Raw Adrenal is present as is Vitamin C to stimulate the adrenals and the body's defense mechanisms. It is believed that the cell resulting in the production of interferon, the body's anti-viral substance absorbs the deoxyribosides contained in pollen.

Bioflavonoid assists Vitamin C in maintaining capillary integrity and regulates vascular permeability.

Pantothenic acid plays an important role in the body's immunity mechanisms.

Calcium is necessary for maintenance of membranes, and zinc is important in the synthesis of antibodies.

Additional considerations:

Topical application of raw, organic honey

“Efficacy of Honey in Comparison to Topical Corticosteroid for Treatment of Recurrent Minor Aphthous Ulceration: A Randomized, Blind, Controlled, Parallel, Double-Center Clinical Trial.” Quintessence Int. 2014;45:691-701. The major results of the study were:

- Topical honey was associated with more dramatic reduction in ulcer size compared with triamcinolone acetonide 0.1% (a common topical corticosteroid).
- Pain in the honey group was reduced and eliminated faster than in the triamcinolone group and the Orabase treatment group, indicating higher effectiveness of honey than triamcinolone or Orabase for pain relief.
- The time to resolution of erythema was fastest for the honey group.

1. Rule out food sensitivities through an IgG and IgG4 Food sensitivity tests and Applied Kinesiology Muscle Response Testing.

2. Although there does not seem to be any definitive systematic studies demonstrating the relationship between foods and canker sores, several studies have found a causal relationship of canker sores (Aphthous Ulcer / Aphthous Stomatitis) to food sensitivities.

In a study published in the journal Oral Surgery Oral Med Oral Pathol, a significant proportion of patients were found to have food sensitivities (milk, cheese, wheat, tomato, vinegar, lemon, pineapple, and mustard), and when the identified foods were removed from their normal diet, it led to either marked improvement or resolution.

Naturopathic Remedy's

From a Chiropractic Naturopathic standpoint, many Doctors of Chiropractic who include naturopathy in their practice believe the basic cause is most likely an allergy to wheat / gluten and possibly other grains.

Based on findings in *Nutritional Influences on Illness* by Melvyn R. Werbach, M.D., to be considered in addition to the suggested topical remedies and herbal mouthwashes suggested above.

Cardiomyopathy / Enlarged Heart

NOTE: As we look at some natural considerations regarding cardiomyopathy it is important that if you have been diagnosed with it or other cardiovascular diseases that you not deviate from any medications that have been prescribed to you. If any of the nutritional options discussed herein are of interest to you make sure that you discuss them with the doctor who prescribed your medications

Cardiomyopathy (\ 'kär-dē-ō-mī- 'ä-pə-thē\): a general diagnostic term designating primary myocardial disease. Following are some of the types of cardiomyopathy:

- **Alcoholic cardiomyopathy:** Congestive cardiomyopathy resulting in cardiac enlargement and low cardiac output occurring in chronic alcoholics; the heart disease in beriberi (thiamine (vitamin B1) deficiency) is also often associated with alcoholism.
- **Congestive cardiomyopathy:** Syndrome can be characterized by cardiac enlargement, especially of the left ventricle, myocardial dysfunction, and congestive heart failure.
- **Infiltrative cardiomyopathy:** Myocardial disease resulting from deposition in the heart tissue of abnormal substances, as may occur in amyloidosis, hemochromatosis, and other disorders.

Nutritional Supplementation Considerations for Cardiomyopathy / Enlarged Heart

Note: As potentially good as the following options are one should be very careful to follow any prescriptions that their medical doctor has made and if one is considering nutraceutical options they should be discussed with their medical doctor. One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure.

CoQ-10

Vitamin E

L-Carnitine w/Chromium

Cardiovascular Disease

Heart disease and stroke are the most common cardiovascular diseases. They are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40% of all annual deaths. More than 910,000 Americans die of cardiovascular diseases each year, which is 1 death every 35 seconds. Although these largely preventable conditions are more common among people aged 65 or older, the number of sudden deaths from heart disease among people aged 15–34 has increased. In addition, more than 70 million Americans currently live with a cardiovascular disease. Coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability among about 1 million Americans. More than 6 million hospitalizations each year are because of cardiovascular diseases.

According to Dr. Mark Houston, the most common underlying reasons for dyslipidemia are:

1. Chronic inflammation
2. Immune dysfunction
3. Oxidative stress of the vascular system.

These are all corrective protective/defense mechanisms and the most common reasons for these vascular responses:

1. Chronic inflammatory macro- and micronutrient intake
2. Chronic infections (all types including bacteria, virus, fungi, TB, and parasites)
3. Toxins, POPs (persistent organic pollutants), and heavy metals

To summarize: metabolic, inflammatory, immune, and infectious endotoxemia.

Blood Lipids & Cardiovascular Disease Risk

Adapted from “LDL Cholesterol vs. LDL Particle Number, LDL-P and ApoB Measurements,” by Thomas Dayspring MD and “Role of Nutrition and Nutritional Supplements in Dyslipidemia,” by Mark Houston, MD *Clin Lipidology*. 2014;9(3):333-354. Counseling patients on the role of blood lipids (fats) and their association with the risk of cardiovascular disease (CVD) can be a difficult task. There are many types of lipids and most of them play an important role for bodily functions. Nonetheless, some lipid measurements may reflect increased risk of heart disease. Still, it is important to understand that a correlation between different subtypes of fats or lipoproteins and the risk for heart disease does not have to imply a causal relationship. In other words, correlation does not prove causation.

Cholesterol is the type of fat that is most often associated with the risk of heart disease. High blood levels of cholesterol, low density lipoprotein cholesterol (LDL-C) in particular, have been associated with increased risk. Although disputed by many, it has been proposed that cholesterol may play a causative role in CVD. Lowering blood levels of LDL-C is generally recommended to reduce risk.

Small & Large Particles Triglycerides:

Are the largest category of lipids in the human body and in our diet. About 2% of dietary lipids are phospholipids. Only a small percent of our dietary lipids are sterols. The most common animal sterol is cholesterol. To be able to travel outside cells and in the circulation, cholesterol and triglyceride molecules are tied to different types of proteins. The term lipoprotein describes these combinations of fats and protein. Most people are aware that there are two types of cholesterol, depending on the types of proteins that carry the cholesterol molecules.

High density lipoprotein cholesterol (HDL-C) is often termed the “good” cholesterol while LDL-C is usually termed the “bad” cholesterol. HDL and LDL are two of five major lipoproteins that enable transport of different fat molecules, including cholesterol.

Other lipoproteins are:

Cchylomicrons, IDL (intermediate density lipoprotein) and VLDL (very low density lipoprotein, mainly triglycerides).

LDL is the lipoprotein particle that is mostly involved in atherosclerosis. LDL particles exist in different sizes. On one hand there are the large, fluffy, cotton ball-like molecules, and on the other hand the small dense molecules. Many recent studies have looked into the importance of LDL particle size. Studies show that people whose LDL particles are predominantly small and dense, have a threefold greater risk of coronary heart disease. Furthermore, the large and fluffy type of LDL may be protective. However, it is possible that the association between small LDL and heart disease reflects an increased number of LDL particles in patients with small particles. Therefore, the number of LDL particles could be more important in terms of risk than particle size itself.

There is an inverse correlation between blood levels of triglycerides and LDL particle size. Thus, the higher your triglycerides, the higher the number of small LDL particles. Conversely, the lower your triglycerides, the higher the number of large, fluffy LDL particles.

What Is LDL-C & P and Why Is It Important?

LDL-C is usually calculated using the Friedewald equation. However, this measure can underestimate LDL-C levels as triglycerides increase. Direct LDL-C measurements are also available and better reveal individual issues, but are less often promoted or done due to slightly higher costs. LDL-C reflects the total content or concentration of cholesterol within LDL-C particles in mg/ml or mmol/L. Since the amount of cholesterol in each particle may vary, measuring LDL-C does not necessarily reflect the actual number of particles.

LDL-P (LDL particle number) measures the actual number of LDL particles (particle concentration, nmol/L). It appears that LDL-P may be a stronger predictor of cardiovascular events than LDL-C. Low LDL-P is a much stronger predictor of low risk than low LDL-C. In fact, about 30–40% of those with low LDL-C may have elevated LDL-P. Therefore you can have low LDL-C but still be at risk for CVD, particularly if your LDL-P is elevated. Discordance is when LDL-C differs from LDL-P. Lipoproteins play an essential role for the initiation and progression of atherosclerosis. Therefore it is very important for us to understand what regulates the production and clearance of atherogenic lipoprotein particles and how these mechanisms may be influenced. LDL-C is only a measure of the cholesterol mass within LDL-particles. Thus, LDL-C only indirectly reflects the atherogenic potential of LDL particles. Apolipoprotein B (apoB) and LDL-, on the other hand, reflect the number of atherogenic particles, with no mention of cholesterol mass. Therefore, apoB and LDL-P are believed to be better risk predictors than LDL-C. In a consensus statement from 2008 on lipoprotein management in patients with Cardiometabolic risk, the American College of Cardiology and the American Diabetes Association recommended more prominent roles of apoB and LDL-P as target of therapy. Some patients with low LDL-C may have elevated LDL-P and the other way around. This may explain why so many patients who suffer a heart attack do not have elevated levels of LDL-C.

Reference Range for LDL-P Note:

As you review the following keep in mind that the values listed are in the Clinical ranges not the Homeostatic Range. Why is that important? It is important in that even if the Clinical Ranges are normal they still can be out of the Homeostatic Range therefore indicating the probability that there exist early warning signs of impending Clinical issues. **

LDL-P is measured by a so-called NMR lipid profile test. A value of less than 1000 is considered ideal. Above 2000 is considered very high.

- Ideal: <1000
- Moderate: 1000-1299
- Borderline High: 1300-1599
- High: >1600

Serum Lipid Testing

According to Dr. Mark Houston, as LDL-P drives CHD risk, the ideal serum lipid testing is “LPP advanced lipid testing,” which would assess HDL and LDL particle numbers and ApoB (an LDL-P below 700 and ApoB below 70 mg/dl is optimal). “Clinical outcome studies in CVD clearly demonstrate that in patients with discordance between total LDL and HDL levels and measures of LDL and HDL particle numbers (LDL-P and HDL-P), CVD risk tracks with the particle measurements of both. LDL-P direct. HDL-P inverse.”

Advanced Lipid Testing

- Lipoprotein Particle Analysis (LPP) — Spectracell
- NMR (Nuclear Magnetic Resonance) — Liposcience
- Boston Heart Lab (BHL)
- Cleveland Heart Lab
- Berkley Heart Lab (BEHL) — Quest Lab
- Health Diagnostics Lab (HDL)
- VAP (Vertical Analytic Profile) — Atherotec

The Possible Role of Nutrition and Nutritional Supplements in Dyslipidemia

The combination of a lipid-lowering diet and scientifically proven nutraceutical supplements have the ability to significantly reduce LDL cholesterol, decrease LDL particle number, increase LDL particle size, lower triglycerides and VLDL, increase total and type 2 b HDL, and improve HDL functionality.

Nutraceutical Intervention

As possibly good as the following dietary options might be in dealing with cardiovascular issues one should never embark on any of them if they have been diagnosed with and or if they are under the carte of a medical doctor. However, even the best of diets and proper nutrition may not be enough to obtain the desired lipid levels, thus a combination of nutrition and nutritional supplements are useful and effective in reaching serum lipid goals. In addition, inflammation, oxidative stress, and vascular immune responses are decreased.

In several prospective clinical trials, coronary heart disease and cardiovascular disease have been reduced with optimal nutrition and/or administration of several nutraceutical supplements, including omega-3 fatty acids, red yeast rice, α-linolenic acid, and niacin. A combined program of nutrition and nutraceutical supplements represents a scientifically valid alternative for patients who are statin intolerant, cannot take other drugs for the treatment of dyslipidemia or in those who prefer alternative therapies. This new approach to decrease dyslipidemia-induced vascular disease recognizes and treats the multiple steps that are involved in the development of atherosclerosis.

“This nutritional and nutraceutical supplement treatment is a valid alternative for patients that are statin intolerant, cannot take other drugs for the treatment of dyslipidemia or in those who prefer alternative treatments. This new approach to lipid management to decrease vascular disease utilizes a more functional and metabolic medicine approach with a broader treatment program that addresses the multitude of steps involved in dyslipidemia-induced vascular damage.” *Clin Lipidology*. 2014;9(3):333-354

Nutritional Supplementation Options for Patients with an Altered Lipid

Profile (with or without elevated blood pressure)

Dietary Options

- Low Glycemic Index Mediterranean Type Die

Clinical NOTE: If patient is on a statin medication, Coenzyme Q10 is supplemented may be considered but one should consult with the medical doctor who prescribed the medication before embarking on Coenzyme Co 10 or any other food supplements.

Seek Medical Opinion

Again any person thinking of taking any food supplement that is reported to be beneficial for heart problems you should consult with the medical doctor who prescribed them. There is a preponderance of criticism of drugs and medical providers and certainly sometimes care causes adverse events but medical providers are not stupid and have vast amounts of experience that we can access but we have to ask and have an open mind to their wisdom.

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Omega 3 Fatty Acids

Omega 3 fatty acids are reported to deliver to support healthy triglycerides and blood lipids and provide targeted support for cardiovascular health better than the omega-3s alone.

Interventional Chiropractic Care

Chiropractic spinal care and Chiropractic supervised massage based on Applied Kinesiological Muscle Response Testing (AKMRT) in that it influences every cell and organ in the body including the cardio vascular system. This is particularly so in the relationship on the brain, spinal cord and spinal column (the switchboard of the nervous system in that no tissue, organ or system within the body successfully functions without proper nerve and blood supply all of which are under the direct influence of the spinal column.

“Exercise: The human body functions best when it is active therefore appropriate daily program of physical exercise is important and that includes regular physical exercise of the spine in that it is in many respects the life line of the human body.

Optimal Nutrition: optimal nutrition with fruits and vegetables (Mediterranean Diet minimal Low Density Index carbohydrates as well as High Density Index Carbohydrates) which promote overall health and wellbeing , optimal body weight and body composition with moderate ETOH consumption (red wine), and smoking cessation reduces the risk of CHD and MI by 80%.” Lancet 2004;364:937

Clinical NOTE: If patient is on a statin medication, it is strongly suggested that Coenzyme Co Q10 supplementation could be considered.

Stabilized, highly absorbable Coenzyme Q10 in the ubiquinol form for enhanced delivery and maximum absorption. The need for supplemental Coenzyme Q10 could arise for several reasons:

- Impaired Coenzyme Q10 synthesis due to a deficiency of the nutrients that are involved in this synthesis (such as phenylalanine and vitamin B6).
- Genetic or acquired defect in the body’s ability to synthesize Coenzyme Q10.
- Increased tissue needs for Coenzyme Q10 resulting from certain medical conditions.
- Caution should be considered with regards to the possibility of any adverse side effects of prescription medications such as the statin family of drugs, beta blocker drugs, and certain antidepressants (phenothiazines and tricyclics. But as possible as that might be sometimes it is to the patients’ health advantage to be on one of those medications. That being the case one should never cease taking a prescribed medication without consulting the physician who prescribed it – therefore regular medical monitoring is of importance.

Depletion of CoQ10

The depletion of the essential nutrient CoQ10 by the increasingly popular cholesterol lowering drugs, HMG CoA reductase inhibitors (statins), has grown from a level of concern to one of alarm. With ever higher statin potencies and dosages, and with a steadily shrinking target LDL cholesterol, the prevalence and severity of CoQ10 deficiency is increasing noticeably.

An estimated 36 million Americans are now candidates for statin drug therapy. Statin-induced CoQ10 depletion is well documented in animal and human studies with detrimental cardiac consequences in both animal models and human trials but as much as there are potential side effects very often the medical protocol demands the those medications be prescribed. This drug-

induced nutrient deficiency is dose related and more notable in settings of pre-existing CoQ10 deficiency such as in the elderly and in heart failure. Published data already indicated that statins can cause myopathies and rhabdomyolysis with renal failure. Moreover, on May 1, 2000, the FDA issued a warning about liver failure as an adverse reaction of statin use, based on reports that more than half of 62 patients with liver failure died. An estimate claims that the drugs can cause liver and muscle injury in up to 1% of users. For the U.S., this will equal up to 130,000 patients with liver and muscle toxicity symptoms. Moreover, statin drug use is also implicated in the increased incidence of cataracts, neoplasia, peripheral neuropathies, and some psychiatric disturbances. Statin-induced CoQ10 deficiency is completely preventable with supplemental CoQ10 with no adverse impact on the cholesterol lowering or anti-inflammatory properties of the statin drugs.

References

Langsjoen P. H., Langsjoen A. M. *The clinical use of HMG CoA reductase inhibitors and the associated depletion of coenzyme Q10. A review of animal and human publications. Biofactors.* 2003;18:101- 111. Bliznakov E. *Lipid lowering drugs (statins), cholesterol, and coenzyme Q10: the Baycol case – a modern Pandora’s box. Biomed Pharmacother.* 2002;56:56-9. de Graaf, L., Brouwers A. H. P. M., & Diemont W. L. *Is decreased libido associated with the use of HMG-CoA-reductase inhibitors? J. Clin Pharmacol.* 2004 Sep;58(3):326-8. Rêviez. *pages 326–328 PMID: 15327593.* Culver, A. L., et al. *Statin use and risk of diabetes mellitus in postmenopausal women in the Women’s Health Initiative. Arch Intern Med.* 2012 Jan 10. PMID: 22231607. “Archives of Internal Medicine found that statins increase the risk of getting diabetes by...71 percent in post-menopausal women.”

Carpal Tunnel Syndrome

CTP involves an entrapment neuropathy of the median nerve in the wrist and, less commonly, compression of the finger flexor tendons, producing paresthesia (numbness/tingling), atrophy, and weakness in the affected hand.

The syndrome is caused by two issues one involving the cervical spine where there are subluxations, spinal curvatures and/or other spinal issues which are impinging on the Brachial nerve Root Plexus and the other continuous pressure on the median nerve as it passes through the anterior carpal tunnel, which is defined by the carpal bones (proximally: pisiform and the tubercle of the navicular; distally: hook of the hamate and the tubercle of trapezium) and the transverse carpal ligament.

Associated Factors

Many factors are associated with the narrowing of the carpal tunnel: acromegaly; myxedema; rheumatoid arthritis; tenosynovitis from repeated flexion/pronation supination movements of the wrist (sewing, typing, drinking); anterior dislocation or subluxation of the lunate bone (one of the eight bones in the wrist); Paget’s disease; swelling secondary to Colles’ fracture of the distal end of the radius; strains or sprains of the wrist; premenstrual edema or edema of pregnancy; gout; tuberculosis; and amyloidosis.

Irritation of the nerves at the Brachial Plexus, or along its route to the wrist such as at the elbow, make the median nerve more susceptible to irritation at the carpal tunnel: “double crush phenomenon.” The untreated course usually entails a gradually worsening situation. Conventional medicine attempts to surgically release the compression by respecting the flexor retinaculum, a procedure that is not 100% effective and is often followed by the development of the syndrome in the other previously normal hand.

Symptoms

- Pain in neck, upper back, hands, elbows, shoulders, or knees
- Morning stiffness of fingers that is generally increased with use.
- Impaired finger flexion and loss of the normal cervical ranges of movement.
- Transitory nocturnal paralysis of arm and hand
- Paresthesia of hands (possibly also of face)
- Painful adduction (internal) rotation of the thumb at metacarpophalangeal joint
- Weakness of hand grip
- Fluctuating edema in hands, feet, or ankles
- Impaired tactile sensations in fingers – loss of sensation)
- Tenderness over carpal tunnel
- Dropping of objects
- Nocturnal muscle spasms in extremities

Self-Evaluation

1. Hold the hands out with palms up
2. Bend the fingers at the 2 outer joints only, leaving the metacarpophalangeal joints in a straight line with the wrists
3. Bring the tips of the fingers down to the palms of the hands, right to the crease that separates fingers from hands
4. If any of these 16 joints cannot be bent completely and without pain, carpal tunnel syndrome is suspected.
5. Touch For Health based Chiropractic examination of the cervical/thoracic spine and upper extremities. The possible X-Ray of the cervical/thoracic spine, the shoulders, arms and involved hand. Why? Because the nerve and blood supply of the upper extremities originate in the brain and cervical/brachial root plexus of the cervical and upper thoracic spine, Therefore in the situation of carpal tunnel syndrome there can be issues involving those regions. Similarly the muscle skeletal components of the cervical, thoracic spine shoulders, arms, forearms and wrists are also vital components that very often have undiagnosed spinal curvatures including spinal subluxations. Interestingly in the 50 plus years of examining spines we have yet to find a spine that was perfectly in order or free of spinal subluxations or other contributing spinal issues.. Any time there is a non-emergency situation such as Carpal Tunnel Syndrome it is our option that interventional chiropractic care should be pursued. That being the possibility specific Chiropractic examination of the components is warranted. Far too often drugs and surgery are pushed upon people diagnosed with carpal tunnel syndrome neglected the physical components we have mentioned here.

Nutritional Supplementation Options for Carpal Tunnel Syndrome

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

EPA-DHA 1000

Dietary Considerations

- Anti-Inflammatory Diet

Exercise Considerations

- Strengthening exercises for the wrist like squeezing a ball, wrist flexion, and extension with small weights.

Nutritional Formula Description & Supplementation Rationale

Note : As potentially good as nutritional intervention can be doing so without including Interventional muscle skeletal interventional care is a mistake in that each are collaborative components in the healing process of CTS. One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Magnesium, B Complex vitamins and Turmeric

Nutritional support for tendon, nerve, and muscle function featuring niacinamide with B vitamins, magnesium, and turmeric concentrate. It is reported that niacinamide with B vitamins, magnesium, and turmeric concentrate and support soft tissue health. When correctly formulated, balanced combination of nutritional factors for support of tendon, nerve, and muscle tissues. Features a ratio-balanced combination of vitamins B6 and B12 to nutritionally support soft tissue.

NOTE: J. M. Ellis, MD published an article in the Southern Medical Journal documenting the effectiveness of vitamin B6 in carpal

tunnel syndrome. This study is interesting in that it shows that the vitamin B6 deficiency was corrected within four weeks, but that it took 12 WEEKS to relieve the symptoms of carpal tunnel syndrome. The 12-week response time in carpal tunnel syndrome demonstrates a possible unique aspect of nutritional health care: Treatments can take months in some cases. This requires patience on the part of the patient and persistence by the doctor. The patient should always remember that with nutrition, progress is sometimes slow, but success is usually permanent and free of negative side effects.

Bioflavonoid Intensive Care®

Standardized herbal relief for minor pain and inflammation are reported to provide relief from minor pain and support healthy joints and muscle tissue. It is the perfect choice for patients whose joints and/or muscles are impacted by physical stressors, poor posture, and even inactivity.

- Supports the body in eicosanoid synthesis such as prostaglandins, thromboxanes, and leukotrienes that can affect muscle, joint, and connective tissue.
- Provides Ayurvedic herbs traditionally used to support healthy joints and muscle tissue.
- Offers added antioxidant support from quercetin.
- Vitamin C, which help to protect connective tissues from damaging free radicals.
- Provides cayenne, an herb that has long been prized for its many health benefits such as the relief of minor pain, which complements the activity of the other herbs.
- Features an extract of boswellia, as well as turmeric and ginger; all premium quality and standardized to key compounds to ensure effectiveness, reproducibility, and consistent results.

Cataracts

Cataracts are clumps of protein that collect on the lens of an eye and interfere with vision. Normally, light passes through the lens (the clear tissue behind the pupil) and focuses on the retina. The retina is the light-sensitive layer of the eye that sends visual signals to the brain. A cataract occurs when the normally clear lens becomes cloudy. Most cataracts develop slowly over time and are a natural result of aging. Once cataracts become large enough that vision loss interferes with everyday activities such as driving, reading, r watching television, they should be surgically removed.

Signs & Symptoms

- Decreased or blurred vision (often described as a “fog”)

- Double vision
- Halo around lights
- “Second sight” – when an individual who normally wears reading glasses can suddenly read without them
- Brown spots in the visual field

What Causes It?

A cataract develops when protein in the lens clumps together and blocks light from reaching the retina. It is not clear what causes these proteins to clump together, but some researchers speculate that cataracts may develop as a result of chemical changes in the lens that occur with aging. Other researchers believe that there may be several causes of cataracts, including smoking, diabetes, and excessive exposure to sunlight.

Statin therapy significantly elevates the risk of developing cataracts severe enough to warrant surgery” •• Wise, S. J., Nathoo, N. A., & Etminan, M., et al. Statin use and risk for cataract: A nested case-control study of 2 populations in Canada and the United States. *Can J Cardiol.* 2014; 30:1613-1619. There are several different types of cataracts:

Types

- **Age-related cataracts** — those that develop with older age
- **Congenital cataracts** — those that are present at birth or develop in early childhood, usually in both eyes
- **Secondary cataracts** — those that develop in people with medical conditions (such as diabetes) or in those who use steroids
- **Traumatic cataracts** — those that develop as a result of an eye injury

Prevention

- Wear ultraviolet (UV)-blocking sunglasses
- Abstain from smoking or being in a tobacco smoke environment
- Certain medications may help delay cataract formation (particularly in those with diabetes or other high-risk conditions), but none are known to reverse the progression of cataracts once they form.

Life Style Factors

- **Eliminate all suspected food allergens**, including dairy (milk, cheese, eggs, and ice cream), wheat (gluten), soy, corn, preservatives, and chemical food additives. Your health care provider may want to test you for food allergies.
- Consider **eating more antioxidant-rich foods** (such as green, leafy vegetables and peppers) and berries (such as blueberries, cherries, and raspberries). Berries contain high levels of beneficial antioxidants for eye health.
- **Avoid refined foods**, such as white breads, pastas, and sugar.
- **Eat fewer red meats** and more lean, grass-fed meats, cold-water fish, tofu (soy, if no allergy), or beans for protein.
- **Use healthy cooking oils**, such as coconut oil, olive oil, or vegetable oil.
- **Reduce or eliminate trans-fatty acids** found in such commercially baked goods as cookies, crackers, cakes, French fries, onion rings, donuts, processed foods, and margarine.
- **Avoid stimulants such as alcohol and tobacco.**
- **Drink 6-8 glasses of filtered water daily.**
- **Exercise** moderately, if tolerated, 5 days a week.

Nutritional Supplementation Considerations for Cataracts

Vitamins C and E

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Several research studies show that the antioxidant properties of vitamins C and E may protect against the development and progression of cataracts. Early evidence also suggests that the carotenoids lutein (pronounced loo-teen) and zeaxanthin (pronounced zee-uh-zan-thin), which are also antioxidants, may also be protective against cataracts.

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Glutathione. Your eyes naturally contain glutathione, a hard-working, disease fighting antioxidant.

Vitamin B2 is thought to help protect glutathione, and thus protect your eyes from cataracts. People with a vitamin B2 deficiency may benefit from supplements. Given the positive association between nutrition and cataracts, it seems prudent for people to increase the amount of certain antioxidants in their daily diet. Eye **Essential Fatty Acids.**

Fighting Vision Loss with Food — The Impact of Vision Loss

Vision loss on a grand scale would have a far-reaching impact on society. Yet, if we continue in the direction we are headed now, we could be facing a future in which a large segment of the population suffers vision loss from diseases such as age-related macular degeneration (AMD), cataracts, glaucoma, and diabetic retinopathy. Vision loss, in turn, is a key reason for loss of independence in the elderly. Certainly, improved methods of diagnosing and treating age-related eye disease can obviate some of the vision loss that would otherwise cripple millions of older adults. Prevention, however, is not only cheaper but likely to be far more effective in averting such a tragedy.

Prevention Is the Key

How can healthcare providers motivate patients to take steps to prevent age-related eye disease? A recent survey[1] found that baby boomers (born between 1945 and 1964) fear vision loss almost as much as they fear heart disease or cancer. Still, almost half do not receive an annual eye exam, and few are knowledgeable about how dietary factors influence eye health.[2] Furthermore, supplement use to promote eye health is low, even in patients already diagnosed with age-related eye disease.[2] Eye care providers, primary care providers, and specialists in diabetes can point to a burgeoning body of research to convince their patients to increase their dietary intake of key nutrients.

AREDS & AREDS2

The Age-Related Eye Disease Study (AREDS), sponsored by the National Eye Institute, was a landmark study[3] that established AMD as a “nutrition-responsive disorder.” This large randomized controlled trial showed a 25% reduction in risk for progression to advanced AMD in high-risk patients who took a combination of antioxidant vitamins (vitamins C and E), beta-carotene, zinc, and copper.

AREDS2 is now underway to establish the benefits of xanthophyll’s and omega-3 fatty acids, and initial results are expected in 2013. Supplement manufacturers aren’t waiting, however.

Formulations of AREDS2 have already joined AREDS supplements on the drugstore shelves.

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Lutein, Zeaxanthin are Xanthophyll Carotenoids

Lutein and zeaxanthin are xanthophyll carotenoids that have antioxidant and light-screening mechanisms. In some situations it is believed that they are deposited in the macula, where they boost macular pigment optical density that is lost with age, reducing photo-oxidation in the central retina. [4] Lutein's purported benefits are believed to be related to its effects on immune responses and inflammation.[5] The CARMA study failed to provide definitive evidence for the protective effects of carotenoids on AMD.[6] Epidemiologic studies also suggest that dietary intake of lutein and zeaxanthin is inversely related to the risk for cataract.[7,8] The human body does not synthesize lutein, so it must be obtained from dietary sources. Green leafy vegetables are the major dietary sources of lutein.[9]

Zeaxanthin

Like lutein, zeaxanthin is typically contained within the retina. Whereas lutein predominates in the peripheral retina, zeaxanthin is the dominant component in the central macula. Zeaxanthin may be a better photo protector than lutein, but its protective role might have been obscured because investigations usually studied both carotenoids together.[10] The major dietary sources of zeaxanthin are corn, spinach, collard greens, lettuce, and tangerines. A recent study showed that the effect on macular pigment level did not differ whether lutein and zeaxanthin intake came from plant sources or dietary supplements.(11)

Zinc

Zinc is an effective antioxidant and anti-inflammatory mineral, and it was included in the AREDS study.[3] Participants were randomly assigned to receive oral supplements of high-dose antioxidants, zinc, antioxidants plus zinc, or placebo. The only statistically significant reduction in rates of at least moderate visual acuity loss occurred in persons assigned to receive antioxidants plus zinc. Patients with AMD or cataract had lower survival, but survival was higher in patients taking zinc.[12] High doses of zinc can lead to copper deficiency anemia, so copper has been added to AREDS formula supplements. Good dietary sources of zinc include oysters, crab, toasted wheat germ, veal liver, low-fat roast beef, mutton, pumpkin seeds, dark chocolate, and peanuts.

Omega-3 Fatty Acids

An important functional role for the essential fatty acid docosahexaenoic acid (DHA) is suggested by its high concentration in the retina. Prospective data from a large cohort of female health professionals without AMD at baseline indicate that regular consumption of omega-3 fatty acids and fish is associated with a significantly lower risk for AMD and may be of benefit in primary prevention of AMD.[13] The AREDS2 study is evaluating the effect of omega-3 fatty acids on progression to advanced AMD. Dietary omega-3 fatty acids have also been shown to control the symptoms of dry eye syndrome.[14] Omega fatty acids can be acquired through higher consumption of fatty fish (salmon, tuna, mackerel, sardines) or through omega-3 fatty acid supplements in the form of oil or capsules

Vitamin E

It has been suggested that vitamin E, like other antioxidants, might have a role in preventing, slowing progression of, or improving macular degeneration. However, the evidence is inconclusive. Studies have not shown a benefit of vitamin E supplementation in reducing the

development or progression of either AMD[15] or cataracts.[16] However, a combination of vitamin E and other nutrients (a 400 IU/day intake of vitamin E plus beta-carotene, vitamin C, and zinc) has the potential to slow the progression of advanced AMD. Vitamin E is more difficult to obtain from food sources alone because it is found in very small quantities in foods. Dietary sources of vitamin E include fortified cereals, wheat germ, sunflower seeds, and vegetable oils.

Vitamin C

Vitamin C (500 mg) was also included in the AREDS formulation that reduced the risk for progression to advanced AMD. An antioxidant found in fruits and vegetables, vitamin C may have a role in lowering risk for cataracts and, when taken in combination with other essential nutrients, can slow the progression of AMD and visual acuity loss. Independent effects of vitamin C on eye health are inconclusive. In a large-scale, randomized trial of physicians, daily use of 500 mg of vitamin C for 8 years had no appreciable beneficial or harmful effect on risk for incident diagnosis of AMD.[17].

Flavonoids

Natural flavonoids are believed to have a role in the prevention of cataracts. Flavonoids efficiently influence the multiple key molecular mechanisms involved in cataract formation and lens opacification, including oxidative stress, lens chaperone proteases, epithelial cell signaling, non-enzymatic glycation, and the polyol pathway.[18] The flavonol quercetin is the most widely consumed flavonoid in the human diet, found in apples, tea, onions, nuts, and berries.

Beta-carotene

Beta-carotene is a carotenoid that is active in the prevention of free radical formation. To determine the effects of a carotenoid on the development of AMD, beta-carotene was included in the original AREDS formula because lutein and zeaxanthin were not yet commercially available. However, beta-carotene is not present in the retina, so any beneficial effects of the combination of nutrients are unlikely to be related to beta-carotene. In a large population of healthy men, beta carotene supplementation had no beneficial or harmful effect on the incidence of AMD.[19]

References

1. Ocular Nutrition Society. Baby boomers value vision more than any other sense but lack focus on eye health. October 24, 2011. <http://www.ocularnutritionssociety.org/boomers> Accessed October 14, 2012.
2. Hochstetler, B. S., Scott, I. U., Kunselman, A. R., Thompson, K., & Zerfoss, E. Adherence to recommendations of the age-related eye disease study in patients with age-related macular degeneration. *Retina*. 2012;30:1166-1170.
3. Age-Related Eye Disease Study Research group (AREDS Report No. 8): A randomized, placebo controlled, clinical trial of high-dose supplemented with vitamins C and E, beta-carotene, for age-related macular degeneration and vision loss. *Arch Ophthalmol*. 2001;119:1417-1436.
4. Bernstein, P. S., Zhao, D. Y., Wintch, S. W., Emakov, I. V., McClane, R. W., & Gellermann, W. Resonance Raman measurement of macular carotenoids in normal subjects and in age-related macular degeneration patients. *Ophthalmology*. 2002;109:1780-1787.
5. Kijlstra, A., Tian, Y., Kelly, E. R., & Berendschot, T. T. Lutein: More than just a filter for blue light. *Prog Retin Eye Res*. 2012;31:303-315.
6. Chakravarthy, U., Beatty, S., & Stevenson, M. CARMA study group. Functional and morphological outcomes in the CARMA clinical trial. Program and abstracts of the Association for Research in Vision and Ophthalmology 2009 Annual Meeting; May 3-9, 2009; Ft. Lauderdale, Florida. Abstract 1257.

7. Chiu, C. J., & Taylor, A. Nutritional antioxidants and age-related cataract and maculopathy. *Exp Eye Res.* 2007;84:229-245.
8. Christen, W. G., Liu, S., Glynn, R. J., Gaziano, J. M., & Buring, J. E. Dietary carotenoids, vitamins C and E, and risk of cataract in women: A prospective study. *Arch Ophthalmol.* 2008;126:102-109.
9. Perry, A., Rasmussen, H., & Johnson, E. J. Xanthophyll (lutein, zeaxanthin) content in fruits, vegetables, and corn and egg products. *J Food Compos Anal.* 2009;22:9-15.
10. Gale, C. R., Hall, N. F., Phillips, D. I., & Martyn, C. N. Lutein and zeaxanthin status and risk of age-related macular degeneration. *Invest Ophthalmol Vis Sci.* 2003;44:2461-2465.
11. Graydon, R., Hogg, R. E., Chakravarthy, U., Young, I. S., & Woodside, J. V. The effect of lutein- and zeaxanthin-rich foods v. supplements on macular pigment level and serological markers of endothelial activation, inflammation, and oxidation: Pilot studies in healthy volunteers. *Br J Nutr.* 2012;108:334-342.
12. Age-Related Eye Disease Study Research. AREDS Report No. 13: Association of mortality with ocular disorders and an intervention of high dose anti-oxidants and zinc in the age-related eye disease study. *Arch Ophthalmol.* 2004;122:716-726.
13. Christen, W. G., Schaumberg, D. A., Glynn, R. J., & Buring, J. E. Dietary omega-3 fatty acid and fish intake and incident age-related macular degeneration in women. *Arch Ophthalmol.* 2011;129:921-929.
14. Brignole-Baudouin, F., Baudouin, C., & Aragona, P., et al. A multicentre, double-masked, randomized, controlled trial assessing the effect of oral supplementation of omega-3 and omega-6 fatty acids on a conjunctival inflammatory marker in dry eye patients. *Acta Ophthalmol.* 2011;89:e591-597.
15. Taylor, H. R., Tikellis, G., Robman, L. D., McCarty, C. A., & McNeil, J. J. Vitamin E supplementation and macular degeneration: Randomized controlled trial. *BMJ.* 2002;325:11.
16. McNeil, J. J., Robman, L., Tikellis, G., Sinclair, M. I., McCarty, C. A., & Taylor, H. R. Vitamin E supplementation and cataract: Randomized controlled trial. *Ophthalmology.* 2004;111:75-84.
17. Christen, W. G., Glynn, R. J., & Sesso, H. D., et al. Vitamins E and C and medical record-confirmed age-related macular degeneration in a randomized trial of male physicians. *Ophthalmology.* 2012;119:1642-1649.
18. Stefek, M. Natural flavonoids as potential multifunctional agents in prevention of diabetic cataract. *Interdiscip Toxicol.* 2011;4:69-77.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today
1. Go to www.nutri-dyn.com
2. Click on Create Account
3. Click on Patients

4. Complete the short form and type in the following Account Number 100160
5. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Cellulitis

Cellulitis is a bacterial infection of the skin. Bacteria get into the skin through a cut, scrape, or other wound. Cellulitis can also affect the deeper layers of connective tissue beneath your skin and, in severe cases, spread to your lymph nodes. Cellulitis most often affects the legs, but it may also affect the arms, face, and scalp. Most times, taking antibiotics cures cellulitis. However, some people can have serious complications. Without treatment, it can become life threatening.

Signs & Symptoms

- Pain and tenderness in in the skin, muscles, ligaments and bones including very often the spine.
- Edema; swelling caused by fluid buildup.
- Redness of the skin
- Skin that is warm to the touch
- Fever
- Chills

What Causes It?

Cellulitis is caused by bacteria, most often streptococcus or staphylococcus aureus that get into the body through a break in the skin: cuts, insect bites, burns, surgical incisions, IV catheters, dermatitis. Methicillin-resistant staphylococcus aureus (MRSA) infection is a more serious type of staph infection and is on the rise.

Erysipelas, a type of cellulitis involving the lymph system, is often preceded by an upper respiratory infections. Infants, young children, and the elderly are most likely to get erysipelas, which is generally caused by streptococcal infection. Very often over looked is the spine and nervous system in that the brain and spinal cord effect every tissues and function of the body therefore when there are spinal issues (diagnosed and/or undiagnosed) it is highly probable that issues within the spine are contributing factors to the people suffering with cellulitis.

Who's Most At Risk?

You are at risk for developing cellulitis if you have the following:

- Older age — as your circulation grows weaker with age, it's easier for cuts and scrapes to get infected
- Diabetes
- Chickenpox and shingles
- Lymphedema, swelling of arms or legs, which may cause skin to crack
- Fungal infections of the feet, which can also cause cracks in the skin
- Dirty wounds – not necessarily related to poor hygiene
- A weakened immune system very often related to spinal issues.
- A general infection.

What you should Expect at Your Provider's Office

If you have symptoms of cellulitis, you should see your doctor right away. If you have a fever with a rash, go to the emergency room. Your health care provider will do a thorough physical examination to see what is causing the condition. Blood tests and imaging may also be used.

Prevention

To help prevent cellulitis: If you have a cut or scrape, wash the area gently with clean water. Apply an antibiotic cream or ointment, and cover the area with a bandage. Change the bandage every day and watch for signs of infection. If you have diabetes or circulatory problems, check your hands and feet daily for scrapes or cuts, or a fungus such as athlete's foot.

Do what you can to keep your skin moisturized and don't go barefoot.

Treatment Plan

Conventional medical therapy believes that Cellulitis must be treated with antibiotics but very often interventional chiropractic care and chiropractic supervised massage minimizes the need for drug therapy but conventional drug therapy often neglects interventional chiropractic care therefore causing patients to take drugs to help ease pain, raise the affected arms or legs, keep still, and apply cool, wet, sterile bandages. If your symptoms aren't better after a few days, you may need hospitalization so doctors can give you antibiotics intravenously (IV). In addition to utilizing Interventional Chiropractic spinal and other muscle skeletal therapy's (pursing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program) is of potential recovery, there in all probability is no one more qualified to offer advice on the nutritional implementation for cellulitis.

Drug Therapies

Commonly medical providers prescribe antibiotics for cellulitis as well as pain relievers if needed. Your doctor may prescribe an antibiotic that works against both staph and strep, such as cephalexin (Keflex®). It is important to take the entire course of antibiotics, even if your symptoms get better before you finish.

Surgical & Other Procedures

If antibiotics don't work, you may need surgery to drain any infected tissue.

Prognosis & Possible Complications

Antibiotics usually cure cellulitis. While complications are rare, they can be serious and even life threatening if the infection spreads to the blood.

Complications are more common in very young children, the elderly, or in people who have weakened immune systems. Possible complications include abscesses, gangrene, and thrombophlebitis (inflammation of superficial veins). Some people are prone to have cellulitis

come back, often in the same area, leading to permanent skin changes. Gangrene may cause the loss of a limb.

Complementary & Alternative Therapies / Nutritional Support

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

If you have cellulitis, you need to take antibiotics. It can spread rapidly, so you should start antibiotics as soon as possible. It is not recommended that you treat cellulitis with alternative therapies alone, but there is strong evidence documenting improved response with nutritional support.

NOTE: If the patient is on antibiotic therapy or Chemo therapy, the utilization of probiotics during antibiotic therapy may be beneficial but please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes Applied Kinesology Muscle Response Test whole person health and wellness care will have expertise in giving counsel.

Antibiotic-associated diarrhea (AAD)

Antibiotic-associated diarrhea (AAD) may be prevented by co-administration of probiotics, as suggested by several randomized controlled trials (RCTs). Several comprehensive meta-analyses, recently published, all show that probiotics significantly decreased incidence of antibiotic associated diarrhea (AAD). McFarland, 2006; Szajewska and Mrukowicz, 2005; Cremonini et al. 2002; D'Souza et al. 2002.

- The effects were similar across all categories and formulations of probiotics and treatment durations. One of the meta-analyses found that *S. boulardii*, *L. rhamnosus*, and multiple mixtures of two different probiotics were the most protective against AAD (McFarland, 2006). Other specific preparations have been studied to a lesser extent and that may be why their efficacy has been found to be less significant.
- One randomized, double-blind, placebo-controlled trial in individuals over the age of 50 using combination *L. casei*, *L. bulgaricus*, and *S. thermophilus* twice daily during a course of antibiotics and for 1 week after the completion of antibiotic therapy showed reduction in the incidence of AAD (Hickson et al. 2007).

Reference: Verna, E. C., & Lucak, S. Use of probiotics in gastrointestinal disorders: What to recommend? *Ther Adv Gastroenterol.* 2010;3(5):307-319.

Probiotics

Probiotics are reported to provide multidimensional support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of seven beneficial probiotic strains. (*Saccharomyces boulardii*, *Bifidobacterium lactis* Bi-07, *Lactobacillus plantarum* Lp-115, *Lactobacillus salivarius* Ls-33, *Lactobacillus acidophilus* NCFM®, *Streptococcus thermophilus* St-21, and *Bifidobacterium lactis* Bl-04).

Reported To:

- Promote a healthy intestinal environment and immune response.
- Help relieve recurring functional bowel discomforts and intestinal irritation.

- Contains NCFM®, one of the most well-researched probiotic strains.
- Designed for reliable outcomes with a concentrated dose of S.boulardii.

Raw Adrenal is present as is vitamin C to stimulate the adrenals and the body's defense mechanisms. Bee pollen is believed to support the cell, resulting in the production of interferon. Interferon, the body's anti-viral substance, absorbs the deoxyribosides contained in pollen. Bioflavonoid assists vitamin C in maintaining capillary integrity and regulates vascular permeability. Pantothenic acid plays an important role in the body's immunity mechanisms. **Calcium is necessary for maintenance of membranes, and zinc** is important in the synthesis of antibodies.

Quercetin, green tea (leaf), grape seed extract, Japanese knotweed extract (resveratrol), grape skin extract, ginkgo extract (leaf), procyanidins, and milk thistle (seed) are promoted as to support the immune system, liver detoxification, and address associated lymph congestion and inflammation associated with cellulitis.

Central Pain Syndrome -CPS

Central pain syndrome is a neurological condition caused by damage to or dysfunction of the central nervous system (CNS), which includes the brain, brainstem, spinal cord and spine which not only houses the spinal cord but acts similar to the switchboard of the nervous system therefore in one or more ways involved in the causes of CPS.

Causes

This syndrome can be caused by stroke, multiple sclerosis, tumors, epilepsy, brain or spinal cord and trauma to the spine or Parkinson's disease. The character of the pain associated with this syndrome differs widely among individuals partly because of the variety of potential causes. Central pain syndrome may affect a large portion of the body or may be more restricted to specific areas, such as hands or feet. The extent of pain is usually related to the cause of the CNS injury or damage.

Thus as we look at pain it is important to keep in mind that the brain, spinal cord and spinal column are components of the Central Nervous System - this is particularly so in that the spinal column is the switchboard of the nervous system therefore almost always there are issues in the spine that if found and chiropractic ally corrected it can contribute to pain reduction and/or elimination.

Pain

Pain is typically constant, may be moderate to severe in intensity, and is often made worse by touch, movement, emotions, and temperature changes, usually cold temperatures. Individuals experience one or more types of pain sensations, the most prominent being burning.

Mingled with the burning may be sensations of "pins and needles;" pressing, lacerating, or aching pain; and brief, intolerable bursts of sharp pain similar to the pain caused by a dental probe on an exposed nerve. Individuals may have numbness in the areas affected by the pain.

The burning and loss of touch sensations are usually most severe on the distant parts of the body, such as the feet or hands. Central pain syndrome often begins shortly after the causative injury or damage, but may be delayed by months or even years, especially if it is related to post-stroke pain.

Is there any treatment?

1. Pain medications often provide some reduction of pain, but not complete relief of pain, for those affected by central pain syndrome.

2. Aspirin (foods and drugs containing Salicylates, Tricyclic antidepressants such as nortriptyline or anticonvulsants such as Neurontin (gabapentin) can be useful. Lowering stress levels appears to reduce pain.

Salicylates – many people eat foods that contain salicylates which unbeknownst to them their body is intolerant to predisposing them to allergic reactions.

Where are Salicylates found

Plants, vegetables, fruits (bananas, limes, peas, beans, sweeteners, herbs, poultry, eggs, spices, corn, beef, chocolate, Jell-O, wheat containing foods, nuts. Salad dressings, etc.

In Plants

They exist in many plants and act as preventing the potential harmful effects of hormones, bad bacteria, fungi, and insecticides on the plants.

For further information check out the Feingold Program

What is the prognosis?

If interventional chiropractic care is pursued it creates a higher probability of recovery without drugs or surgery. Central pain syndrome does not have to be a fatal disorder, but the syndrome causes disabling chronic pain and suffering among the majority of individuals who have it.

Nutritional Supplementation Considerations for Central Pain Syndrome

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure.

GLA A combination of nutrients that directly supports peripheral nerve function is reported to promote healthy nerve conduction, blood flow to the nerves, and nerve tissue integrity by featuring gamma-linolenic acid (GLA) which is believed to deliver the added benefits of vitamin C in hopes to synergistically enhance the effectiveness of GLA and, along with beta-carotene, protect delicate nerve tissue from oxidation. Neurosol also supplies potent levels of folate and vitamins B12 and B6 to support methylation and homocysteine metabolism to support nervous system function.

Alpha-Lipoic Acid (ALA). Through proprietary technology, the potentially harmful chemical by-product epilipoic acid is removed and polymer residuals kept at a minimum, resulting in a purity-controlled product that delivers maximum value and effectiveness with an excellent safety profile. It also assists in the antioxidant activity in both aqueous and fatty regions of the cell, crosses the blood brain barrier, extends the functional capacities of vitamins C and E and coenzyme Q10, promotes accelerated glutathione synthesis, and directly scavenges free radicals. It supports glucose transport, metabolism, and utilization, which may promote healthy glucose clearance from the bloodstream and supports the health and function of neurological tissue, especially peripheral nerves and promotes the production of cellular energy (ATP). Offers clinically effective levels of alpha-lipoic acid in just two tablets daily. Several published studies report that the antioxidant nutrient alpha-lipoic acid (ALA) can partly restore diabetic nerve function after only four months of high-dose (800 mg daily) oral treatment, have a beneficial effect on several attributes of nerve conduction, and was associated with a favorable effect on neuropathic deficits without causing significant adverse reactions. *Diabetes Care*,

18:1160-67, 1995, Diabet Med. 2004 Feb;21(2):114-21, Free Radic Res. 1999 Sep;31(3):171-9, Diabetes Care. 1999 Aug;22(8):1296-301, Ther

Clin Risk Manag. 2011;7:377-85. Pub 2011 Sep 5, Diabetes. 2000 Jun;49(6):1006-15

Boswellia, turmeric and ginger are compounds to ensure effectiveness, reproducibility, and consistent results.

Cayenne, an herb that has long been prized for its many health benefits such as the relief of minor pain, which complements the activity of the other herbs. It offers added antioxidant support from quercetin and provides excellent muscle tissue support and relief of minor pain.

Cerebral Palsy

Cerebral palsy is a group of disorders that affect a person's ability to move and to maintain balance and posture. The disorders appear in the first few years of life. Usually they do not get worse over time but when it seems to worsen very often it is related to other systems within the body failing. People with cerebral palsy may have difficulty walking. They may also have trouble with tasks such as writing or using scissors. Some have other medical conditions, including seizure disorders or mental impairment. Cerebral palsy happens when the areas of the brain that control movement and posture do not develop correctly or get damaged.

Early signs of cerebral palsy usually appear before 3 years of age. Babies with cerebral palsy are often slow to roll over, sit, crawl, smile, or walk. Some babies are born with cerebral palsy; others get it after they are born. There is no cure for cerebral palsy, but treatment can improve the lives of those who have it. Treatment includes medicines, braces, and interventional chiropractic care, physical, occupational, and speech therapy.

Reference: *NIH: National Institute of Neurological Disorders and Stroke*

What are the different types of cerebral palsy? There are three major types of cerebral palsy. Some individuals may have symptoms of more than one type.

Spastic cerebral palsy

About 70 to 80 percent of affected individuals have the spastic type in which muscles are stiff, making movement difficult. Spastic diplegia is a form of spastic cerebral palsy in which both legs are affected. Affected children may have difficulty walking because tight muscles in the hips and legs cause legs to turn inward and cross at the knees (called scissoring). In spastic hemiplegia, only one side of the body is affected, often with the arm more severely affected than the leg. Most severe is spastic quadriplegia, in which all four limbs, the trunk, and face are affected. Children with spastic quadriplegia usually cannot walk. They often have mental retardation, difficulty speaking, and seizures. Thus early detection is vital in that some alternate therapy's offer help and slowing down the progressiveness of CP.

Athetoid or dyskinetic cerebral palsy

About 10 to 20 percent of affected individuals have the athetoid form, which affects the entire body. It is characterized by fluctuations in muscle tone (varying from too tight to too loose) and sometimes is associated with uncontrolled movements (which can be slow and writhing or rapid and jerky). Affected children often have trouble learning to control their bodies well enough to sit and walk. Because muscles of the face and tongue can be affected, there also can be difficulties with sucking, swallowing, and speech.

Ataxic cerebral palsy

About 5 to 10 percent of affected individuals have the ataxic form, which affects balance and coordination. They may walk with an unsteady gait with feet far apart. They have difficulty with motions that require precise coordination, such as writing. What are the causes of cerebral palsy? Cerebral palsy is usually caused by factors that disrupt normal development of the brain before birth. In some cases, genetic defects

may contribute to brain malformations and “miss wiring” of nerve cell connections in the brain, resulting in cerebral palsy and what happens in the brain transfers in to the nervous system, and spinal cord which is housed in the spinal column Therefore treatment of cerebral palsy should include chiropractic care.

Other Possible Causes

1. Other cases are caused by injuries to the developing brain, such as a fetal stroke. Contrary to common belief, few cases of cerebral palsy are caused by a lack of oxygen reaching the fetus during labor and delivery.
2. A small number of babies develop brain injuries in the first months or years of life that can result in cerebral palsy. These injuries may be caused by brain infection (such as meningitis) and head injuries. In many cases, the cause of cerebral palsy in a child is not known.
- 3 Another very often over-looked cause is damage to the baby’s spine during delivery therefore chiropractic pediatric intervention is called for aa of which those risk factors make it more likely that a baby will develop cerebral palsy.
4. Spinal curvatures, spinal subluxations and other spinal column issues in that the spine houses, protects and acts similar to a switchboard of the nervous system thus involved in the flow of blood and life force to every cell and organ in the body. That being the case interventional chiropractic care is a valid approach in the treatment of Cerebral Palsy.

Risk factors for cerebral palsy include:

Prematurity

Premature babies (those born before 37 completed weeks of pregnancy) who weigh less than 3 1/3 pounds are between 20 and 80 times more likely to develop cerebral palsy than full-term babies. Many of these tiny babies suffer from bleeding in the brain, which can damage delicate brain tissue, or develop periventricular leukomalacia, destruction of nerves around the fluid-filled cavities (ventricles) in the brain.

Birth Injury in that sometimes delivery is compromised causing damage to the child’s brain or spine and spinal cord. Unfortunately very often when a child demonstrates symptom of cerebral palsy the attending medical providers never include examination of the child’s spine.

Complicating that when (rarely) when the child’s spine is examined or X-Rayed traditional medicine does not recognize the existence of spinal curvatures or worse yet spinal subluxations. When that’s the case it predisposes the child to developmentally related problems as they grow.

Infections during pregnancy

Certain infections in the mother can cause brain damage and result in cerebral palsy. Examples of these infections include rubella, cytomegalovirus (usually mild viral infection), herpes (viral infections that can cause genital sores), and toxoplasmosis (a usually mild parasitic infection). Maternal infections involving the placental membranes (chorioamnionitis) may contribute to cerebral palsy in full-term as well as premature babies. A 2003 study at the University of California at San Francisco found that full-term babies were 4 times more likely to develop cerebral palsy if they were exposed to chorioamnionitis in the womb.

Insufficient oxygen reaching the fetus. This may occur when the placenta is not functioning properly or it tears away from the wall of the uterus before delivery. Asphyxia during labor and delivery: Until recently, it was widely believed that asphyxia (lack of oxygen) during a difficult delivery was the cause of most cases of cerebral palsy. Studies now show that birth complications, including asphyxia, contribute to only 5 to 10 percent of cases of cerebral palsy.

Severe jaundice

Jaundice, a yellowing of the skin and whites of the eyes, is caused by the build-up of a pigment called bilirubin in the blood. Mild cases of jaundice usually clear up without treatment and do not harm the baby. However, jaundice can occasionally become severe. Affected babies have high levels of bilirubin in the blood. Without treatment, high bilirubin levels can pose a risk of permanent brain damage, resulting in athetoid cerebral palsy.

Certain blood diseases, such as Rh disease, can cause severe jaundice and brain damage, resulting in cerebral palsy. Rh disease is an incompatibility between the blood of the mother and her fetus. It usually can be prevented by giving an Rh-negative woman an injection of a blood product called Rh immune globulin around the 28th week of pregnancy and again after the birth of an Rh-positive baby.

Blood clotting disorders (thrombophilia's). These disorders in either mother or baby may increase the risk of cerebral palsy.

Treatment

1. Interventional Chiropractic care involving evaluation of the brain, spinal cord, spine and the muscle skeletal systems including pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential recovery,.
2. Nutritional therapy in collaboration with the patients' medical care providers and nutritionally oriented chiropractic physician may not restore destroyed brain or nerve cells, but it can greatly aid in the development of functional control via collateral cells in the brain and central nervous system. It also goes a long way in relieving the terrible stress seen in these patients. It can build strength and resistance to infection and undercurrent secondary disease invasion, and it very often improves the mental outlook of these patients as they become mature.

Diagnostic Tests Indicated

Clinical and Homeostatic analysis of Blood Profile, CBC, urine analysis and Applied Kinesiology Muscle Response Testing and appropriate therapy . In the situation of urinalysis it is very important to observe any urinary loss of Creatine, which if present in these cases indicates muscle destruction), liver profile tests, and kidney profile tests.

Nutritional Supplementation Options for Cerebral Palsy

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Any dietary or other life style changes should discussed with your medical doctor and never stop taking any prescribed medications.

With regard to children with **suspected** cerebral palsy: It would make the most sense to consider the omega-3 fatty acid DHA and lipoid acid in particular, along with general nutritional support.

DHA

Lipoic Acid

Schendel, D. E., Berg, C. J., Yeargin,-Allsopp, M., Boyle, C. A., & Decoufle, P. Prenatal magnesium sulfate exposure and the risk for cerebral palsy or mental retardation among very low-birthweight children aged 3 to 5 years. *JAMA*. December 11, 1996; 276(22): 1805-10.

Dietary Considerations

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Consider a low glycemic load diet.

Key Vitamins & Minerals, Essential Fatty Acids, PLUS Patient-Specific Nutrition.

Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

DHA features a concentrated, purified source of pharmaceutical-grade omega-3 fatty acids from sustainably sourced, cold-water fish. Each softgel provides a total of 900 mg DHA in triglyceride form for easy absorption.

Alpha-Lipoic Acid

Alpha lipoic acid/lipoid acid is a universal antioxidant, meaning an antioxidant that quenches free radicals in both lipid and water-soluble portions of tissues and cells. Alpha lipoic acid is an important component in the production of energy from carbohydrates. It is involved throughout the complex multi-enzyme process that catalyzes glucose (blood sugar) into energy. Also, alpha lipoic acid both stimulates insulin activity and reduces insulin resistance. Orally, alpha-lipoic acid is used for diabetes, peripheral neuropathy, cardiac autonomic neuropathy, retinopathy, cataracts, and glaucoma. Alpha-lipoic acid is also used orally for dementia, chronic fatigue syndrome (CFS), HIV/AIDS, cancer, liver disease, Wilson’s disease, cardiovascular disease, peripheral arterial disease (PAD), intermittent claudication, Lyme disease, and lactic acidosis caused by inborn errors of metabolism but it should not be used as a replacement for any prescribed medications. Most certainly GMP Certified Pharmaceutical Quality food supplements can be helpful but they never should consider a cure-all..

Fruits & Greens

Fruits & Greens is an easy-to-mix, great tasting, nutrient-rich superfood formula with whole food concentrates designed to provide synergistic phytonutrient nutrition. It provides a super blend of 100% natural fruit and vegetable extracts, vitamins, enzymes, and symbiotic intestinal flora—high in antioxidants, lignans, and phytonutrients reported to be:

- Powerful Antioxidant Benefits
- Supports Immune System Function
- Enzymes, Probiotics, and Fiber for Digestion
- Supports Detoxification of Body Systems
- Natural Body Alkalizer
- Contains Proprietary Blends of Organic Superfoods
- No Wheat, Preservatives, or MSG
- No Stimulants or Caffeine
- No Sugar Added

Caution

As potentially good as those options are it is possible that some of them are hypersensitive to the body therefore its good advice to have a Chem Screen, CBC and IgG and IgG4 Food Sensitivity tests

Chronic Fatigue Syndrome

Chronic, persistent, or relapsing debilitating fatigue, or easily fatigued, that does not resolve with bed rest and that is severe enough to reduce or impair average daily activity below 50% of premorbid activity level.

International CFS Study Group Definition of Chronic Fatigue Syndrome:

I. Clinically evaluated, unexplained persistent or relapsing chronic fatigue that:

- is of new or definite onset (has not been lifelong)
- is not the result of ongoing exertion
- is not substantially alleviated by rest
- results in substantial reduction in previous levels of occupational, educational, social, or personal activities.

II. The concurrent occurrence of four or more of the following symptoms, all of which must have persisted or recurred during six or more consecutive months of illness and must not have predated the fatigue:

- self-reported impairment in short-term memory or concentration severe enough to cause substantial reduction in previous levels of occupational, educational, social, or personal activities.
- persistent/recurrent sore throat
- tender cervical or axillary lymph nodes
- generalized muscle pain which often includes chronic back and other joint pains
- multi-joint pain including pain involving the spine without joint swelling or redness
- headaches of a new type, pattern, or severity
- unrefreshing sleep
- post-exertional malaise lasting more than 24 hours

Suspected Etiologies for Chronic Fatigue Syndrome:

- Viral infections and the post-viral fatigue syndrome
- Fibromyalgia
- Neurally-mediated hypotension (low blood pressure)
- Psychogenic biological dysfunction
- Low natural killer cell syndrome

Factors Suspected of Promoting Chronic Fatigue Syndrome:

- Hypoxemia Endocrine (Adrenal Gland) and dysfunction of the Immune System.
- Stress-related dysfunction
- Somatoform disorder including subluxations in the spinal column. Generally speaking the spine is always involved in CFS because the spine is similar to that of the switchboard of the nervous system in that it houses and protects and regulates the nerves, artery's, veins, lymphatics and meridians that coordinate every system and function of the human body.
- Marginal nutritional deficiencies
- Intestinal hyper permeability predisposing people to not only gastrointestinal problems but systemic as well therefore the probability of the need for at minimum a IgG and IgG4 Food Hypersensitivity, Chem Screen, CBC, PTH (Parathyroid Hormone), 24 Hour Urine Hormone Analysis (including Corticosteroids and sex hormones) and Hair Mineral Toxic Metal biopsy..
- Overgrowth of pathogenic intestinal flora (dysbiosis)
- Heavy metal toxicity best diagnosed through blood and/or hair mineral toxic metal analysis.

Symptoms

In addition to the symptoms above, Fatigue, neck, back and muscle and joint aches in that very often contributing factors to the interruption of the nerve and blood passing in and through the intervertebral foramina then all of the body is going to suffer: The degree may be mild, being able

to perform at work or home but easily fatigued from it; or it may be intense, causing patients to give up their jobs and greatly curtailing other activities. Sometimes they may be bedridden, and slight activities such as housecleaning or going for a walk may necessitate a recovery period of 2-3 days.

Usually more strenuous exertion and exercise are impossible. Frequently, though, patients have alternating periods of fatigue and normalcy. The disease usually begins gradually, with the fatigue slowly growing until it becomes overwhelming. Other symptoms include: difficulty sleeping, weight loss, or gain and questioning if they have psychological issues because no traditional medical approaches often fail to diagnose let alone find solutions to their health issues.

Associated symptoms:

- Mild fever
- Sore throat
- Painful lymph nodes
- Muscle weakness and pains
- Myalgia headaches
- Arthralgia including chronic back and joint pains
- Neuro-psychological complaints
- Sleep disturbances

Laboratory Findings

While laboratory diagnosis of this condition used to be prohibitively expensive and inadequate, some labs now provide reasonably priced comprehensive panels showing titers of different causative agents, usually Epstein-Barr virus, cytomegalovirus, toxoplasmosis, candida. Subtyping of antigens allows accurate diagnosis of present, chronic, active, or inactive infections, but severity of symptoms do not always correlate with the lab findings. Some patients with extremely high titers for a particular agent may be symptom free, while others with low titers may be extremely symptomatic. Many see decreased WBC count, increased lymph's, or atypical lymph's on peripheral smear.

Course & Prognosis

This disorder is not well recognized by most conventional physicians, despite empirical evidence and clinical research and this is complicated by the fact that many of the symptoms of Chronic Fatigue Syndrome are subjective (can't been seen) rather than objectively objective(seen). Conventional treatment involves suppression and/or palliation of symptoms, e.g., salicylates for fever, headaches, and myalgia. With no further diagnosis or treatment, the patient is likely to have bouts of remission and exacerbations that may develop into a constant, persistent disease. Appropriate diagnosis and treatment lead to excellent recovery rates in most sufferers who comply.

Nutritional Supplementation Considerations for Chronic Fatigue Syndrome

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

EPA-DHA

CoQ10

B12/Folate

Dietary Considerations

•• Modified Elimination Diet

Consider Avoiding:

- dairy
- increased fat
- red meat
- gluten
- arginine-rich foods*

*Viral protein structures are arginine rich vs. human protein structures which are lysine rich. (CFS patients in general have decreased arginine by amino acid analysis possibly due to increased viral replication.)

Nutritional Formula Description and Supplementation Rationale

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Pharmaceutical Quality omega-3 essential fatty acids from cold water fish per

CoQ10

Stabilized, highly absorbable coenzyme Q10 in the ubiquinol form for enhanced delivery and maximum absorption.

B12/Folate™

B12/Folate™ provides vitamin B12 and folates in combination with intrinsic factor for enhanced absorption and assimilation.

Creatine in an attempt to change pH with the goal for increased muscle ATP. Recent studies reveal that Creatine supplements can significantly increase exercise and athletic performance by delaying the development of fatigue. Creatine does not alter muscle size and structure, but improves the ability to maintain maximal performance and helps rebuild lean muscle mass.

Pure Creatine monohydrate is a precursor to Creatine phosphate, which is necessary to fuel muscle contractions. Creatine plays a vital role in the production of ATP (adenosine triphosphate), the primary compound which converts food into energy. When high concentrations of Creatine are present, the body can quickly release ATP to sustain high-powered muscle contractions. Kre-Alkalyn® EFX remains 100% stable and reaches muscle cells at full strength. Its patent (6,399,661) also covers all pH levels from 7-14. Therefore, the pH of all other Creatine products must be pH 6.9 (Alkaline) or less—meaning they will degrade and lose potency in liquids. The first and only Creatine that doesn't convert to creatinine in liquids before reaching muscle. Creatine is involved in muscle energy production increasing both strength and recovery.

Interventional Chiropractic.

Interventional Chiropractic Care in that the spine not only houses and protects the spinal cord but in effects acts like a switchboard of the nervous system therefore vital to the health of every tissue, cell and function of the body. One way or another anytime there is sickness (Fibromyalgia) there are going to be muscle skeletal issues and to varying degrees there are going to be probable issues in the spine which is a component of dysfunction. The same holds true when that Doctor of Chiropractic is also nutritionally oriented as well as trained in Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential recovery. One can eat well, take good GMP nutraceuticals but as potentially good as that might be if the body is not receiving essential life force then all of those other interventions are not going to

perform as well as intended. In our caring for untold numbers of people suffering with fibromyalgia it was those who were on the correct nutraceutical program as well as receiving chiropractic care. But those who were on a good nutraceutical program but not also receiving chiropractic care did not respond as well as the other group.

Chemical Dependency No doubt many people are unfortunately dependent on prescribed as well as over the counter drug that contains chemicals that their body and mind have become dependent upon. Some people are born with DNA issues that predispose them to be allergic to certain chemicals of which can cause all kinds of health problems.

Most certainly this country has many multiple approaches to trying to help chemically dependent people and to varying degrees they have positive things to help those people. Even though we have considerable experience in psychological evaluations for chemical dependent our focus here will be more toward chemical dependency from a nutritional perspective

This is in part comes from personally have been exposed to chemical dependency issues from early childhood thought life and our desire to be set free from chemical dependency as well as the nutritional factors involved in chemical dependency. This is particularly so as some of the nutritional counseling that takes place in chemical dependency treatment centers vary's and very often involves little to no accepted whole person biochemical analysis of people in treatment. Similarly people who have no chemical dependency issues may be sympathetic to those that do but as helpful as they might attempt to be no one but the chemically dependent person knows the emotional and physical ravages of struggling with chemical dependency.

From this perspective we are going to do an over lay of the typical nutritional aspects of chemical dependency. Any time a person becomes dependent on potentially harmful chemicals (Hypersensitivities) there then is a high predisposition to those harmful chemicals adversely affecting the mind and body.

What are the most common related biochemical issues in chemically dependent people as sadly usually go undiagnosed in treatment centers.

Deficiencies and Imbalances of:

1. Fat soluble and water soluble vitamins and minerals
2. Neurotransmitters – that are comprised of – Cortisol, Cortisone, Creatine, DHEA, Dopamine, Estrogen, Estradiol, Epinephrine, GABA, Histamine, Melatonin, Norepinephrine, PEA, Progesterone, Serotonin, Testosterone.
3. Adrenal dysfunction – fluctuating hypoadrenalism and Hyper adrenalism with accompanying chronic fatigue, hormone dysfunction, malaise, mood irregularities, motivation issues, sleep disturbances, depression, anxiety, anger.
4. Amino Acid - Status of amino acids (proteins). Minerals do not float freely in the blood but rather are absorbed and chelated/chemically bond in the small intestine to amino acids who then transported by the amino acids to the various tissues in the body.

Types of Amino Acids – Essential and Non-Essential

Essential - The nine essential amino acids for humans are histidine, leucine, isoleucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine. Other organisms have different essential amino acids.

Non Essential - [alanine](#), [asparagine](#), [aspartic acid](#), [cysteine](#), [glutamic acid](#), [glutamine](#), [glycine](#), [proline](#), [serine](#), [tyrosin](#)

The non-essential amino acids do not need to originate from food because when the body is in homeostasis they can be made by the body. Only 20 amino acids are used by all life forms; but it is estimated that in nature there are at least 500 different amino acids. Amino acids are proteins and come from a string of monomers, or building blocks, called amino acids. These amino acids combine with one another to produce the large number of proteins used for various structural and functional needs in the body. With those chemical possibly being deficient or imbalanced in chemical dependent people what are diagnostic tests that are appropriate?

1. Chem Screen/CBC- Blood Profile
2. Amino acids and Neurotransmitters evaluated through urine or saliva analysis and hair mineral toxic metal analysis.
3. Adrenal dysfunction, chronic fatigue, hormone dysfunction, malaise, mood irregularities, motivation issues, sleep disturbances.
5. IgG and IgG4 Hypersensitivity Food Tests
4. Applied Kinesiology Muscle Response Testing, (

The importance of whole person evaluations

No matter how good psychological counseling may be if the biochemical nature of the person is not consistently analyzed and appropriate dietary changes made recovery will be incomplete therefore continuing to predispose the individual to health issues including relapses.

Interventional Chiropractic Care

Interventional Chiropractic care focused on manipulations of spinal curvatures, subluxations, muscle issues that are found to be contributing to the restrictive flow of venous or arterial blood circulation. All circulation is influenced by the spinal cord which is spine not only house in and protects the spinal cord but in effects acts like a switchboard of the nervous system therefore created to influence every tissue, cell and function of the body including circulation therefore pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFH AKMRT) program is of potential recovery.

Nutraceutical Options-

Not a recommendation but some GPM certified Pharmaceutical Quality food supplements that many men and women who are in recovery have found helpful.

Wellness Essentials (Male or Female)

Adrenal Resilience

Brain Restore

500-Methoxyflavone

Calm Eze

DHEA

Women – Estro Pro Cream

Men - Testrain

Circulation / Venous Insufficiency

(Chronic Venous Insufficiency; Chronic Venous Stasis; Chronic Venous Disease)

Venous insufficiency is a condition in which the veins have problems sending blood from the legs back to the heart.

Causes

Normally, valves in your deeper leg veins keep blood moving forward toward the heart. With chronic venous insufficiency, vein walls are weakened and valves are damaged. This causes the

veins to stay filled with blood, especially when you are standing. Chronic venous insufficiency is a long-term condition. It occurs because a vein is partly blocked, or blood is leaking around the valves of the veins.

Risk factors for venous insufficiency include:

- Age
- Being female (related to levels of the hormone progesterone)
- Being tall or when the persons thoracic spine is excessively hyper kyphosis (humped) therefore compressing the thorax and the heart and lungs therein.
- Family history of this condition
- History of deep vein thrombosis in the legs
- Obesity
- Pregnancy
- Sitting or standing for a long periods and spinal curvatures, subluxations and muscle issues that imping on the veins therefore restricting venous circulation.

Symptoms

- Dull aching, heaviness, or cramping in legs
- Itching and tingling in the affected extremity.
- Pain that gets worse when standing including backache
- Pain that gets better when legs are raised
- Swelling of the legs
- Redness of the legs and ankles
- Skin color changes around the ankles
- Varicose veins on the surface (superficial)
- Thickening and hardening of the skin on the legs and ankles (lipodermatosclerosis)
- Ulcers on the legs and ankles
- Wound that is slow to heal on the legs or ankles

Examinations & Tests

Your doctor should take a past and present medical history and at minimum perform a Chiropractic oriented postural, neurological, orthopedic and spinal examination including a Kinesiological Muscle Responses Test and utilize appropriate non-invasive instruments that access venous and arterial flow. Diagnosis is often made based on the appearance of leg veins when you are standing or sitting with your legs dangling. Likewise blood pressure should be evaluated with the patient lying supine/or sitting and then standing.

A duplex ultrasound of your leg may be ordered to:

- Check blood flow in the veins
- Rule out other problems with the legs, such as a blood clot

Treatment Considerations

Your doctor may suggest that you take the following self-care steps to help manage venous insufficiency:

- Wear compression stockings to decrease swelling
- Do not sit or stand for long periods; even moving your legs slightly helps keep the blood flowing
- Care for wounds if you have any open sores or infections
- Lose weight if you are overweight

If your condition is severe, your doctor may recommend the following treatments:

- Sclerotherapy: salt water (saline) or a chemical solution is injected into the vein; the vein hardens and then disappears
- Ablation: heat is used to close off and destroy the vein; the vein disappears over time
- Vein stripping: small surgical cuts (incisions) are made in the leg near the damaged vein; the vein is removed through one of the incisions
- Bypass: this is surgery to reroute blood flow around the blocked vein; a tube or blood vessel taken from your body is used to make a detour around, or bypass, the damaged vein
- Valve repair: a small incision is made in the leg and the damaged valve is repaired
- Angioplasty and stenting: this is a procedure to open a narrowed or blocked vein. Angioplasty uses a tiny medical balloon to widen the blocked vein. The balloon presses against the inside wall of the vein to open it and improve blood flow. A tiny metal mesh tube called a stent is then placed inside the vein to prevent it from narrowing again.
- Surgery (varicose vein stripping) or other treatments for varicose veins may be recommended if you have:
 - Leg pain, which may make your legs feel heavy or tired
 - Skin sores caused by poor blood flow in the veins
 - Thickening and hardening of the skin on the legs and ankles (lipodermatosclerosis)

Interventional Chiropractic Care

Interventional Chiropractic care focused on manipulations of spinal curvatures, subluxations, muscle issues that are found to be contributing to the restrictive flow of venous or arterial blood circulation. All circulation is influenced by the spinal cord which is spine not only house in and protects the spinal cord but in effects acts like a switchboard of the nervous system therefore created to influence every tissue, cell and function of the body including circulation therefore pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFH AKMRT) program is of potential recovery,.

Prognosis

Chronic venous insufficiency tends to get worse over time. By taking self-care steps, you may be able to ease discomfort and slow the condition from getting worse. It is likely that you will need medical procedures to treat the condition.

See your health care provider if:

- You have varicose veins and they are painful
- Your condition gets worse or does not improve with self-care, such as wearing compression stockings or avoiding standing for too long
- You have a sudden increase in leg pain or swelling, fever, redness of the leg, or leg sores.

References

- Freischlag, J. A., & Heller, J. A. Venous disease. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, eds. *Sabiston Textbook of Surgery*. 19th ed. Philadelphia, Pa.: Elsevier Saunders; 2012: chap 65.
- Word, R. Medical and surgical therapy for advanced chronic venous insufficiency. *Surg Clin N Am*. 2010;90:1195–1214.

Dietary Considerations

- Low Glycemic, Mediterranean-Type Diet

Nutritional Formula Description & Supplémentation Rationale

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to

discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Orally, **Terminalia arjuna** is used for cardiovascular conditions, including ischemic heart disease and angina, hypertension, and hyperlipidemia. It is also used orally for circulatory conditions, as a diuretic, for earaches, dysentery, venereal and urogenital diseases, and as an aphrodisiac.

Orally, **Rutin** is used as a vascular protectant, reducing capillary permeability and fragility, varicose veins, internal bleeding, hemorrhoids, inflammatory bowel disease (IBD), to prevent strokes, and for prophylaxis of mucositis associated with cancer treatments. In combination with trypsin and bromelain, rutin is used orally for osteoarthritis.

EPA-DHA designed to provides concentrated omega-3 fatty acids, an important missing component of many foundation nutrition formulas that contributes to overall health and supports the body's ability to address inflammation.

Kinase response modulators (SKRMs) in the form of tetrahydro-iso-alpha acids (THIAA) to modulate kinase activity in favor of a balanced inflammatory response and good health.

Glucosamine Sulfate are building blocks for healthy cartilage. and help rebuild and maintain the integrity of the cartilage matrix, which is crucial for healthy joint function.

Vitamin D3 Vitamin D deficiency is a highly prevalent condition and is independently associated with most CVD risk factors such as venous insufficiency and to CVD morbidity and mortality.

Al Mheid, I., Patel, R. S., Tangpricha, V., & Quyyumi, A. A. Vitamin D and cardiovascular disease. *Eur Heart J.* 2013;34(48):3691-3698.

Argin

Argin is formulated to provide specialized nutritional support for patients with peripheral artery disease. It provides high quality L-arginine, magnesium, folate, and beet powder to increase nitric oxide production to support circulation and heart muscle function. Reported to provides beet root to help maintain healthy blood pressure. Designed to delivers two forms of folate to better ensure improved folate nutrition—even in those with genetic variations in folate metabolism.

Dietary nitrate in the form of daily beetroot* juice significantly reduced elevated blood pressure compared with placebo in hypertensive patients over 4 weeks in a randomized phase 2 trial. (*Beet powder is a significant part of the Argin).

As the authors explain, ingestion of dietary (inorganic) nitrate elevates circulating and tissue levels of nitrite via bioconversion in the enter salivary circulation. In addition, nitrite is a potent vasodilator in humans, an effect thought to underlie the study's observed BP-lowering effects of dietary nitrate. Supplementation of dietary nitrate as used in this study led to about a 5.5-fold increase in plasma nitrate concentrations, as the authors observe, while plasma nitrite concentrations were elevated by approximately 2.7-fold from baseline.

“Irrespective of the method of measurement, the magnitude of BP reduction is of clinical significance because it resembles the average BP reduction achieved with a single antihypertensive medication at standard dose (9.1/5.5 mm Hg),” the authors state. “[And] these appropriately powered data are the first to demonstrate sustained BP-lowering with dietary nitrate in patients with hypertension that require BP control. “Noteworthy as well, investigators observed about a 20% improvement in endothelial function (P<0.001) after 4 weeks in the nitrate group compared with the placebo group, which showed no change in endothelial function. They also observed a decrease in arterial stiffness by 0.59 m/s (P<0.01) following dietary-nitrate consumption compared with baseline and a similar reduction of 0.58 m/s compared with placebo (P<0.05).

Kapil, V., Kamata, R. S., & Robertson, A., et al. Dietary nitrate provides sustained blood pressure lowering in hypertensive patients: A randomized, phase 2, double-blind, placebo-controlled study. *Hypertension* 2014; DOI: 10.1161/HYPERTENSIONAHA.114.04675.

Clostridium difficile (C. difficile) Infection / Clostridium difficile (C. difficile) Colitis / Chronic Water Spools / Diarrhea

Clostridium difficile Infection (CDI) is considered to be the main cause of bacterial infectious diarrhea in nosocomial settings. Clostridium difficile is a gram-positive, anaerobic, spore-forming bacillus that is responsible for the development of antibiotic associated diarrhea and colitis. C. difficile was first described in 1935 as a component of the fecal flora of healthy newborns and was initially not thought to be a pathogen.

It was named difficile because it grows slowly and is difficult to culture. While early investigators noted that the bacterium produced a potent toxin, the role of C. difficile in antibiotic-associated diarrhea and pseudomembranous colitis was not elucidated until the 1970s.

Since the beginning of the new century a continuous rise in the incidence of severe CDI has been observed worldwide. Even though some CDI cases are not associated with previous antibiotic exposure, this remains as the principal risk factor for the development of CDI. The rate of recurrences represents perhaps one of the most challenging aspect on the management of CDI. C. difficile can colonize the gut if the normal intestinal microbiota is altered or absent. CDI is considered to be the main cause of bacterial infectious diarrhea in nosocomial settings. C. difficile is implicated as the causative organism in 10–25% of patients who develop antibiotic-associated diarrhea (AAD), 50–75% of those with antibiotic-associated colitis and 90–100% of those with antibiotic associated Pseudomembranous colitis (PMC). C. difficile infection commonly manifests as mild-to-moderate diarrhea, occasionally with abdominal cramping. Pseudo membranes, adherent yellowish-white plaques on the intestinal mucosa, are occasionally observed. In rare cases, patients with C. difficile infection can present with an acute abdomen and fulminant life-threatening colitis. Approximately 20% of individuals who are hospitalized acquire C. difficile during hospitalization, and more than 30% of these patients develop diarrhea. Thus, C. difficile colitis is currently one of the most common nosocomial infections.

Diagnosis

The diagnosis of C. difficile colitis should be suspected in any patient with diarrhea who has received antibiotics within the previous 2 months and/or when diarrhea occurs 72 hours or more after hospitalization. Treatment with proton-pump inhibitors (PPIs), H2 antagonists, and methotrexate and the presence of gastrointestinal (GI) diseases, such as inflammatory bowel disease, can be additional risk factors for the development of CDI.

Elderly hospitalized patients receiving antibiotics remain the main group at risk of infection, and have the greatest associated mortality. However, recent evidence shows an increased incidence of CDI in younger populations with no previous contact either with the hospital or with antibiotics. Furthermore, the incidence of CDI in other groups previously considered at low risk, such as children and pregnant women, has increased. *JAMA Intern Med.* 2013;173:1359-1367, 1367-1368

Mortality / Morbidity

While most patients with C. difficile colitis recover without specific therapy, symptoms may be prolonged and debilitating. C. difficile-associated diarrhea can be a serious condition with a mortality rate as high as 25% in elderly patients who are frail. Reports that focus on patients who are more seriously ill indicate mortality rates of 10-30%. Mortality rates have also risen over the past decade and reflect an increase in admissions and the virulence for C. difficile.

The CDC reported that enteritis deaths more than doubled in the United States, increasing to 17,000 in 2007 from about 7,000 in 1999. *C. difficile* was associated with 14,500 of these deaths, up from 2,700 in 1999.

Clostridium difficile colitis results from a disturbance of the normal bacterial flora of the colon, colonization by *C. difficile*, and the release of toxins that cause mucosal inflammation and damage. Antibiotic therapy is the key factor that alters the colonic flora. *C. difficile* infection primarily occurs in hospitalized patients.

Signs & Symptoms

Symptoms of *C. difficile* colitis often include the following:

- Mild to moderate watery diarrhea that is rarely bloody
- Cramping abdominal pain
- Anorexia
- Malaise

Physical examination may reveal the following in patients with the disorder:

- Fever: Especially in more severe cases
- Dehydration
- Lower abdominal tenderness
- Rebound tenderness:

Diagnosis

Lab tests for evaluating patients with *C. difficile* infection include the following:

- Electrolytes: Dehydration and electrolyte imbalance may accompany severe disease
- Albumin: Hypoalbuminemia and anasarca may accompany severe disease
- Complete blood count: Leukocytosis may be present
- Stool examination: Stool may be Hemocult positive in severe colitis, but grossly bloody stools are unusual; fecal leukocytes are present in about half of cases
- Stool assays for *C. difficile*, from the most to the least sensitive, include the following:
- Stool culture: The most sensitive test (sensitivity, 90-100%; specificity, 84-100%), but the results are slow and may lead to a delay in the diagnosis if used alone
- Glutamate dehydrogenase enzyme immunoassay (EIA): Very sensitive (sensitivity, 85-100%; specificity, 87-98%); this test detects the presence of glutamate dehydrogenase produced by *C. difficile*
- Real-time polymerase chain reaction (PCR) assay: May be used to detect *C. difficile* gene toxin
- The stool cytotoxin test: Has a sensitivity of 70-100% and a specificity of 90-100%; a positive test result is the demonstration of a cytopathic effect that is neutralized by a specific antiserum
- Enzyme immunoassay for detecting toxins A and B: Used in most labs; the sensitivity is moderate (79-80%) and the specificity is excellent (98%)
- Latex agglutination technique: Another means of detecting glutamate dehydrogenase; the sensitivity of this test is poor (48-59%), although the specificity is 95-96%

Endoscopy

Endoscopy is less sensitive for diagnosing *C. difficile* than are stool assays. Endoscopy may demonstrate the presence of raised, yellowish-white, 2 to 10mm plaques overlying an erythematous and edematous mucosa. These plaques are termed pseudomembranous.

Endoscopic examination findings may be normal in patients with mild disease or may demonstrate nonspecific colitis in moderate cases.

Management

Treatment for *C. difficile* infection varies according to its severity. Interventions include the following:

- **Asymptomatic carriers:** No treatment necessary but most certainly a well-balanced proactive diet and nutritional support program Probiotics is essential and hopefully you've had your blood tested for food allergy's through the IgG and IgG4 Tests, Blood Profile/CBC and Stool Analysis.
- Mild, antibiotic-associated diarrhea without fever, abdominal pain, or leukocytosis: Cessation may be the only treatment necessary
- **Mild to moderate** diarrhea or colitis: Antibiotic therapy, metronidazole (oral or intravenous) or vancomycin (oral) for 10 days
- **Severe disease:** Treatment with vancomycin is considered superior to therapy with metronidazole because of faster symptom resolution and fewer treatment failures with vancomycin; in fulminant cases, combined therapy with intravenous metronidazole and oral vancomycin may be considered **NOTE:** "Fecal Transfer Proves Potent *Clostridium difficile* Treatment." The first clinical trial of the infusion of donor feces for the treatment of recurrent *Clostridium difficile* came to an early halt when feces transfer proved three times more effective than antibiotics in curing the infection, according to an article published in the January 16, 2013 issue of the New England Journal of Medicine.

Relapse

Relapse occurs in 20-27% of patients treated with metronidazole or vancomycin. Once a patient has one relapse, the risk for a second relapse is 45%. Relapses should be treated as follows:

- First relapse: The choice of antibiotic should be based on the severity of *C. difficile* diarrhea/colitis
- Subsequent relapses: For every relapse beyond the first, vancomycin (prolonged taper/pulsed regimen) is recommended to help clear persistent spores. Among various investigational therapies, fecal transplantation (fecal enemas) has been reported to repopulate the colonic flora and treat recurrent *C. difficile* infection. In the first controlled, randomized trial of this technique, investigators in the Netherlands found feces transfer to be three times more effective than antibiotics in curing recurrent *C. difficile* infection.

Possible Nutritional Strategies

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Probiotics in the Management of *Clostridium difficile* (*C. difficile*) Infection

There seems to be sufficient scientific evidence from a nutritional support perspective for the use of probiotics in the management of *Clostridium difficile* (*C. difficile*) Infection / *Clostridium difficile* (*C. difficile*) Colitis / Chronic Loose Stools / Diarrhea, especially in conjunction with the antibiotic therapy normally prescribed medically. Probiotics shorten diarrheal episodes, according to the results of a systematic review reported online in the Cochrane **Database of Systematic Reviews**. "A striking finding of this review is that most trials reported that probiotics reduced diarrhea," said lead author Stephen J. Allen, from the School of Medicine at Swansea University, Swansea. "The beneficial effect was consistent and significant across many different types of trials...Used alongside rehydration therapy, probiotics appear to be safe and have clear beneficial effects in shortening the duration and reducing stool frequency in acute infectious diarrhea."

Cochrane Database Syst Rev. Published online November 10, 2010

Probiotics

1. Probiotics are generally considered safe and effective for preventing *Clostridium difficile*-associated diarrhea (CDAD) in children and adults taking antibiotics, according to a systematic review published online May 31, 2013 in the Cochrane Database of Systematic Reviews but there is a difference between GMP Certified probiotics and those that are not GMP Certified – Food Grade not Food Quality. What’s the difference?
2. Just because a label says the product is a probiotic and contains large numbers of doesn’t mean that they are in the product nor that they are bioactive thus a person can be taking a probiotic that has little to no bio logical value.
3. *Clostridium difficile* colitis (CDC) has been shown to be prevented by probiotic co-treatment in a number of studies. In the largest study to date, *S. boulardii*—at a dose of 2×10^{10} per day—in combination with vancomycin and metronidazole was associated with a significant decrease in risk of CDC recurrence (McFarland et al., 1994) and showed efficacy in preventing CDC (Hickson et al., 2007). GMP Certified probiotics cut antibiotic-associated *C. difficile* diarrhea by 66%. A meta-analysis of 20 trials covering 3800 participants found probiotics were associated with a 66% reduction in the incidence of *Clostridium difficile*-associated diarrhea (CDAD), according to a study published online November 13, 2012 in *Annals of Internal Medicine*.
4. Probiotics are designed to improve antibiotic therapy as they reduce microbial adhesion and growth by bacteriocins or other inhibitory compounds, possess immunomodulatory properties and improve intestinal barrier integrity. In patients treated with antibiotics, probiotics promote the recovery of commensal microbiota and increase treatment tolerability. *Expert Rev Anti Infect Ther.* 2012;10(4):407-409

Nutritional Supplementation Options for *Clostridium difficile* (C. difficile). Infection / *Clostridium difficile* (C. difficile) Colitis / Chronic Loose Stools/Diarrhea

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Acute Phase (therapeutic application minimum of 30-days) – the following are GMP certified **Probiotics with** the intention of hopefully targeted relief of *S. boulardii* (see information under Deigned to:

- Support a healthy intestinal environment and immune response.
- Provide targeted support for healthy intestinal function.
- Designed for reliable outcomes and acute care with a consent-rated dose of *S. boulardii*.
- McFarland, L. V., Surawicz, C. M., & Greenberg, R. N., et al. Prevention of beta-lactam associated diarrhea by *Saccharomyces boulardii* compared with placebo. *Am J Gastroenterol* 1995;90:439-48.
- Surawicz, C. M., Elmer, G. W., & Speelman, P., et al. Prevention of antibiotic-associated diarrhea by *Saccharomyces boulardii*: A prospective study. *Gastroenterology* 1989;96:981-8.
- McFarland, L. V. Meta-analysis of probiotics for the prevention of antibiotic-associated diarrhea and the treatment of *Clostridium difficile* disease. *Am J Gastroenterol* 2006;101:812-22.
- Can, M., Besirbellioglu, B. A., & Avci, I. Y., et al. Prophylactic *Saccharomyces boulardii* in the prevention of antibiotic-associated diarrhea: A prospective study. *Med Sci Monit* 2006;12:PI19-22.

References

- Laid Laidman, J. *Fecal transfer proves potent clostridium difficile treatment.* Medscape Medical News [serial online]. Jan 16 2013; Accessed January 23, 2013. Available at <http://www.medscape.com/viewarticle/777772>
- van Nood, E., Vrieze, A., Nieuwdorp, M., Fuentes, S., Zoetendal, E. G., & de Vos, W. M., et al. *Duodenal infusion of donor feces for recurrent Clostridium difficile.* N Engl J Med. Jan 16 2013; [Medline].
- CDC. "Vital Signs: Preventing Clostridium difficile Infections." MMWR Morb Mortal Wkly Rep. Mar 9 2012;61:157-62. [Medline].
- Bauer, M. P., Notermans, D. W., & van Benthem, B. H., et al. *Clostridium difficile infection in Europe: A hospital based survey.* Lancet. Jan 1 2011;377(9759):63-73. [Medline].
- Centers for Disease Control and Prevention (CDC). "Deaths from gastroenteritis double." Available at http://www.cdc.gov/media/releases/2012/p0314_gastroenteritis.html
- Nylund CM, Goudie A, Garza JM, Fairbrother G, Cohen MB. *Clostridium difficile infection in hospitalized children in the United States.* Arch Pediatr Adolesc Med. May 2011;165(5):451-7. [Medline].
- "FDA Drug Safety Communication: Clostridium difficile-associated diarrhea can be associated with stomach acid drugs known as proton pump inhibitors (PPIs)." US Food and Drug Administration. Accessed February 8, 2012. Available at <http://www.fda.gov/Drugs/DrugSafety/ucm290510.htm>
- Guerrero, D. M., Chou, C., & Jury, L. A., et al. *Clinical and infection control implications of Clostridium difficile infection with negative enzyme immunoassay for toxin.* Clin Infect Dis. Aug 1 2011;53(3):287-90. [Medline].
- Cornely, O. A., Crook, D. W., Esposito, R., Poirier, A., Somero, M. S., & Weiss, K., et al. *Fidaxomicin versus vancomycin for infection with Clostridium difficile in Europe, Canada, and the USA: A double-blind, non-inferiority, randomized controlled trial.* Lancet Infect Dis. Apr 2012;12(4):281-9. [Medline].
- Louie, T. J., Miller, M. A., & Mullane, K. M., et al. *Fidaxomicin versus vancomycin for Clostridium difficile infection.* N Engl J Med. Feb 3 2011;364(5):422-31. [Medline].
- Brandt, L. J., Aroniadis, O. C., Mellow, M., Kanatzar, A., Kelly, C., & Park, T., et al. *Long-term follow-up of colonoscopy fecal microbiota transplant for recurrent Clostridium difficile infection.* Am J Gastroenterol. Mar 27 2012. [Medline].
- Sailhamer, E. A., Carson, K., & Chang, Y., et al. *Fulminant Clostridium difficile colitis: Patterns of care and predictors of mortality.* Arch Surg. May 2009;144(5):433-9; discussion 439-40. [Medline].
- Miller, A. T., Tabrizian, P., & Greenstein, A. J., et al. *Long-term follow-up of patients with fulminant Clostridium difficile colitis.* J Gastrointest Surg. May 2009;13(5):956-9. [Medline].
- Bartlett, J. G. *Pseudomembranous enterocolitis and antibiotic-associated colitis.* In: Feldman M, Scharschmidt, B. F., Sleisenger, M. H. (Eds.) *Sleisenger and Fordtran's Gastrointestinal and Liver Disease (6th ed.).* Philadelphia: WB Saunders Co;1998:1633-1647.
- Cleary, R. K. *Clostridium difficile-associated diarrhea and colitis: Clinical manifestations, diagnosis, and treatment.* Dis Colon Rectum. Nov 1998;41(11):1435-49. [Medline].
- Fekety, R. *Guidelines for the diagnosis and management of Clostridium difficile-associated diarrhea and colitis.* American College of Gastroenterology, Practice Parameters Committee. Am J Gastroenterol. May 1997;92(5):739-50. [Medline].
- Gilbert, D. N., Moellering, R. C., & Sande, M. A. *The Sanford Guide to Antimicrobial Therapy (13th ed.).* Hyde Park, Vt: Antimicrobial Therapy;2000:12.

- Johnson, S., & Gerding, D. N. *Clostridium difficile*-associated diarrhea. *Clin Infect Dis. May 1998;26(5):1027-34; quiz 1035-6. [Medline].*
- Jones, E. M., Kirkpatrick, B. L., & Feeney, R. *Hospital-acquired Clostridium difficile diarrhea. Lancet. Apr 19 1997;349(9059):1176-7. [Medline].*
- Kelly, C. P., & LaMont, J. T. *Clostridium difficile* infection. *Annu Rev Med. 1998;49:375-90. [Medline].*
- Kelly, C. P., & LaMont, J. T. *Clostridium difficile*-more difficult than ever. *N Engl J Med. Oct 30 2008;359(18):1932-40. [Medline].*
- Kelly, C.P., Pothoulakis, C., & LaMont, J. T. *Clostridium difficile* colitis. *N Engl J Med. Jan 27 1994;330(4):257-62. [Medline].*
- Lyerly, D. M., & Wilkins, T. D. *Clostridium difficile. Infections of the Gastrointestinal Tract. 1995;867-891.*
- McDonald, C. L., Gerding, D. N., & Johnson, S. "Clostridium difficile: Changing diagnosis, epidemiology, and treatment." *The content of this virtual lecture is derived from a satellite symposium presented on April 7, 2008, during the 18th Annual SHEA Scientific Meeting. Available at <http://www.rmei.com/CDI010/>*
- McFarland, L. V., Mulligan, M. E., & Kwok, R. Y. *Nosocomial acquisition of Clostridium difficile* infection. *N Engl J Med. Jan 26 1989;320(4):204-10. [Medline].*
- Schneeweiss, S., Korzenik, J., & Solomon, D. H., et al. *Infliximab and other immunomodulating drugs in patients with inflammatory bowel disease and the risk of serious bacterial infections. Aliment Pharmacol Ther. Aug 2009;30(3):253-64. [Medline].*
- Sonnenberg, A. *Similar geographic variations of mortality and hospitalization associated with IBD and Clostridium difficile colitis. Inflamm Bowel Dis. Jul 27 2009; epub ahead of print. [Medline].*
- Starr, J. *Clostridium difficile* associated diarrhea: Diagnosis and treatment. *BMJ. Sep 3 2005;331(7515):498-501. [Medline]. Clostridium difficile Infection / Clostridium difficile Colitis / Chronic*

Coffee Enema

Coffee enemas were listed in folk literature for years as a method of helping the body rid itself of toxins and accumulated waste products. They were found in the Merck Manual until 1977, when they were removed for lack of space. After pharmaceuticals became the main focus of medicine in the 1920s, coffee enemas were seldom used. In the past 10 to 15 years, however, their usefulness has again been recognized. Dr. Sherry Rogers discusses them in detail in her book, *Wellness Against All Odds*.

A coffee enema is a low-volume enema that stays in the sigmoid colon, the last S-shaped section of the large intestine. A special circulatory system exists between the sigmoid colon and the liver called the enterohepatic circulation system. When the stool reaches the sigmoid colon, it is full of decomposed material and toxins. These toxins are sent directly to the liver for detoxification rather than being circulated throughout the body. Given rectally, it helps detoxify the liver and emulsifies fat.

While coffee enemas promote cleansing of the intestines as well as the liver and gallbladder, they are used primarily to clean the liver and gallbladder.

Toxicity Related To Chemotherapy

While the idea of coffee enemas is strange to some people, and even repugnant to others, they can be extremely helpful. One important use for these enemas is to combat the toxicity produced by chemotherapy. Used on a regular basis, they will help people with high toxic burdens to detoxify.

In addition, they can be used on an acute basis to clear allergic reactions, particularly those triggered by chemical exposures.

The caffeine in the coffee is the active ingredient in a coffee enema.

Consider NOT Using DECAFFEINATED COFFEE.

A Coffee Enema: Proponents believe the following and we can say that our clinical experiences with patients who went on coffee enema proved the following:

- Increased the peristaltic action of the intestines and speeds up emptying of the bowel
- Make the toxins accumulated in the bile ducts empty, allowing other toxins in the body to filter into the liver for detoxification
- Increased the emptying speed of the liver ducts holding detoxified materials, speeding up the detoxification process
- Encouraged the removal of gallstones in the bile
- Stimulates the production of the enzyme glutathione-S-transferase, which makes the liver detoxification pathways function
- Broke down accumulated fat in the liver cells
- Cleared chemical overloads and chemical reactions
- Helped the body cope with chemotherapy and side effects caused by toxic overload from cell destruction
- Minerals and electrolytes are not washed out by coffee enemas, the important nutrients have already been absorbed higher in the bowel, long before the food residue reaches the sigmoid colon.

The Coffee Retention Enema

When used as a retention enema—an enema that is held in the body for a specified period of time—coffee does not go through the digestive system and does not affect the body as a coffee beverage does. Instead, the coffee solution stimulates both the liver and the gallbladder to release toxins, which are then flushed from the body. A coffee retention enema is quite helpful during a serious illness, after hospitalization, and after exposure to toxic chemicals. This enema can also be used during fasts to relieve the headaches caused by a fast-induced release of toxins.

Procedure

To make the coffee enema solution, place 2 quarts of steam-distilled water in a pan and add 6 heaping tablespoons of organic ground coffee (do not use instant or decaffeinated). Boil the mixture for fifteen minutes, cool to a comfortable temperature, and strain. Use only 1 pint of the strained coffee at a time and refrigerate the remainder in a closed jar. Place 1 pint of the enema solution into an enema bag. Do not use petroleum jelly to lubricate the tip of the enema tube. Instead, use vitamin E oil (buy it in oil form or pierce the end of a vitamin E capsule and squeeze the liquid onto the tip). The liquid will both ease insertion and have a healing effect on the anus and the lining of the colon if these areas are inflamed. Aloe Vera may also be used for this purpose.

Seek Someones Assistance

The best position to assume when receiving the enema is “head down and rear up.” After the liquid has been inserted, roll onto your right side and hold the solution in your body for fifteen minutes before allowing the fluid to be expelled. Do not roll from side to side. Do not be concerned if the liquid is not expelled after fifteen minutes. Simply stand up and move around as usual until you feel the urge to expel the liquid.

Considerations

To maximize the benefits of this, or any other retention enema, use a cleansing enema first. Do not abuse coffee enemas by using them too often. You may use coffee enemas occasionally as needed. Use them only once daily while following a program for a specific disorder, unless you are being treated for cancer. People with cancer may need up to three enemas a day.

The Common Cold

Common Cold Nutritional Immune Support Strategies for Acute Care

Common colds are minor infections of the nose and throat that can be caused by more than 100 different viruses, including the human rhinovirus (HRV). In the course of a year, Americans suffer an estimated 1 billion colds.

Adults get an average of 2 to 4 colds per year, mainly in the Fall, Winter, and early Spring (September through May). In the United States, colds account for more office visits to a healthcare provider than any other condition, and the economic impact of non-influenza-related viral respiratory tract infections is projected to be nearly \$40 billion annually. Cold-related symptoms begin 2-3 days after infection and can last from a few days to several weeks. Colds often last longer in children, elderly adults, and those with poor health.

For relief consider:

- Getting plenty of rest
- Drinking fluids
- Gargling with warm salt water
- Using cough drops or throat sprays

NOTE: Honey was more effective than a placebo in controlling nighttime cough in children with upper respiratory infections (URI), according to results published online August 6, 2012 in *Pediatrics*.

- Nutritional immune support. There is no cure for the common cold. Existing products often target reduction of discomforting, cold-related symptoms, which are known to be the result of the inflammatory response by the host towards the infection. Therefore, cold remedies with the right type of immune regulatory activity may effectively relieve symptoms associated with the inflammation that results from viral infections.

Interventional Chiropractic Care in that manipulation of the spine creates the probability of enhancing the person's immunity therefore it should be pursued and better yet seeing a Doctor of Chiropractic regularly for wellness care is a good thing.

Summary

In 2 large-scale, randomized, placebo-controlled studies, daily administration of a combination of *Lactobacillus plantarum* HEAL9 and *Lactobacillus paracasei* 8700:2 during a 12-week period resulted in reduced incidence and delayed onset of cold episodes. Significant reductions in the intensity of total cold symptoms and key individual symptoms were observed. Furthermore, subjects receiving the probiotic combination experienced a faster recovery period—approximately 15% compared to placebo in both healthy patients and those more susceptible to upper respiratory infections. This probiotic combination may provide a useful therapeutic application in clinical practice for reducing the severity, duration, and frequency of cold-like illnesses.

References

- *Busch, R., Gruenwald, J., & Dudek, S. Randomized, double blind and placebo controlled study using a combination of two probiotic lactobacilli to alleviate symptoms and frequency of common cold. FNS. 2013;4(11A):13-20.*

•• Berggren, A., Lazou Ahrén, I., Larsson, N., & Önning, G. Randomised, double-blind and placebo-controlled study using new probiotic lactobacilli for strengthening the body immune defense against viral

References

•• Wang, S. F. et al. Clinical study on the curative effect of Xin Qin Ke Li on allergic rhinitis in children. *Clin Otorhino J.* 2000;14:197-203.

•• Clinical Study on the Curative Effect of Xin Qin Ki Li on Chronic Nasosinusitis. *Hua Xi Medical Journal.* 14: 93 (1999).

Andrographis Plus®

Andrographis Plus combines a proprietary blend of Ayurvedic and Asian herbs designed to promote healthy immune function. Andrographis leaf and amla fruit extracts combine with the traditional Chinese Mulberry & Apricot Kernel Decoction to deliver a proprietary blend of herbs traditionally used for lung congestion and immune function.

References

•• Suresh, K., et al. Emblica. *J Ethnopharmacol.* 1994;44:55-60.

•• Morton, J. F. The embolic (*Phyllanthus emblica* L.). *Econ Botany.* 1960;14:119-28.

Biocidin® TS - Advanced Formula Throat Spray

Sore throats are a common complaint during the winter season, and for those exposed to allergens or who speak or sing professionally.

Biocidin TS brings all the effectiveness of Biocidin directly to the throat for soothing relief. The nasal/pharynx region is said to be one focus of infection for upper respiratory disorders, and addressing this area directly is an important part of an immune support strategy. Biocidin TS' broad spectrum of activity protects against gram positive and gram negative bacteria, yeast, fungus, parasites, and viruses.

Biocidin® TS — Summary of Benefits: Immediate relief of sore throat pain; laboratory tested for effectiveness; indispensable during cold and flu season; soothes irritation due to allergies.

Probioplex® Intensive Care

Probioplex Intensive Care is an innovative probiotic support formula featuring concentrated whey protein combined with fructooligosaccharides (FOS) and the advanced prebiotic factors lactoferrin and lactoperoxidase.

UltraFlora™ Acute Care

UltraFlora Acute Care features concentrated probiotic factors that are ideal for patients to support a healthy balance of intestinal microflora and healthy intestinal function.

Common Warts

Common warts are skin growths caused by a virus called the human papillomavirus (HPV). This virus causes a rapid growth of cells on the outer layer of your skin. Common warts are different from moles, and they aren't cancerous. In fact, they're usually harmless and often disappear on their own. But you may find common warts bothersome or embarrassing, and you may want treatment to remove them. Common warts usually grow on your hands or fingers.

Treatment helps prevent common warts from spreading to other parts of your body or to other people. But common warts may recur after treatment, and they may be a persistent problem. Common warts usually occur on your hands. They may occur singly or in multiples. Warts may bleed if picked or cut and often contain one or more tiny black dots, which are sometimes called wart "seeds" but are actually small, clotted blood vessels.

Other Locations for Warts

Other types of HPV tend to cause warts in other places:

- **Plantar warts.** These occur on the plantar surfaces, or soles, of your feet. They usually look like flesh-colored or light brown lumps with tiny black dots in them. These dots are small, clotted blood vessels.
- **Genital warts.** A sexually transmitted infection, genital warts can appear on your genitals, in your pubic area, or in your anal canal. In women, genital warts can also grow inside the vagina.
- **Flat warts.** These smaller warts generally occur on your face or legs. They're usually smoother than other types of warts.

Causes

Warts are caused by a virus known as the human papillomavirus (HPV). There are 100 or more types of HPV. Some types of HPV cause relatively harmless conditions, such as common warts, while others may cause serious disease, such as cancer of the cervix. And, different types of HPV cause different types of warts.

How Warts Spread

Like other infectious diseases, wart viruses pass from person to person. You can also get the wart virus indirectly by touching a towel or object used by someone who has the virus. It can take a wart as long as two to six months to develop after exposure to the virus.

Each person's immune system responds to the HPV virus differently, meaning not everyone who comes in contact with HPV develops warts. If you have warts, you can spread the virus to other places on your own body. Warts usually spread through breaks in your skin, such as a hangnail or scrape. Biting your nails can also cause warts to spread on your fingertips and around your nails.

Prevention

To reduce the risk that you or your child will get or spread warts:

- Don't brush, clip, comb, or shave areas that have warts in order to avoid spreading the virus.
- Don't use the same file or nail clipper on your warts as you use on your healthy nails.
- Don't bite your fingernails if you have warts near your fingernails.
- Don't pick at warts; picking may spread the virus. Consider covering warts with an adhesive bandage to discourage picking.
- Keep your hands as dry as possible, because warts are more difficult to control in a moist environment.
- Wash your hands carefully after touching your warts.
- Use footwear in public showers or locker rooms.

Lifestyle, Alternative Health Care and Home Remedies Unless you have an impaired immune system or diabetes, try a self-care approach to treating common warts.

Alternative.

Why is it that of all of the "so-called wart cures," no one method is effective in all cases?

The answer to this "therapeutic riddle," according to Dr. Daniel Hyman of New York City's Roosevelt Hospital, lies in the viral origin of warts. They disappear when the immunologic mechanism is stimulated, which is why since the 1950s there have been articles published in the Southern Medical Journal and Clinical Medicine that utilize water dispersible vitamin A (a known immune support agent) both topically and internally to treat warts. (Some researchers believe that a wart develops where there is a lack of vitamin A in the skin and that introducing the vitamin A will bring the skin back to normal.)

Although you may run across alternative treatments that promise to cure your warts, the following treatments have shown promise in clinical feedback and clinical trials:

Nutritional Supplementation Considerations for Common Warts

There are many but we have a policy of not making any specific product.

Why do we have that policy? Because we do not want to make a diagnosis or propose any treatments to non-patients. Doing so might be considered being in violation of Federal or State Licensing Statutes, Rules and Regulations that govern our license to practice health care.

Food-grade Hydrogen Peroxide (34% H₂O₂)

To quote Jonathan V. Wright, MD, “Food-grade hydrogen peroxide must be handled with great caution, but is very effective for at-home removal of ordinary warts. Dip cotton swab in the peroxide and press it against the wart until the wart and a tiny margin of skin around the wart “blanch” (turn white). Repeat this procedure twice daily. After a few days to three weeks, depending on the size and location of the wart, it will start to blacken. Continue to apply the peroxide until the wart falls off.” (Food-grade peroxide can be obtained through many natural food stores and pharmacies.)

Salicylic Acid

Wart medications and patches are available at drugstores. You can use them to treat warts at home. For common warts, look for a solution or patch containing 17% salicylic acid (Compound W®, Occlusal®-HP), which peels off the infected skin. These products require daily use, often for a few weeks. For best results:

Consider soaking your wart in warm water for 10 to 20 minutes before applying a solution or patch, and file away any dead skin with a nail file or pumice stone between treatments. Just be careful. The acid in these products can irritate or damage healthy skin around the wart. Stronger salicylic acid preparations are available with a prescription. Irritation is a common side effect of this treatment, and usually means that the treatment is working.

How about Duct Tape?

An initial study found that duct tape wiped out more warts than cryotherapy did. The “duct tape therapy” used in this study included covering warts with duct tape for six days, then soaking the warts in warm water and rubbing them with an emery board or pumice stone. The process was repeated for as long as two months. Researchers hypothesized that this unconventional therapy worked by irritating the wart and triggering the body’s immune system to attack. The low cost and convenience of this treatment may make it worth trying, especially in children who find cryotherapy to be painful and frightening.

References

- Warts. *American Academy of Dermatology*.
http://www.aad.org/public/publications/pamphlets/common_warts.html. Accessed Dec. 28, 2009.
- Androphy E. J., et al. Warts. In Wolff, K., et al., *Fitzpatrick’s dermatology in general medicine*. (7th ed.). New York, N.Y.: McGraw-Hill Medical; 2008.
<http://www.accessmedicine.com/content.aspx?aID=2958209>. Accessed Dec. 28, 2009.
- Warts. *The Merck Manuals: The Merck Manual for Healthcare Professionals*.
<http://www.merck.com/mmpe/print/sec10/ch122/ch122c.html>. Accessed Dec. 26, 2009.
- Goldstein B. G., et al. Cutaneous warts. <http://www.uptodate.com/home/index.html>. Accessed Dec. 28, 2009.
- Berger T. G. *Dermatologic disorders*. In: McPhee SJ, et al., *Current Medical Diagnosis and Treatment 2010*. 49th ed. New York, N.Y.: McGraw-Hill Medical; 2010.
<http://www.accessmedicine.com/content.aspx?aID=747>. Accessed Dec. 28, 2009.
- Dehghani F., et al. Healing effect of garlic extract on warts and corns. *International Journal of Dermatology*. 2005;44:612.

- Egawa K., et al. *Topical vitamin D3 derivatives for recalcitrant warts in three immunocompromised patients. British Journal of Dermatology. 2004;150:367.*
- *Archives of Pediatric and Adolescent Medicine, October 2002;156:971-974.*
- *Nutrition & Healing, January 2000.*
- *Alternative medicine: The definitive guide compiled by The Burton Group, Future Medicine Publishing, Inc. Copyright 1994.*

Neuro Muscle Skeletal Compartment Syndrome

Compartment syndrome is a serious condition that involves increased pressure in a muscle compartment. It can lead to muscle and nerve damage and problems with blood flow.

Causes

Thick layers of tissue, called fascia, separate groups of muscles in the spine, arms and legs from each other. Inside each layer of fascia is a confined space, called a compartment. The compartment includes the muscle tissue, nerves, blood vessels and acupuncture meridians.

Fascia surrounds these structures, similar to the way in which insulation covers wires. Fascia do not expand. Any swelling or interruption of the tone or blood and nerve circulation of a compartment will lead to increased pressure in that area, which will press on the bones, muscles, blood vessels, and nerves.

Increased Pressure

If this pressure is high enough, blood flow to the compartment will be blocked. This can lead to permanent injury to the muscle and nerves. If the pressure lasts long enough, the muscles may atrophy, die and the arm or leg will not work anymore. It may need to be amputated.

Swelling that leads to compartment syndrome occurs from trauma such as a car accident or crush injury, or surgery. Swelling can also be caused by complex fractures or soft tissue injuries due to trauma. Long-term (chronic) compartment syndrome can be caused by repetitive activities, such as running. The pressure in a compartment only increases during that activity. Compartment syndrome is most common in the lower leg and forearm, although it can also occur in the hand, foot, thigh, and upper arm.

Symptoms

Compartment syndrome causes severe joint pain that does not go away when you take pain medicine or raise the affected area. In more severe cases, symptoms may include:

- Decreased sensation
- Numbness and tingling
- Paleness of skin
- Severe neck and back pain that gets worse
- Weakness

Examinations and Tests

A physical exam including a chiropractic spine and other muscle skeletal assessments that include a pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFH AKMRT) program can be of potential recovery, because where there is pain very often its can be traced back to the spine and nervous system thus when a person finds the cause it then becomes more likely that they are going to find the cure. This is especially so when one or more of the following become evident when:

- Pain when the area is squeezed
- Extreme pain when you move the affected area (for example, a person with compartment syndrome in the foot or lower leg will have severe pain when moving the toes up and down)

- Swelling and or increased tissue heat or discoloration in involved area.

To confirm the diagnosis, the doctor may need to directly measure the pressure in the compartment. This is done using a needle attached to a pressure meter, which is placed into the body area. The test must be done during and after an activity that causes pain.

Prognosis

When interventional diagnostic and treatment is pursued the outlook is excellent for recovery of the bones, muscles, nerves artery's, veins, lymphatics and acupuncture meridians inside the compartment. However, the overall prognosis will be determined by the injury leading to the syndrome.

Permanent spine, and nerve injury and loss of muscle function can result if the diagnosis is delayed. This is more common when the injured person is unconscious or heavily sedated and cannot complain of pain. Permanent nerve injury can occur after 12-24 hours of compression. Possible complications include permanent injury to nerves and muscles that can dramatically impair function.

Interventional Chiropractic Care involved in Prevention – A Healthy and Aligned Spine and Muscle Skeletal Systems

The spine houses, protects the spinal cord and in effects acts like a switchboard of the nervous system therefore influences every function of the body including Compartment Syndrome. There is probably no way to prevent this condition; however, early diagnosis and treatment will help prevent many of the complications. Persons with casts need to be made aware of the risk of swelling. They should see their health care provider or go to the emergency room if pain under the cast increases despite pain medicines and raising the area.

References

- Twaddle, B. C., & Amendola, A. (2008). "Compartment syndrome." (Chapter 13). In: Browner, B. D., Jupiter, J. B., Levine, A. M., Trafton, P. G., & Krettek, C. (Eds.). *Skeletal Trauma (4th ed.)*. Philadelphia, Pa: Saunders Elsevier.
- Geiderman, J. M., & Katz, D. (2009). "General principles of orthopedic injuries." (Chapter 46). In: Marx, J. (Ed). *Rosen's Emergency Medicine: Concepts and Clinical Practice (7th ed.)*. Philadelphia, Pa: Mosby Elsevier.
- Marshall, S. T., & Browner, B. D. (2012). "Emergency care of musculoskeletal injuries." (Chapter 20). In: Townsend, C. M. Jr, Beauchamp, R. D., Evers, B. M., & Mattox, K. L. (Eds.). *Sabiston Textbook of Surgery (19th ed.)*. Philadelphia, Pa: Saunders Elsevier.

Nutritional Supplementation Considerations for Compartment Syndrome

NOTE: In many cases of Compartment Syndrome there is a need for immediate surgery, and delaying surgery can lead to permanent damage. The nutritional support protocol outlined below is intended for use only in cases where surgery is not considered necessary.

Additional Considerations

- Paraffin bath of affected area
- Ice bag
- Interventional Chiropractic Care and chiropractic supervised Muscle Skeletal therapy's.
- Low level laser therapy for sports injurie. The application of low level laser therapy (LLLT) reduces short-term inflammation. Additionally, laser therapy significantly lowers the risk of arthritis, which frequently arises from sports injuries. Laser therapy is used by professional sports

teams and athletes to treat inflammation, provide deep tissue therapy, and accelerate pain relief to help minimize downtime.

Concussion / Brain Injury / Battered Brains

A concussion involves a traumatic brain injury that alters the way your brain functions. Effects are usually temporary but can include headaches and problems with concentration, memory, balance and coordination. Although concussions usually are caused by a blow to the head, they can also occur when the head, spine and upper body are violently shaken in effect there being a whiplash type injury's this is particularly so in children who have not reached maximum growth and older people.

These injuries can cause a loss of consciousness, but most concussions do not. Because of this, some people have concussions and don't realize it. Concussions are common, particularly if you play a contact sports such as football, soccer, hockey, basketball. But every concussion injures your brain to some extent because as the head goes so does the spine –particularly the cervical spine. This injury needs conservative chiropractic care that that includes pursuing a Touch For Health Applied Kinesiological Muscle Response Testing (TFHAKMRT) program is of potential recovery,.

Most concussive traumatic brain injuries are mild when one looks at the initial symptoms but very often when head and neck pains disappear it doesn't mean that the brain or spinal column has fully recovered therefore the longer internal head and spine injury's go untreated the greater the likelihood of their becoming future health problems.

Symptoms

The signs and symptoms of a concussion can be subtle and may not be immediately apparent. Symptoms can last for days, weeks, or even longer. Common symptoms after a concussive traumatic brain and spinal injury are headache, loss of memory (amnesia), neck and back pain and confusion. The amnesia, which may or may not follow a loss of consciousness, usually involves the loss of memory of the event that caused the concussion.

Signs and symptoms of a concussion may include:

- Neck and back pain, headache or a feeling of pressure in the head
- Temporary loss of consciousness
- Confusion or feeling as if in a fog
- Amnesia surrounding the traumatic event
- Dizziness or “seeing stars”
- Ringing in the ears
- Nausea
- Vomiting
- Slurred speech
- Delayed response to questions
- Appearing dazed
- Fatigue

Some symptoms of concussions may be immediate or delayed in onset by hours or days after injury, such as:

- Concentration and memory complaints
- Irritability and other personality changes
- Sensitivity to light and noise
- Sleep disturbances and neck and back pains

- Psychological adjustment problems and depression
- Disorders of taste and smell

Symptoms in Children

Head trauma is very common in young children. But concussions can be difficult to recognize in infants and toddlers because they may not be able to describe how they feel. Nonverbal clues of a concussion may include:

- Appearing dazed
- Listlessness and tiring easily •• Irritability and crankiness
- Loss of balance and unsteady walking
- Crying excessively
- Change in eating or sleeping patterns
- Lack of interest in favorite toys

When to See a Doctor – The Absence of Symptoms Does Not Indicate the Internal State of Health

The person should be examined immediately and if there are any initial symptoms removed from all physical activity. Secondly at minimum the injured persons head and neck should be X-Rayed preferably in a chiropractic facility and or if in a medical facility the films should be read by both a medical and chiropractic radiologist. Why also a Chiropractic Radiologist? Because as good as medical radiologists are the chiropractic radiologist also includes observations of possible spinal subluxations and if they exist need to be chiropractic ally manipulated and conservatively managed. Follow up should be within 1 to 2 days if.

Priority's

There is nothing more important than long life with good health and as unfortunate as it is present day society glorifies sports and very often the most physically combative. From the time that children begin seeing sporting events it very often glory's athletes and very seldom do they see the consequences of injury's to athletes. Vey often children want to continue to play after an injury and very often their coach(s) and parents tell them to "Shrug the injury's off and the athletic minimizes there pain and goes back into "cogitative combat.

Adult Neglect of Children

Even though many parents and coaches will become upset with the following it is true in that They Should Be Arrested and Sued For Child Neglect Because They Have Encouraged, Added and Abated Their daughter(s) or Sons To Become Involved in physically Competitive Athletics.

It is one thing for a mature adult to make the decision to become involved in physically competitive sorts but no person under no less than age 18 to know the physical and psychological ramifications of the consequences of likelihood and short and long term consequences of not just brain and spine injury's and unfortunately because so many parents live out their unfulfilled fantasies of sorting achievements through their children are allowed and encouraged to play physically competitive sports.

•• You or your child experiences a head injury you can presume that there also has been some neck and back injury as well. Even if emergency care isn't required. The American Academy of Pediatrics recommends that you call your child's doctor for advice if your child receives anything more than a light bump on the head. If your child doesn't have signs of a serious head injury, and if your child remains alert, moves normally and responds to you, the injury is probably mild and usually doesn't need further testing. In this case, if your child wants to nap, it's OK to let him or her sleep. If worrisome signs develop later, seek emergency care. 1998 Concussion / Brain Injury / Battered Brains

Seek emergency care for an adult or child who experiences a head injury and symptoms such as:

- Repeated vomiting
- A loss of consciousness lasting longer than 30 seconds
- A headache and neck and back pain that gets worse over time
- Changes in his or her behavior, such as irritability
- Changes in physical coordination, such as stumbling or clumsiness
- Confusion or disorientation, such as difficulty recognizing people or places
- Slurred speech or other changes in speech-**Other symptoms include:**
- Seizures
- Vision or eye disturbances, such as pupils that are bigger than normal (dilated pupils) or pupils of unequal sizes
- Lasting or recurrent dizziness and neck and back pains
- Obvious difficulty with mental function or physical coordination
- Symptoms that worsen over time
- Large head bumps or bruises on areas other than the forehead in children, especially in infants under 12 months of age

Athletes

No one should return to play or vigorous activity while signs or symptoms of a concussion are present. Experts recommend that an athlete with a suspected concussion not return to play until he or she has been medically evaluated by a health care professional trained in evaluating and managing concussions. Children and adolescents should be evaluated by a health care professional trained in evaluating and managing pediatric concussions. Experts also recommend that adult, child, and adolescent athletes with a concussion not return to play on the same day as the injury.

References: Centers for Disease Control and Prevention and Mayo Clinic website

NOTE: Simple Vision Test (King-Devick (K-D) test) Detects Concussion in Young Athletes. A quick vision test that's so simple it can be administered by parents and others on the sidelines of sports fields and arenas helps detect concussion in athletes as young as 5 years of age, a new study suggests. Results showed that the King-Devick (K-D) test of rapid number naming outperformed tests of cognition and balance in terms of its capacity to distinguish no concussed from concussed athletes immediately after an injury. The results suggest that a vision-based test should be included in the assessment of athletes following an injury to optimally identify a concussion, said study author Steven Galetta, MD, the Philip K. Moskowitz Professor and chair of neurology at New York University Langone Medical Center. With so much information in the news about the damage to the brain from contact sports—add to this trauma, stress, toxicity, and the very common nutrient deficiencies in our society—and it is easy to understand all the unhealthy neurologic, cognitive, and emotional conditions seen so commonly in practice.

Nutritional Support Options Concussion / Brain Injury / Battered Brains are based on the clinical experience and protocols that have been outlined by both Dr. Robert Silverman and Dr. Robert Rakowski, combined with the recommendations of acclaimed neuroscientist Daniel Amen, M.D of which you can look them up on the internet but we are not necessarily endorsing their recommendations. One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure.

Why do we have that policy?

Because we do not want to make a diagnosis or propose any treatments to non-patients. Doing so might be considered being in violation of Federal or State Licensing Statutes, Rules and Regulations that govern our license to practice health care.

Congestive Heart Failure

Congestive heart failure (CHF) occurs as a result of impaired pumping capability of the heart and is associated with abnormal retention of water and sodium. The condition ranges from mild congestion with few symptoms to life-threatening fluid overload and total heart failure. CHF results in an inadequate supply of blood and oxygen to the body's cells.

The decreased cardiac output causes an increase in the blood volume within the vascular system. Congestion within the blood vessels interferes with the movement of body fluids in and out of the various fluid compartments, and they accumulate in the tissue spaces causing edema. Very often (but often neglected) are spine issues especially in the cervical thoracic spine which can be contributing factors to encroachment on the thorax thus compression and restriction of the functions of the heart and lungs.

Symptoms

Left-sided heart failure produces dyspnea (shortness of breath) of varying intensity. In the early stages, shortness of breath occurs only when the patient is physically active. Later, as the heart action becomes more seriously impaired, the dyspnea is present even when the patient is resting. In advanced cases, the patient must sit up in order to breathe (orthopnea).

Attacks of breathlessness severe enough to wake the patient frequently occur during sleep. These attacks usually are accompanied by coughing and wheezing (cardiac asthma), and the patient seeks relief by sitting upright. Orthopnea and cardiac asthma or paroxysmal nocturnal dyspnea are related to congestion of the pulmonary blood vessels and edema of the lung tissues. They are aggravated by lying down because in the prone position quantities of blood in the lower extremities move upward into the blood vessels of the lungs.

Fluid Retention

Fluid retention is another common symptom of CHF. In left-sided failure there is higher than normal pressure of blood in the pulmonary vessels.

This increased pressure forces fluid out of the intravascular compartment and into the tissue spaces of the lungs causing pulmonary edema. Right-sided failure causes congestion in the capillaries of the peripheral circulation and results in edema and congestion of the liver, legs and feet, and in the sacral region of bedridden patients. This is one of the primary reasons why the hospital staff attempts to get bed ridden patients up and walking.

Medical Treatment

Medical management of congestive heart failure is aimed at improving contractility of the heart, reducing salt and water retention, and providing rest for the heart muscle. Drugs used to accomplish these goals include digitalis glycosides to slow and strengthen the heart beat; vasodilators, such as nitroprusside and phentolamine, to reduce resistance to the flow of blood being pumped from the heart; and diuretics to assist in the elimination of water and sodium in the urine.

Similarly there continue to be advances in devices that can be surgically implanted in the cardiovascular system.

Note: Any person who has been diagnosed with CHF should never stop taking any prescribed medications and if they are thinking about adding food supplements to their diet they should discuss that with the medical personnel involved in their case.

Interventional Chiropractic Care.

Anytime there are chiropractic procedures that assist in freeing up and maintaining flexibility of the spine and spinal cord and circulation there will create the probability of the cardiovascular system being in more optimal function. Even though the heart has a Sino Atrial Node that exists to electrically stimulate the heart to function it still also receives neural stimulation from the autonomic nervous system that is related to the spine therefore the spine is a vital component of cardiac function.

Nutritional Supplementation Considerations for Congestive Heart Failure

As we review the following please do not stop taking any medically prescribed medications. If you have any inclination of pursuing any nutraceutical make sure that you consult with the doctor who prescribed those drugs. Likewise as potentially good as some of those medications might be all have potential deleterious effects on the body therefore one is wise to discuss the following food supplement considerations with Applied Kinesiology Muscle Response Test who is also nutritionally oriented Chiropractic Physician and when any recommendations are made they should be discussed with the medical doctor who prescribed medications but we have a policy of not listing any food supplements.

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure.

Why do we have that policy? Because we do not want to make a diagnosis or propose any treatments to non-patients. Doing so might be considered being in violation of Federal or State Licensing R

Statutes, Rules and Regulations that govern our license to practice health care.

Conjunctivitis (Pink Eye)

An acute infection of the conjunctiva, which may be viral, bacterial, or allergic. Only 25% of cases are caused by bacteria. Allergies and viruses (especially adenoviruses) are responsible for most of the rest, along with other irritations to the eye and cornea such as smoke, dust, wind, sunlamps, reflection of the snow, the common cold, exanthems, and contact lenses. In neonates:

In neonates, the most common causes of conjunctivitis are chemical (silver nitrate), chlamydia, gonorrhea, and other bacteria (strep pneumonia, staph aureus, Hemophilus influenza), and viruses (especially Herpes Simplex I and II).

Bacterial infections may superimpose viral or allergic conditions.

Viral conjunctivitis is usually self-limiting in 1-2 weeks, but is highly contagious and care should be taken not to spread the infection from one eye to the other or to another person. For example, the infected person should use separate towels.

In bacterial conjunctivitis, treatment should be:

Initiated promptly to avoid eye damage. Contact wearers should discontinue wearing their contacts for a few days, support nutritionally, and begin slowly wearing them again. If the irritating factor is not removed, a chronic conjunctivitis may develop with symptoms less severe than that of the acute disease but still quite noticeable (redness, itching, smarting, feeling of foreign body).

Symptoms

Viral: Clear discharge; minimal or absent lid swelling; no itching; often, lymphadenopathy of periarticular node is present.

Allergic: Clear, mucoid discharge; high eosinophils; mild to marked lid swelling; severe itching with increased lacrimation; no nodal involvement.

Bacterial: Purulent, green discharge; high polymorph nuclear leukocytes; moderate lid swelling; no itching; no nodal involvement; possible fever.

Contact Lens Wearers: Mild to marked lid swelling; mild to moderate itching; usually no discharge. In any of these cases, the patient may wake up in the morning with eyelids agglutinated shut. Children may find this very traumatic the first time it happens.

Neonatal Conjunctivitis

- **Gonorrhea:** usually occurs within 3-5 days of birth
- **Chlamydia:** usually occurs within 5-14 days of birth
- **Chemical irritation** from silver nitrate (now rare as most hospitals have switched to erythromycin): occurs 6-8 hours after instillation into the eyes.

Lifestyle & Home Remedies

To help you cope with the signs and symptoms of pink eye until it goes away, try to: Apply a compress to your eyes. To make a compress, soak a clean, lint-free cloth in water and wring it out before applying it gently to your closed eyelids. A cool water compress may help relieve allergic conjunctivitis. If you have bacterial or viral conjunctivitis, you may prefer a warm compress. If pink eye affects only one eye, don't touch both eyes with the same cloth. This reduces the risk of spreading pink eye from one eye to the other. Try eye drops. Over-the-counter eye drops called artificial tears may relieve symptoms.

Some eye drops contain antihistamines or other medications that can be helpful for people with allergic conjunctivitis.

Stop wearing contact lenses. If you wear contact lenses, you may need to stop wearing them until your eyes feel better.

How long you'll need to go without contact lenses depends on what's causing your conjunctivitis.

Ask your doctor whether you should throw away your disposable contacts, as well as your cleaning solution and lens case. If your lenses aren't disposable, clean them thoroughly before reusing them.

Preventing the Spread of Pink Eye

- Practice good hygiene to control the spread of pink eye. For instance:
- Don't touch your eyes with your hands.
- Wash your hands often.
- Use a clean towel and washcloth daily.
- Don't share towels or washcloths.
- Change your pillowcases often.
- Throw away your eye cosmetics, such as mascara.
- Don't share eye cosmetics or personal eye-care items.

Although pink eye symptoms may resolve in three or four days, children with viral conjunctivitis may be contagious for a week or more. Children may return to school when they no longer experience tearing and matted eyes.

Bacterial Conjunctivitis in Children

If your child has bacterial conjunctivitis, keep him or her away from school until after treatment is started. Most schools and child care facilities require that your child wait at least 24 hours after

starting treatment before returning to school or child care. Check with your doctor if you have any questions about when your child can return to school or child care.

Preventing Pink Eye in Newborns

Newborns' eyes are susceptible to bacteria normally present in the mother's birth canal. These bacteria cause no symptoms in the mother. In rare cases, these bacteria can cause infants to develop a serious form of conjunctivitis known as ophthalmia neonatorum, which needs treatment without delay to preserve sight. That's why shortly after birth, an antibiotic ointment is applied to every newborn's eyes. The ointment helps prevent eye infection.

Nutritional Supplementation Considerations for Conjunctivitis (Pink Eye)

As we re-state this book we have a policy of not listing the nutritional products or options we're aware of for any health condition to non-patients. Why do we have that policy? Because we do not want to make a diagnosis or propose any nutritional options that we know of. Doing so could be considered being in violation of Federal or State Licensing Statutes, Rules and Regulations that govern our license to practice health care.

Constipation

Chronic constipation is the number one gastrointestinal complaint in the United States.

Constipation accounts for more than 2.5 million physician visits a year and is among the most frequent reasons for patient self-medication.

Constipation is a universal affliction of Western civilization. Americans spend more than \$725 million annually on over-the-counter (OTC) laxatives in an attempt to self-treat but there are also alternative therapies including that are safer and more effective than conventional laxatives and work better for more people than fiber supplements alone.

Symptoms

Most individuals with uncontrolled constipation develop a variety of symptoms ranging from:

- Large bowel pain
- Rectal discomfort
- Abdominal fullness
- Nausea
- Anorexia
- General feeling of malaise

Severe chronic constipation may be accompanied by fecal impaction resulting in severe diarrhea, ulceration of the colon, and intestinal obstruction.

Diet / Lifestyle

There are a number of factors that can contribute to constipation, including:

- Not eating enough fiber
- Not drinking enough fluids
- Digestive enzyme issues
- Food sensitivities/allergies
- Not getting enough exercise
- Improper laxative use
- Thyroid disorders
- Hypercalcemia
- Inflammatory bowel disorders
- Neuromuscular disorders
- Acute diverticulitis

Pregnancy, Aging, , Antacids, Calcium, Drugs, Diet

Additionally, taking antacids containing aluminum or calcium, as well as reactions to various medications such as painkillers, antibiotics, antidepressants, anti-parkinsonism drugs, and diuretics, to name a few. Even pregnancy can cause constipation. Aging itself may increase the incidence of constipation. As a person ages, the colon wall thickens. When this thickening is combined with a lifetime diet low in fiber, constipation can result.

Diet can have a significant effect on constipation. People may become constipated if they start eating fewer high-fiber vegetables, fruits, and whole grains. Eating more high-fat meats, dairy products, and consuming a high refined sugar diet can all contribute to constipation. People often do not drink enough clean water and other healthy fluids. Water and other fluids add bulk to stools, making bowel movements easier. Despite all of the above known causes, many people suffer chronic constipation because of a sluggish bowel (insufficient peristalsis) and need to follow aggressive interventions to properly evacuate their colon on a regular basis.

Nutritional Supplementation Considerations for Constipation

For Mild to Moderate Acute Constipation

Some authority's recommend taking probiotics, magnesium, increasing fiber in the diet, coffee enemas, colonic therapy. *Anderson P.O., Knoben J.E. Handbook of Clinical Drug Data. 8th ed. Stamford, CT: Appleton & Lange, 1997.* Constipation IS associated with low intake of magnesium and low intake of water from foods. *Eur J Clin Nutr.* 2007 May;61(5):616-22. Pub 2006 Dec 6.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

How are magnesium and constipation related? Magnesium increases water in your intestines, which helps initiate peristalsis (the wave-like motion which moves fecal matter through your intestines). Peristalsis also pushes food into your stomach. The laxative effect of magnesium appears to come through two different mechanisms:

- Magnesium relaxes the muscles in the intestines—this helps to establish a smoother rhythm that helps eliminate constipation.
- Magnesium also attracts water—this increased amount of water in the colon serves to soften the stool, helping to make stools easier to pass and thus removing constipation. **NOTE:** Since your intestines will be absorbing this excess water from your body, it is very important to drink plenty of water after taking magnesium. This will keep you from becoming dehydrated.

COPD (Chronic Obstructive Pulmonary Disease) /Chronic Bronchitis / Emphysema / Lung Disease /Impaired Lung Function

Chronic Obstructive Pulmonary Disease (COPD) is manifested with difficult breathe, persistent coughing up mucus is often the first sign of COPD. Many of the tissues in the body need the lubricating effects of mucus but when it becomes its viscosity increases (become too thick) it causes the tissues within the lungs to become clogged which is the situation in Mucus Chronic bronchitis and emphysema are common COPDs.

Your airways branch out inside your lungs like an upside down tree. At the end of each branch are small, balloon-like air sacs (Alveoli which are wrapped around with capillaries - microscopic

blood vessels that are involved in exchange of gases-breathing). In healthy people, both the airways and air sacs are springy and elastic. When you breathe in, each air sac fills with air like a small balloon. The balloon deflates when you exhale. In COPD, your airways and air sacs lose their shape and become floppy, like a stretched-out rubber band and are decreased in their ability to exchange gases thus inhibiting normal breathing.

Pollution

Cigarette smoking is the most common cause of COPD. Breathing in other kinds of irritants like pollution, dust, or chemicals may also cause or contribute to COPD. Quitting smoking is the best way to avoid developing COPD. NIH: National Heart, Lung, and Blood Institute.

Symptoms

COPD can cause a variety of symptoms, including:

- Chronic
- Persistent cough
- Increased mucus
- Shortness of breath (especially during physical activity). This is not saying that everyone who has shortness of breath has COPD but rather that as people age very often they have decreased breathing capacity.
- Wheezing

•• Tight feeling in the chest and spine. With reference to the spine and thorax interventional Chiropractic care may be of assistance to people suffering with COPD in that not only do the ribs and diaphragm play significant roles in minimizing restrictive breathing but also does the spine as it houses and protects the nervous system which is involved in the nerve and blood supply to the lungs. A potential help key then is keeping the spine, thorax as flexible as possible and interventional chiropractic care is a most viable non –invasive option.

Diet Considerations

“Smoking is the most important risk factor for incident chronic obstructive pulmonary disease (COPD), but recent research has demonstrated that diet can also influence the risk for COPD. In a large study combining cohorts of female and male health professionals, Varraso and colleagues demonstrated a significant inverse trend between the consumption of dietary fiber and the risk for COPD. Their results, which were published in the April 1, 2010 issue of the American Journal of Epidemiology suggested:

That fiber from cereal appeared to be more effective than fruit or vegetable fiber in the prevention of COPD.

Consumption of cured meats has been demonstrated to be an independent risk factor for incident COPD among men and women. The study by de Batlle and colleagues evaluates whether eating cured meats raises the risk for hospital readmission for COPD. The authors hypothesize that cured meats have a deleterious effect on patients with COPD because they contain high level of nitrites.

Nitrates

Nitrites used in the preparation of cured meat may lead to an increase in the nitrosative stress burden within the lungs, and lead to the formation of reactive nitrogen species, which results in parenchymal damage and remodeling. Eur Respir J. Published online March 8, 2012.

Nutritional Supplementation Considerations for COPD (Chronic Obstructive

Note: The following are not presented in any way to discourage people diagnosed with COPD from following their medical physician’s recommendations but incorporating one or more of these nutritional considerations may help them deal with COPD. One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any

nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Exercise

Physical exercise is important in that it demands some degree of increased respiration therefore challenging both the lung and cardiovascular systems. It likewise contributes to better oxygenation of not just the blood but every cell and organ in the body.

Pulmonary Disease) / Chronic Bronchitis / Emphysema / Lung disease /Impaired Lung Function

Note: Before embarking on any food supplements one should consult with the medical personnel managing their case

Nutritional Formula Description & Supplementation Rationale

N-acetyl cysteine (NAC) is a form of the amino acid cysteine and a very efficient precursor of the potent antioxidant glutathione. The positive effects of NAC have been published in conditions such as Acute Respiratory Distress Syndrome, Chronic Bronchitis, Chronic Obstructive Pulmonary Disease (COPD), Allergic Rhinitis, Fibrosing Alveolitis, and Lung Cancer. In animal models, NAC has shown to attenuate diaphragm fatigue, possibly due to its ability to scavenge free radicals. Evidence indicates NAC might positively impact some aspects of human diaphragm function as well.

Antioxidants with the goal of protecting and support lung tissue health. Commonly consisting of nutrients such as vitamins C, E and beta-carotene and mixed carotenoids.

Raw Bovine Lung Concentrate (processed below 37°C) that is guaranteed raw so the natural constituents remain intact.

Vitamin D- Vitamin D and Respiratory Infections? If Linus Pauling were alive today, perhaps he would turn his attention away from vitamin C and write *Vitamin D and the Common Cold*. One randomized controlled trial suggested that vitamin D supplementation reduced acute respiratory tract infections in children during the long, cold, and dark Mongolian winter. Another randomized controlled trial showed that vitamin D reduced symptoms and antibiotic use in a group of patients with an increased frequency of respiratory infections. In infants, cord blood levels of 25-hydroxyvitamin D (25[OH]D) are inversely associated with the risk for respiratory tract infection and childhood wheezing. In patients with increased frequency of respiratory tract infections, supplementation with 4000 IU vitamin D3 for 1 year reduced symptoms and antibiotic use, according to findings of a randomized controlled trial published in the BMJ.

References

- Camargo, C. A., Jr, Ganmaa, D., & Frazier, A. L., et al. Randomized trial of vitamin D supplementation and risk of acute respiratory infection in Mongolia. *Pediatrics*. 2012;130:e561-567.
- Bergman, P., Norlin, A. C., & Hansen, S., et al. Vitamin D3 supplementation in patients with frequent respiratory tract infections: A randomized and double-blind intervention study. *BMJ Open*. 2012;2:e001663.
- Murdoch, D. R., Slow, S., & Chambers, S. T., et al. Effect of vitamin D3 supplementation on upper respiratory tract infections in healthy adults: The VIDARIS randomized controlled trial. *JAMA*. 2012;308:1333-1339.

•• Carlos, A., et al. *Cord-Blood 25(OH)Vitamin D Levels Inversely Related to Risk for Respiratory Infection. Pediatrics. Published online December 27, 2010.*

Lung Disorders & Vitamin D

Low vitamin D levels often appear to be related to the need for steroids in asthma and may also blunt the effectiveness of asthma treatment. For chronic obstructive pulmonary disease, according to one study, high-dose vitamin D supplementation improves exercise capacity and respiratory muscle strength during rehabilitation but vitamin D being a fat soluble vitamin can in excessive intake become toxic in the body therefore it should be monitored through blood study's regularly. Vitamin D has been shown to have an immunomodulatory effect with a significant impact on immune function. Specifically, vitamin D regulates the mechanisms which suppress the inflammatory response and direct the differentiation fate of immune cells. Vitamin D has been shown to play an important role in asthma and appears to be a critical player in chronic rhinitis and rhino sinusitis. Vitamin D supplementation prevented moderate to severe exacerbations of chronic obstructive pulmonary disease (COPD) in patients with vitamin D deficiency in a multicenter, double-blind, randomized controlled trial. The results were published online December 2, 2014 in the Lancet.

•• Coussens, A. K., Wilkinson, R. J., & Hanifa, Y., et al. *Vitamin D accelerates resolution of inflammatory responses during tuberculosis treatment. Proc Natl Acad Sci U S A. 2012;109:15449-15454.*

•• Wu, A. C., Tantisira, K., & Li, L., et al. *Effect of vitamin D and inhaled corticosteroid treatment on lung function in children. Am J Respir Crit Care Med. 2012;186:508-513.*

•• Lehouck, A., Mathieu, C., & Carremans, C., et al. *High doses of vitamin D to reduce exacerbations in chronic obstructive pulmonary disease: A randomized trial. Ann Intern Med. 2012;156:105-114.*

•• Abuzeid, W. M., Akbar, N. A., & Zacharek, M. A. *Vitamin D and chronic rhinitis/chronic rhinosinusitis (CRS). Curr Opin Allergy Clin Immunol. 2012;12(1):13-17.*

•• Huisman, A. M., White, K. P., Algra, A., Harth, M., Vieth, R., Jacobs, J. W., Bijlsma, J. W., & Bell, D. A. *Vitamin D levels in women with systemic lupus erythematosus and fibromyalgia. J Rheumatol. 2001;28(11):2535-9.*

•• Falkenbach, A., Tripathi, R., Sedimeyer, A., Staudinger, M., & Herold, M. *Serum 25-hydroxyvitamin D and parathyroid hormone COPD / Chronic Bronchitis / Emphysema / Lung Disease / Impaired Lung Function 209 in patients with ankylosing spondylitis before and after a three-week rehabilitation treatment at high altitude during winter and spring. Wien Klin Wochenschr. 2001;113(9):328-32.*

•• Martineau, A. R., et al. *Vitamin D3 supplementation in patients with chronic obstructive pulmonary disease (ViDiCO): A multicentre, double-blind, randomized controlled trial. The Lancet Respiratory Medicine, Early Online Publication, 2 December 2014. doi:10.1016/S2213-2600(14)70255-3*

Interventional Chiropractic Care

Where ever there is a breathing problem there are going to be a high propensity to rib, spine, diaphragm problems. That being the case it behooves those so afflicted to see a Doctor of Chiropractic for regular spine and muscle related issues. Doing so offers significant collaborative values to nutritional and medical care.

Cystic Fibrosis (CF)

Cystic fibrosis (CF) is an inherited disease of the mucus and sweat glands. It affects mostly your lungs, pancreas, liver, intestines, sinuses, and sex organs. CF causes mucus to become too thick and sticky. When that's the situation the mucus clogs the lungs, causing breathing problems and making it easy for bacteria to grow.

This can lead to problems such as repeated lung infections and lung damage. "Inherited" means that the disease is passed through the genes from parents to children. People who have CF inherit two faulty CF genes—one from each parent. The parents likely don't have the disease themselves.

Overview

Mucus is a substance made by the lining of some body tissues. Normally, mucus is a slippery, watery substance. It keeps the linings of certain organs moist and prevents them from drying out or getting infected.

However, if you have CF, your mucus becomes thick and sticky. The mucus builds up in your lungs and blocks your airways—the tubes that carry air in and out of your lungs. The buildup of mucus makes it easy for bacteria to grow. This leads to repeated, serious lung infections. Over time, these infections can severely damage your lungs.

CF and the Pancreas

The thick, sticky mucus can also block tubes, or ducts, in your pancreas. As a result, the digestive enzymes that your pancreas makes (Amylase, Proteases and Lipase) can't reach your small intestine. These enzymes are designed and integral in breaking down the food that you eat. Without them, your intestines can't fully absorb fats and proteins.

This can cause vitamin deficiency and malnutrition because nutrients leave your body unused. It can also cause bulky stools, intestinal gas, a swollen belly from severe constipation, and pain or discomfort. Similarly because the pancreas is the prouder of insulin individuals with CF are also at increased risk for diabetes or a bone-thinning condition called osteoporosis. CF also causes infertility in men, and it can make it harder for women to get pregnant.

CF and Altered Electrolytic Balance

CF also causes your sweat to become very salty. As a result, your body loses large amounts of salt when you sweat. This can upset the balance of minerals (electrolytic balance) in your blood and cause a number of health problems. Examples include:

Dehydration (a condition in which your body doesn't have enough fluids), increased heart rate, tiredness, weakness, decreased blood pressure, heat stroke, and rarely, death.

The Outlook

The symptoms and severity of CF vary widely. Some people have serious problems from birth, and/or serious lung, digestive and blood glucose problems. Others have a milder version of the disease that doesn't show up until they are teens or young adults. Although there is no cure for CF, treatments have improved greatly in recent years. Until the 1980s, most deaths from CF occurred in children and teenagers. Today, with improved treatments, people with CF live, on average, to be more than 35 years old. NIH: National Heart, Lung, and Blood Institute.

Interventional Chiropractic Care

In CF very often the person also experiences tightness in their chest and spine. With reference to the spine and thorax interventional Chiropractic care will not cure it but may be of assistance to people suffering with CF in that not only do the ribs and diaphragm play significant roles in minimizing restrictive breathing but also does the spine as it houses and protects the nervous system which is involved in the nerve and blood supply to the lungs. A potential help key then is keeping the spine, thorax as flexible as possible and interventional chiropractic care is a most viable non –invasive option.

Nutritional Supplementation Considerations for Cystic Fibrosis (CF)

As we review the nutritional food supplements for CF please keep in mind the importance of discussing any food supplements you might be taking (or contemplating taking) with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor are we in anyway attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly we encourage you to consider discussing your situation with a Doctor of Chiropractic who has expertise in giving counsel to those troubled with CF.

“Children and adolescents with cystic fibrosis (CF) frequently have growth failure by the combination of malabsorption, increased energy needs, and reduced appetite. Nutrient, blood and nervous delivery and correction of mal digestion and malabsorption are essential to achieve normal growth to support optimal pulmonary function and to prolong life.” Cystic Fibrosis: Nutritional Issues – Robert D Baker, MD, PhD.

Promoting Pancreatic Function

Lifelong pancreatic insufficiency is a characteristic of Cystic Fibrosis, so in order to digest fats in general (including the essential fatty acids, and all of the fat-soluble vitamins), it is necessary to administer

Antioxidants Adequate antioxidant supplementation, especially the “ACES” (Beta-Carotene, vitamins A, C, E, and the mineral selenium) and the “Greens” (plant phyto-nutrients), are highly recommended such as found in both the Dynamic Health Drink and PhytoMulti™.

Vitamin D support **Vitamin D deficiency** is common in Cystic fibrosis (CF). The Cystic Fibrosis Foundation committee recommends yearly screening for vitamin D status, preferably at the end of winter, using the serum 25-hydroxyvitamin D measurement, with a minimal 25-hydroxyvitamin D concentration of 30 ng/ml (75 nmol/liter) considered vitamin D sufficient in individuals with CF.

Note: Dr. Holick recommends an optimal range of 60-80 ng/ml per the 25-hydroxyvitamin D concentration serum analysis but it is advisable to have a vitamin D blood test as well as monitor it periodically.

Probiotic Support

Due to frequent and recurrent respiratory infections, most Cystic Fibrosis patients have received multiple, often prolonged courses of antibiotics. This creates an ideal setup for intestinal dysbiosis with candida overgrowth. Tests to determine gut and bowel status might be appropriate, followed by measures to eradicate abnormal organisms and reestablish normal intestinal flora.

With regards to food supplements it is very important that when the person takes food supplements that they are GMP certified. This is especially so in that CF is a very serious disease and important that any food supplements being Food Quality therefore GMP Certified.

Dietary Considerations

Low glycemic index Mediterranean Type Diet / FirstLine Therapy® Diet Program

Detoxification

Low-level, long-term exposure to toxins such as heavy metals (e.g., lead, mercury, PSP, and cadmium), pesticides, industrial compounds, and pollutants is associated with chronic fatigue syndrome (CFS), multiple chemical sensitivities (MCS), fibromyalgia (FM), neurodegenerative diseases such as Parkinson’s disease and atherosclerosis, as well as many types of cancers. Common signs and symptoms of environmental toxicity include acne, rashes, headaches, aches and pains, fatigue, muscle weakness, tinnitus, fertility problems, memory loss, back problems and chronic immune system depression. Toxins may remain in the body for many years, therefore we

are exposed to much higher toxin doses than present environmental concentrations suggest. Research suggests that we all maintain toxin contamination within our bodies on a regular basis due to this lifetime of exposure.

Risk Reduction

Detoxification pathways are the route to optimum health. BY Robert Silverman, DC. Some of the most dangerous culprits that inhibit a person's ability to achieve optimum health also happen to be omnipresent. Environmental toxins are virtually everywhere given their almost global nature; for instance, people don't think too much about the packaging their food comes in, the contents of their shampoo, or even the air they breathe. Yet, according to a 2010 article in *Science*, 70 to 90 percent of disease risks likely stem from environmental factors.¹ *Environmental Toxins Come in Two Categories — Chemical and Metallic*²⁻⁴.

These accumulate and reside in the body's fatty tissues, and come from medications, food preservatives, and exposure to pesticides, air pollutants, and other harmful toxins. While these toxins come from a variety of sources, initial exposure to them usually begins while a baby is still in the womb.⁵

All Too Common

According to the CDC's *Fourth National Report on Human Exposure to Environmental Chemicals*, more than 212 chemicals have been found to be present in the blood and urine of most Americans.⁶ The six most widespread chemicals are:

- Polybrominated diphenyl ethers (PBDEs), used as a flame retardant
- Bisphenol A (BPA), found in plastic products (e.g., water bottles)
- Perfluorooctanoic acid (PFOA), found in nonstick cookware
- Acrylamide in items cooked at high temperatures (e.g., French fries, fried chicken, and coffee)
- Mercury, found in seafood
- Methyl tert-butyl ether (MTBE), a gasoline additive released in vehicle exhaust⁷⁻⁹. To illustrate, research data suggests there is a strong relationship between urine concentrations of BPA and Type 2 diabetes and reduced testosterone levels.¹⁰⁻¹¹ BPA is also an endocrine disruptor. It binds to receptors on cells used by hormones that regulate physiological functions and thus takes the place of the body's natural hormones.

The Liver

The liver functions as the body's natural detoxification mechanism. It supports the body's ability to excrete toxins once they have been neutralized, thus reducing the chance they will recirculate and be stored in the body. Unfortunately, as a result of vast exposure to pervasive toxins, the liver is unable to adequately break down fat-soluble toxins, which is the key to the natural detoxification process.¹²⁻¹⁴

These toxins need to be converted into water-soluble compounds and then excreted through normal bodily functions. If the liver is dysfunctional, toxins won't be broken down and eliminated but rather recirculated, causing secondary tissue damage. Both health and performance are impaired by toxin recirculation.

Pathology of Excess Toxic Burden

Here is a partial list of common symptoms that can indicate toxin overload:

- Fatigue, lethargy, weakness
- Depression
- Headaches, irritability
- Cognitive problems; e.g., brain fog, memory problems

- Concentration difficulties
- Generalized muscle aches
- Dark circles under eyes
- Digestion, elimination problems
- Muscle and joint pain
- Overweight/underweight

Healthy Liver Detoxification Pathways

Metabolic detoxification is a way to normalize the body's metabolization of xenobiotic and endogenous compounds, while temporarily reducing incoming toxic burden. **Note:** Prior to doing so at minimum a Chem Screen, CBC and Hair Mineral Toxic Metal Analysis should be performed and preference would be to seek the counsel of the medical and a Chiropractic physician who in also nutritionally oriented as well as the patients' medical doctors should be consulted and continue to follow their recommendations.

Step 1: Toxins that are fat soluble are transported from the intestine to the liver. These can include metabolic end products, chemical pollutants and contaminants, microorganisms, food additives, drugs and medications, and alcohol.

Step 2: In the liver, toxins undergo Phase 1 detoxification to neutralize certain toxins. Phase 1, called "functionalization," involves the release of enzymes by the liver that break down xenobiotics and produce harmful free-radicals.

Step 3: The remainder of the un-neutralized toxins moves into Phase 2 detoxification, which transforms them into water-soluble compounds.¹⁷ By the process of conjugation, large molecules join together with modified xenobiotics to produce harmless water-soluble substances.

Step 4: Newly transformed toxins are then transported to either the kidneys, where they are excreted in the urine; or to the gallbladder, where they are eventually excreted via the feces in Phase 3 of detoxification.¹⁸⁻¹⁹ Phase 3 relies on the pH scale (acid to- alkaline ratio). The proper pH level is more alkaline than acid (pH at 7 or above).

Unhealthy Liver Detoxification Pathways

In an unhealthy liver, toxins cannot be detoxified at the rate they are brought to the liver. Phase 1 occurs too quickly for conversion to Phase 2. In this case, toxins build up and recirculate in the blood, contributing to long-term poor health. These un-neutralized, fat-soluble toxins can be stored in body tissues such as fat, the brain, and the nervous system, causing systemic symptoms.

Nutritional Support

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor in in anyway attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly it is a good idea to include discussing your questions about nutritional supplication with a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Increasing the Probability of Successful Metabolic Detoxification

The chances of a metabolic detoxification program succeeding can be maximized by using well-researched nutrients, vitamins, and herbs to balance and support the body's detoxification pathways. The gastrointestinal tract is the first-pass detoxification barrier against large chemical compounds that are foreign to the human body. Your first nutritional recommendation could be two probiotics, specifically *B. lactis* (Bi-07) and *L. acidophilus* (NCFM), which have both been

documented to help with GI tract stability and health. Additionally, low-allergen-potential nutrients nourish the GI barrier and support the elimination of toxins.²³⁻²⁴ Rice proteins and medium-chain triglycerides (MCTs) derived from milk fat, palm oil, and coconut oil boost metabolism. They allow clearance of potential allergens that may be contributing to impaired toxin clearance.

Product Description

Optimal Nutrient Support for Healthy Detoxification

The human body is created to conduct natural processes to help people detoxify and stay healthy. These are known as Phase I and Phase II, and your liver plays an important part in both. These phases can sometimes become overworked or overloaded depending on your body's toxin load. Nutria-Dyn offers a supplement that delivers nutrients to fully support detoxification.

Detox Phase I & II is formulated with a comprehensive blend of vitamins, minerals, amino acids, and other nutrients special selected to support optimal liver function related to detoxification.

Product Details:

- Detox Phase I & II provides optimal support for the detoxification and removal of xenobiotics, hormones, heavy metals, neurotransmitters, and anything else your body needs to get rid of to maintain optimal health
- It delivers antioxidants, conjugating agents, glutathione precursors, and other nutrients essential to healthy Phase I and II detoxification processes

Just two easy-to-swallow capsules every day give your body and liver the support they need to properly detoxify and get rid of harmful toxins and other substances that can cause a decline in overall health.

Support your body in keeping you at optimal health. Start using Detox Phase I & II from Nutri-Dyn today to help your liver get rid of harmful toxins. Order yours today and see the difference it can make!

Nutrition Facts

Supplement Facts

2 capsules contain:

Vitamin A 3190 IU (64%)

---(as palmitate and beta-carotene)

Vitamin C (as magnesium ascorbate) 167mg (278%)

Vitamin E (as d-alpha tocopheryl succinate) 83 IU (277%)

Thiamin (as thiamin HCl) 8.3mg (553%)

Riboflavin 8.3mg (488%)

Niacin 10mg (50%)
Vitamin B6 (as pyridoxine HCl) 10mg (500%)
Folic acid 200mcg (50%)
Vitamin B12 (as cyanocobalamin) 0.4mcg (7%)
Biotin 0.66mcg (<1%)
Pantothenic Acid (as calcium pantothenate) 33.3mg (333%)
Magnesium 64mg (16%)
---(as magnesium ascorbate, magnesium citrate and magnesium malate)
Zinc (as zinc Picolinate) 2mg (13%)
Selenium (as l-selenomethionine) 0.33mcg (<1%)
Manganese (as manganese glycinate chelate) 496mcg (25%)
Molybdenum (as molybdenum citrate) 50mcg (67%)
Calcium-D-Gluconate 66.7mg
L-Methionine 66.7mg
Glycine 66.7mg
L-Glutamic Acid HCl 66.7mg
Taurine 66.7mg
L-Glutamine 66.7mg
Choline Bitartrate 66.7mg
N-Acetyl-L-Cysteine 66.7mg
Quercetin Dehydrate 66.7mg
Inositol 33.3mg
L-Ornithine-L-Aspartate 33.3mg
Broccoli Aerial Parts Extract 33.3mg
---(Brassica oleracea L. var. dioica)
Milk Thistle Seed Extract 16.7mg
---(Silybum marianum)
L-Glutathione 16.7mg
L-Serine 16.7mg
L-Histidine 16.7mg
L-Carnitine (as l-carnitine tartrate) 16.7mg
Coenzyme Q10 8.3mg
Grape Seed Extract 3.3mg
Superoxide Dismutase 33.3mcg
Catalase 16mcg
Other Ingredients: gelatin (capsule), microcrystalline cellulose and magnesium stearate (vegetable source).
Contains NO: gluten, GMOs.

Recommended Use:

Adults: Two capsules daily or as directed by your healthcare practitioner.

Warning:

If you are pregnant, nursing, or taking medication, please consult your healthcare professional before using this product. Keep out of the reach of children.

24/7/365 Access/

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

- 1. Go to www.futurehealth-today**
- 1. Go to www.nutri-dyn.com**
- 2. Click on Create Account**
- 3. Click on Patients**
- 4. Complete the short form and type in the following Account Number 100160**
- 5. Click submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Rice –Arsenic and Lead

People who are attempting to eat gluten free foods tend to increase rice into their diet but as good as doing so may seem there is evidence that they are increasing arsenic and lead into their body's as in the process of growing rice there is an increase of arsenic and lead being absorbed by the rice plants.

The liver is the next toxin treatment center. Nutrients that help regulate liver processes include L-cysteine, magnesium, glucuronic acid, glycine, glutathione, and sulfate. Antioxidants also support the clearance of reactive intermediary compounds.

The Need For a Vitamin/Mineral Profile

A comprehensive vitamin profile, including vitamins A, C, and E, and a broad spectrum of B vitamins also help neutralize these compounds. Three substances that act as bio-functional

modulators have the ability to simultaneously influence both Phase 1 and Phase 2 activity in the liver: green tea catechins, ellagic acid, and watercress glucosinolates. To achieve Phase 3, the addition of potassium citrate, an effective alkalizing compound, will shift the body's reserves to become more alkaline pH above 7.0. A diet to promote optimum health should consist of the above mentioned nutrient supplements and the detox-friendly diet. An appropriate dietary regimen should include green vegetables and most fruits, and eliminate acidifying grains such as corn, wheat, white flour, and grain-fed animal proteins. Research has indicated that a program as short as 10 days can lead to distinct changes in an individual's health profile. A 28-day comprehensive detox program is the gold standard for improving the health of individuals with significant symptomatology.

Interventional Chiropractic Care

Wherever there is a breathing problem there are going to be a high propensity to rib, spine, diaphragm problems. That being the case it behooves those so afflicted to see a Doctor of Chiropractic for regular spine and muscle related issues that could be determined through a Touch For Health Applied Kinesiology Muscle Response Test. Doing so offers significant collaborative values to nutritional and medical care.

References

1. Rappaport, S. M., & Smith, M. T. *Environment and disease risks. Science.* 2010;330(6003):460-61.
2. Lichtenstein, P., et al. *Environmental and heritable factors in the causation of cancer. N Engl J Med.* 2000;343(2):78-85.
3. Hindorff, L. A., et al. *Potential etiologic and functional implications of genome-wide association loci for human diseases and traits. Proc Natl Acad Sci.* 2009;106(23):9362-67.
4. Willett, W. C. *Balancing lifestyle and genomics research for disease prevention. Science.* 2000;296(5568):695-98.
5. *Environmental Working Group. "A benchmark investigation of industrial chemicals, pollutants and pesticides in umbilical cord blood." Body Burden: The Pollution in Newborns. <http://www.ewg.org/research/body-burden-pollution-newborns>. Published July 14, 2005. Accessed November 2014.*
6. *Centers for Disease Control and Prevention. "Fourth National Report on Human Exposure to Environmental Chemicals." <http://www.poison.org/current/cdc%20fourth%20report%20human%20exposure%20to%20env%20chemicals.pdf>. Published 2009. Accessed November 2014.*
7. *Environmental Protection Agency. "Polybrominated diphenylethers (PBDEs) Action Plan Summary." Existing Chemicals. <http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/pbde.html>. Updated October 30, 2014. Accessed November 2014.*
8. *Environmental Protection Agency. "Bisphenol A (BPA) Action Plan Summary." Existing Chemicals. <http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/bpa.html>. Updated January 29, 2014. Accessed November 2014.*
9. Vom Saal, et al. *Bisphenol A and risk of metabolic disorders. JAMA.* 2008;300(11):1353-54.
10. *Ibid.*
11. Nakamura, D., et al. *Bisphenol A may cause testosterone reduction by adversely affecting both testis and pituitary systems similar to estradiol. Toxicol Lett.* 2010;194(1-2):16-25.

12. Fujiyoshi, T. P., et al. *Molecular epidemiologic evidence for diabetogenic effects of dioxin exposure in U.S. Air Force veterans of the Vietnam War. Environ Health Perspect.* 2006;114(11):1677-83.
13. Liska, D. J., & Bland, J. S. *Emerging clinical science of bifunctional support for detoxification. Townsend Letter for Doctors and Patients.* 2002.
14. Musser, W. *Mitochondrial inhibitors and neurodegenerative disorders. J Neuropsychiatry Clin Neurosci.* 2000;12:280-281.
15. Liska, D. J., & Bland, J. S. *Emerging clinical science of bifunctional support for detoxification. Townsend Letter for Doctors and Patients.* 2002.
16. Bland, J. (2008). *The Disease Delusion: Conquering the Causes of Chronic Illness for a Healthier, Longer, and Happier Life (1st ed., p. 124).* HarperWave.
17. Rooney, P. J., et al. *A short review of the relationship between intestinal permeability and inflammatory joint disease. Clin Exp Rheumatol.* 1990;8(1):75-83.
18. Vree, T. B., et al. *Effect of urinary pH on the pharmacokinetics of salicylic acid, with its glycine and glucuronide conjugates in humans. Int J Clin Pharmacol Ther.* 1994;32(10):550-8.
19. Zmonarski, S. C., & Klinger, M., et al. *Therapeutic use of potassium citrate. Przegl Lek.* 2001;58(2):82-6.
20. John, T. J., & Jesudason, M. V. *The first epidemic of Vibrio cholerae O139. Int J Clin Pharmacol Ther.* 1994;32(10):550-8.
21. *University of Michigan School of Public Health.*
22. Meeker, J., & Ferguson, K. *Relationship between urinary phthalate and Bisphenol A concentrations and serum thyroid measures in U.S. adults and adolescents from the National Health and Nutrition Examination Survey (NHANES) 2007-2008. Environ Health Perspect.* 2011;119(10):1396-1402.
23. Asemi, A., et al. *Effect of daily consumption of probiotic yogurt on oxidative stress in pregnant women. Ann Nutr Med.* 2012;60(1):62-28.
24. Ejtahed, H., et al. *Probiotic yogurt improves antioxidant status in type-2 diabetic patients. Nutrition.* 2012;28:539-543.
25. Porter, R. (2001). *Merck Manual of Diagnosis and Therapy (17th ed., ch. 298).* Whitehouse Station, NJ: Merck Sharp & Dohme Corp.
26. Sheweita, S. A. *Drug-metabolizing enzymes: Mechanisms and functions. Curr Drug Metab.* 2000;1(2):107-32.
27. Brown, M. D. *Green tea (camellia sinensis) extract and its possible role in the prevention of cancer. Altern Med Rev.* 1999;4(5):360-70.
28. Pieniazek, W., Franczuk, P., & Janicki, K. *The comparison of clinical effectiveness of perindopril and acebutolol in the primary hypertension treatment. Przegl Lek.* 2001;58(5):58(2):82-6. Polish.

DETOXIFICATION QUESTIONNAIRE

Patient Name: Date:

Rate each of the following symptoms based on your typical health profile for the specified duration:

_ Past month _ Past week _ Past 48 hours

Point Scale: **0**—Never or almost never have the symptom **1**—Occasionally have it, effect is not severe **2**—Occasionally have it, effect is severe

3—Frequently have it, effect is not severe **4**—Frequently have it, effect is severe

I. Medical Symptom Questionnaire (MSQ)

HEAD Headaches

Faintness

Dizziness

Insomnia **TOTAL**

EYES Watery or itchy eyes

Swollen, reddened or sticky
eyelids

Bags or dark circles under eyes

Blurred or tunnel vision **TOTAL**

EARS Itchy ears

Earaches, ear infections

Drainage from ear

Ringing in ears,

hearing loss **TOTAL**

NOSE Stuffy nose

Sinus problems

Hay fever

Sneezing attacks

Excessive mucus formation **TOTAL**

MOUTH/ Chronic coughing

THROAT Gagging, frequent need to
clear throat

Sore throat, hoarseness,
loss of voice

Swollen or discolored
tongue, gums, lips

Canker sores **TOTAL**

SKIN Acne

Hives, rashes, dry skin

Hair loss

Flushing, hot flashes

Excessive sweating **TOTAL**

HEART Chest pain

Irregular or skipped heartbeat

Rapid or pounding

heartbeat **TOTAL**

LUNGS Chest congestion

Asthma, bronchitis

Shortness of breath

Difficulty breathing **TOTAL**

DIGESTIVE Nausea, vomiting

TRACT Diarrhea

Constipation

Bloated feeling

Belching, passing gas

Heartburn

Intestinal/stomach pain **TOTAL**

JOINTS/ Pain or aches in joints

MUSCLE Arthritis

Stiffness or limitation of movement

Feeling of weakness or tiredness
Pain or aches in muscles **TOTAL**

WEIGHT Binge eating/drinking
Craving certain foods

Excessive weight
Water retention

Underweight
Compulsive eating **TOTAL**

ENERGY/ Fatigue, sluggishness
ACTIVITY Apathy, lethargy

Hyperactivity
Restlessness **TOTAL**

MIND Poor memory
Confusion, poor comprehension

Difficulty in making decisions
Stuttering or stammering

Slurred speech
Learning disabilities

Poor concentration
Poor physical coordination **TOTAL**

EMOTIONS Mood swings
Anxiety, fear, nervousness

Anger, irritability, aggressiveness
Depression **TOTAL**

OTHER Frequent illness
Frequent or urgent urination

Genital itch or discharge **TOTAL**
GRAND TOTAL

1. Are you presently using prescription drugs?

Yes (1 pt.)

If yes, how many are you currently taking? ____ (1 pt. each)

No (0 pt.)

2. Are you presently taking one or more of the following over-the-counter drugs?

Cimetidine (2 pts.)

Acetaminophen (2 pts.)

Estradiol (2 pts.)

3. If you have used or currently use prescription drugs, which of the following scenarios best represents your response to them: Experience side effects, drug(s) is (are) efficacious at lowered

dose(s) (3 pts.) Experience side effects, drug(s) is (are) efficacious at usual dose(s) (2 pts.) Experience no side effects, drug(s) is (are) usually not efficacious (2 pts.) Experience *no* side effects, drug(s) is (are) usually efficacious (0 pt.)

4. Do you currently use or within the last 6 months had you regularly used tobacco products?

Yes (2 pts.) No (0 pt.)

5. Do you have strong negative reactions to caffeine or caffeine containing products?

Yes (1 pt.) No (0 pt.) Don't know (0 pt.)

6. Do you commonly experience "brain fog," fatigue, or drowsiness?

Yes (1 pt.) No (0 pt.)

7. Do you develop symptoms on exposure to fragrances, exhaust fumes, or strong odors?

Yes (1 pt.) No (0 pt.) Don't know (0 pt.)

8. Do you feel ill after you consume even small amounts of alcohol? _ Yes (1 pt.) _ No (0 pt.) _ Don't know (0 pt.)

10. Do you have a personal history of
_ Environmental and/or chemical sensitivities (5 pts.)

_ Chronic fatigue syndrome (5 pts.)

_ Multiple chemical sensitivity (5 pts.)

_ Fibromyalgia (3 pts.)

_ Parkinson's type symptoms (3 pts.)

_ Alcohol or chemical dependence (2 pts.)

_ Asthma (1 pt.)

11. Do you have a history of significant exposure to harmful chemicals such as herbicides, insecticides, pesticides, or organic solvents?

_ Yes (1 pt.) _ No (0 pt.)

12. Do you have an adverse or allergic reaction when you consume sulfite containing foods such as wine, dried fruit, salad bar vegetables, etc.?

_ Yes (1 pt.) _ No (0 pt.) _ Don't know (0 pt.)

GRAND TOTAL:

II. Xenobiotic Tolerability Test (XTT)

For Practitioner Use Only:

OVERALL SCORE TABULATION

MET1229 8/05 Rev 9/05

Recommended protocols based on new detoxification questionnaire (MSQ and XTT) MSQ SCORE _____ (High >50; moderate 15-49; Low <14)

XTT SCORE _____ (High >10; moderate 5-9; Low <4)

MSQ Score XTT Score Description and Additional Nutraceutical Support

50 or > 10 or > High level of general symptoms and elimination Bifunctional, antioxidant, indicated symptoms of elevated toxic load imbalanced detoxifiers diet and chlorophyllin nutraceuticals 15-49 5-9

Additional Symptom-Specific Nutraceutical Support

Water retention and/or frequent or urgent urination Kidney support nutraceuticals. Heartburn and/or intestinal/stomach pain Functional dyspepsia nutraceuticals. Diarrhea, constipation, and/or intestinal/stomach pain **Probiotics**

Note: People with high MSQ but low XTT may be exhibiting pathology that is not related to toxic load. Other mechanisms should be considered such as inflammation/immune/allergic gastrointestinal dysfunction, oxidative stress, hormonal/neurotransmitter dysfunction, nutritional depletion, and/or mind body.

Middle Ear Infections

Acute otitis media is a viral or bacterial infection of the middle ear, usually secondary to an upper respiratory infection (URI). It is most common in children 6 to 36 months old and then again at 4-7 years old. It is the most frequent diagnosis of children in a clinical setting, and it is estimated that about 2 billion dollars is spent each year for conventional medical and surgical treatment of the condition.

Etiology

The Eustachian tube is the focal point of concern in most cases of acute otitis media. The Eustachian tube protects the middle ear from nasopharyngeal secretions, regulates gas pressure in the middle ear, prevents bacteria and viruses from having easy access into the middle ear from the mouth and nasopharynx, and clears secretions from the middle ear. In the child, the tube is at a

horizontal level in the head (the tube becomes slightly vertical in the adult), making it easier for organisms to move from the nasopharynx into the middle ear. The tube opens during the act of swallowing due to the contraction of the tensor veli palatini muscle. Obstruction of the tube and/or abnormal patency are the initiating factors causing acute otitis media. Obstruction may be:

1. **Function:** Due to an abnormal opening mechanism and/or increased tubal compliance.
2. **Mechanical:** Due to abnormal hyperplasia of the tissues around the tubes opening into the nasopharynx or swelling of the tube itself.
3. **Infection/Allergy:** Affecting nearby tissues causing them to swell and occlude the tube. In infants, the bacteria most involved are *E. coli* and *S. aureus*; in older children (but less than 8 years old), the most common bacteria are *S. pneumoniae*, *H. influenzae*, Group A-beta hemolytic streptococci, and *S. aureus*. Over 8 years of age *H. influenzae* is less involved in infections of the ear and the other three bacteria are the main causes. Otitis media usually begins when a viral URI or acute otitis media experiences secondary invasion by one of these bacterial organisms.

Causative Factors

Causative factors involved in susceptibility include:

- 1..Substituting early bottle feeding for breast feeding. Human breast milk seems to have a prophylactic effect on a baby, although the exact reason why is not understood; that is, whether it has more to do with an intolerance to the cow's milk or the natural immune boost provided by mother's milk, or a combination of both. A related factor to bottle feeding is that supine feeding with the bottle has been shown to cause regurgitation of the milk which then has a chance of entering the Eustachian tube.
2. Another very common etiological factor in children is one or more food or inhalant allergies. Allergens may cause acute otitis media by causing mucous production and mucous membrane swelling. Once the allergens are discovered and removed from the child's environment or diet, health can greatly improve. Common food allergens in children include cow's milk, wheat, soy, corn, citrus, and egg, although other foods may be implicated on an individual basis. Inhalant allergies include molds, dust, animal dander, and hay fever. Pre-teen otitis media seems to be related to true food allergies, while otitis media in adults (20 years and older) seems to be mostly food sensitivities.

Symptoms

The initial complaint of acute otitis media is usually that of a persistent painful earache. Children may pull on their ear or bore their finger into the canal. The child's mood may often change to irritability or clinginess. There is not infrequently a history of recent viral URI, although Eustachian tube obstruction from any cause can lead to infection. Hearing loss may occur but is not that common. High fever, chills, nausea, vomiting, and diarrhea may be present. Tympanic membrane is hyperemic, opaque, and bulging; the cone of light is displaced, and the landmarks are hard to discern. Insufflation shows a tympanic membrane that does not move. If the tympanic membrane spontaneously ruptures, there is significant pain relief associated with the flow of bloody, serous, and/or purulent otorrhea.

Course & Prognosis

The potential complications of acute otitis media include acute mastoiditis; petrositis; brain abscess; facial paralysis; epidural abscess; labyrinthitis; hearing loss (conductive and sensorineural); meningitis; subdural empyema; lateral sinus thrombosis; otitic hydrocephalus; and the development of serous otitis media. Symptoms of the beginning of one of the serious complications (all but serous otitis media) include headache, chills and fever, vertigo, and sudden severe hearing loss. The typical course for a child having recurrent infections and seeing an M.D.

for treatment would be continuous use of antibiotics, tympanostomy tubes, tonsillectomy, and adenoidectomy, although these procedures have no significant efficacy in the literature when compared to treatment with placebo. If a child is taken off of foods she/he is intolerant of and avoids other allergens, a complete cessation of acute otitis media episodes may often ensue. Serous otitis media, also known as secretory or nonsuppurative otitis media, is a chronic effusion in the middle ear, resulting from the incomplete resolution of acute otitis media or a chronic obstruction of the Eustachian tube. It may be recognized by seeing an air fluid level or bubbles behind the tympanic membrane with otoscopy, as well as retraction of the membrane, a displaced light reflex, and an ability to see the landmarks more distinctly. It is found in 20-40% of children under 6 years old and may cause conductive hearing loss. On culture, the exudate present is usually sterile but may contain pathogenic bacteria. Allergies have been firmly implicated in patients with serous otitis media, either inhalant (16%), food (14%), or both (70%). Patients who are treated for allergies by removing the offending antigen and/or by desensitization show a very good success rate in curing serous otitis media.

General Treatment Strategies in Otitis Media

1. Assume problem has a dietary component until proven otherwise and in persistent or chronic otitis media problems the best ways to determine any food related sensitivities is through a Applied Kinesiology Muscle Response Test and/or a IgG and Igg4 Food Sensitivity Test.
2. Eliminate all dairy products for at least 3 weeks.
3. Eliminate refined sugars and junk food.
4. Address food intolerance (begin with most simple and inexpensive). Eliminate foods the child commonly eats that are common offenders such as dairy and gluten/wheat, or perform elimination/provocation (E/P) testing. If E/P testing is unsuccessful you may wish to proceed to serum IgG, IgG4, IgE, or IgM, IgD—invasive and costly, but very useful.
5. Eliminate Trans fatty acids from diet.
6. Decrease omega-6 intake while increasing omega-3 intake.
7. Reduce intake of meat and eggs unless child is malnourished.
8. Address biomechanical problems.
9. Interestingly very often children who have asymmetry involving the occipital bone and C1&C2 (Atlas/Axis) vertebrae tend to be more predisposed to otitis media therefore including in prevention of and treatment of otitis media should involve evaluation of those possibilities.

Nutritional Supplementation Options for Ear Infection (Otitis Media)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Acute Otitis Media Nutritional Protocol Considerations

One should never discontinue any prescribed medications without consulting the physician who prescribed them or embark on any nutritional program without consulting with your physician. All food supplements listed supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Considerations

•• D-89-(Topical)

•• **UltraFlora™ Spectrum. Do not microwave!**

Chronic Otitis Media Nutritional Protocol

•• **D-89**

•• **UltraFlora™ Synergy**

— OR —

•• **UltraFlora™ Children's** (chewable grape flavored probiotic).

•• **PhytoMulti® Kids**

— OR —

•• **Ultracare for Kids®**

Additional Considerations

•• Children who have been on repeated courses of antibiotics may need restoration of bowel ecology (**UltraFlora Synergy** and

Probioplex Intensive Care).

•• Breastfed children may require additional zinc (**Zinc Drink**).

Additional Therapy

Interventional Chiropractic Spinal care in that very often in otitis media there are subluxations in person's cervical spine which are interfering with the normal nerve and blood supply to the middle ear. The same holds true with Chiropractic administered Acupuncture in that it can be useful as an adjunctive measure, especially Si Feng in babies and toddlers. Acupressure is reported to provide symptomatic relief of which the Board Certified Chiropractic Physician is well qualified to evaluate and treat.

Otitis in Breast-Fed Infants

•• Child may be sensitized in utero

•• Mother's current diet — which can be evaluated through a Touch For Health Applied Kinesiology Muscle Response Test (TFHAKMRT)

•• Excessive maternal vitamin or drug intake in pregnancy or lactation

•• Poor maternal EFA (Essential Fatty Acids) or zinc intake (quite common)

•• Unrelated to food or nutrition

•• Suspect birth trauma particularly to the child's cervical spine. Again things happen to children and very often when some trauma occurs and the child seem fine we are happy and move on but very often when there is some injury to the child's spine we are not aware that there was an injury but latter on things that seem unrelated to the spine begin but people often fail to have the child's spine checked out.

•• Consider vaccine reaction if child has been immunized.

Nutritional Formula Description & Supplementation Rationale

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

D-89

D-89-1 Ear Drops are an essential oil formula designed to be dropped directly in the ear or applied to cotton and inserted in the ear to address pain and inflammation.

UltraFlora™ Spectrum

UltraFlora Spectrum is a multi-dimensional probiotic intestinal and immune health support provided in a dairy-free capsule form (30 billion per capsule, 7-strains including *Saccharomyces boulardii*, *Bifidobacterium lactis* Bi-07, *Lactobacillus plantarum* Lp-115, *Lactobacillus salivarius* Ls-33, *Lactobacillus acidophilus* NCFM®, *Streptococcus thermophilus* St-21, and *Bifidobacterium lactis* Bl-04).

UltraFlora™ Synergy

UltraFlora Synergy is daily probiotic immune health and digestive support enhanced with prebiotics and designed to provide intestinal support on multiple levels with a patented combination of probiotics and prebiotic fibers, provided in a non-dairy powder base. It supplies a powerful probiotic blend of *B. lactis* Bi-07 and *L. acidophilus* NCFM®. This NCFM strain has been the topic of over 60 published scientific articles, including clinical trials for a number of bothersome GI symptoms.

UltraFlora™ Children's (chewable grape flavored probiotic)

UltraFlora Children's is formulated for daily immune health and digestive support with a proprietary probiotics blend of *B. lactis* Bi-07 and *L. acidophilus* NCFM® provided in a delicious, natural grape-flavored chewable tablet.

PhytoMulti® Kids

PhytoMulti Kids—The Smart Multi. PhytoMulti Kids goes beyond basic wellness support with 16 vitamins and minerals combined with a proprietary combination of 9 fruit and vegetable powders and extracts. Designed to complement a healthy diet with a rainbow spectrum of phytonutrients to activate health potential like no other chewable foundation nutrition formula. Here's what makes PhytoMulti Kids so smart:

- Optimized with 16 essential vitamins and minerals, including the vitamin C equivalent of 1 orange to help safeguard the nutritional needs of growing, active children.
- Intelligent combination of fruit and vegetable powders and extracts, including tomatoes, carrots, broccoli, Brussels sprouts, spinach, kale, onions, and blueberries.
- Designed to provide multidimensional support to promote overall health and well-being.
- Kid-tested and approved, natural tropical citrus fruit flavor—and sweetened with xylitol.
- Ideal for children and adults who would rather not swallow tablets or capsules.

Ultracare for Kids®

UltraCare for Kids is specifically formulated for children with food sensitivities/allergies. It provides a comprehensive blend of nutrients to nutritionally support the reduction of symptoms associated with food allergies.

- Low-allergy-potential rice protein concentrate.
- Fructooligosaccharides to support the growth of beneficial bifidobacteria.
- Dairy-free calcium to support bone health.
- High quality foundation nutrition.

Eczema (AKA: Atopic Dermatitis)

What is eczema? Eczema is a general term for rash-like skin conditions. The most common type of eczema is called atopic dermatitis, which is an allergic reaction. Eczema is often very itchy and when you scratch it, the skin becomes red and inflamed. Eczema affects adults and children, but it is most common in babies. *What is atopic dermatitis?*

Atopic dermatitis is a chronic skin condition. "Atopic" describes an inherited tendency to develop dermatitis, asthma, and hay fever.

"Dermatitis" means that the skin is red and itchy. *When does atopic dermatitis start and how long does it last?* Atopic dermatitis usually starts during infancy and continues into childhood. There

are times when the condition gets worse (called flare-ups). Flare-ups are followed by times when the skin will heal and there may be no signs of atopic dermatitis (called remission). Remission can last for weeks, months, or even years. Some children will outgrow atopic dermatitis, and others will still have it when they are adults. Flare-ups in adults tend to be less severe.

Symptoms

Atopic dermatitis and eczema may start out as dry, extremely itchy skin. The rash may become very red, swollen, and sore. The more you scratch it, the worse it generally gets. A clear fluid may leak from the rash. Eventually, the rash will crust over and start to scale. Common places for the rash are in the elbow creases, behind the knees, on the cheeks, and on the buttocks.

Causes & Risk Factors

You are more likely to have atopic dermatitis or eczema if a family member has it. They aren't contagious, which means you can't catch them from other people. The exact cause of eczema and atopic dermatitis is unknown.

Management

Eczema and atopic dermatitis can't be cured, but they can be managed, and you can learn to avoid the things that trigger them.

1. Limit your contact with things that can irritate your skin. Some things that may irritate your skin include household cleansers, detergents, aftershave lotions, soap, gasoline, turpentine, and other solvents. Try to avoid contact with things that make you break out with eczema.
2. Soaps and wetness can cause skin irritation. Wash your hands only when necessary and use a mild unscented soap such as Dove, Basis, or Oil of Olay, especially if you have eczema on your hands. Dry your hands completely after you wash them.
3. Wear gloves to protect the skin on your hands. Wear vinyl or plastic gloves for work that requires you to have your hands in water. Also, wear gloves when your hands will be exposed to anything that can irritate your skin. Wear cotton gloves under plastic gloves to soak up sweat from your hands. Take occasional breaks and remove your gloves to prevent a buildup of sweat inside your gloves. Wear gloves when you go outside during the winter.
4. Cold air and low humidity can dry your skin, and dryness can make your eczema worse. Wear clothes made of cotton or a cotton blend. Wool and some synthetic fabrics can irritate your skin. Care for your skin in the bath or shower. Bathe only with a mild unscented soap, such as Dove, Basis, or Oil of Olay. Use a small amount of soap.
5. Keep the water temperature cool or warm, not hot. Soaking in the tub for a short time can be good for your skin because the skin's outer layer can absorb water and become less dry. Soak for 15 to 20 minutes. Then use a soft towel to pat your skin dry without rubbing. Immediately after drying, apply a moisturizer to your skin. This helps seal in the moisture.
6. Consider using a quality moisturizer on your skin every day. Moisturizers help keep your skin soft and flexible. They prevent skin cracks. A plain moisturizer is best. Avoid moisturizers with fragrances (perfume) and a lot of extra ingredients. A good, cheap moisturizer is plain petroleum jelly (such as Vaseline). Use moisturizers that are more greasy than creamy, because creams usually have more preservatives in them. Regular use of a moisturizer can help prevent the dry skin that is common in winter.
7. Avoid getting too hot and sweaty. Too much heat and sweat can make your skin more irritated and itchy. Try to avoid activities that make you hot and sweaty.
8. Learn how to manage stress in your life.

Eczema can flare up when you are under stress. Learn how to recognize and cope with stress. Stress reduction techniques can help. Changing your activities to reduce daily stress can also be

helpful. Control of stress, nervousness, anxiety, and depression may help prevent flares of eczema. Mind/body techniques that have shown some success include cognitive-behavioral therapy, autogenic training.

Dietary Restrictions that may help avoid flare-ups.

Dietary restrictions that may help avoid flare-ups include eggs, fish, peanuts, gluten (wheat), and soy. This is very individual and should be discussed with your healthcare provider. A doctor, dietitian, or naturopath, for example, can help you make these dietary changes and determine if the lack of these foods in your diet is reducing the incidence and severity of your eczema.

NOTE1: Although somewhat controversial, some studies have shown that children who are exclusively breast-fed for at least 4 months are less likely to get eczema. This is particularly true when the nursing mother has avoided cow's milk in her own diet.

•• **NOTE2:** Similarly, studies suggest that babies whose mothers used probiotics during pregnancy and while breastfeeding were less likely to have eczema up to 2 years of age.

•• **NOTE3:** Data clearly shows a very high rate of IgE sensitization to foods and IgE-mediated allergy to egg, milk, and peanut in children with persistent atopic dermatitis and asthma resistant to standard medical therapies. *The Journal of Allergy and Clinical Immunology, Volume 128, Issue 1, pages 214-215, July 2011*

Treatment Approach

The goals when treating eczema are to heal the skin, reduce symptoms, prevent skin damage, and prevent flares. Treatment may vary depending on age, symptoms, and general health. Developing skin care routines, identifying factors that trigger flares, and avoiding these triggers is a large part of any treatment plan. As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor when we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

1. Paying attention (even keeping a diary) to what you (or your child) eat and the effect it has on the skin may help indicate which foods provoke flares of eczema. Potentially provoking foods include peanuts, milk, soy, wheat, fish, and eggs.

2. Foods high in saturated fats (like meat and full-fat dairy) and trans-fatty acids (such as fried foods and hydrogenated oils) may stimulate inflammation, as might sugar and highly processed foods. On the other hand, fresh fruits (particularly dark berries) and vegetables, whole grains, and foods rich in omega-3 fatty acids (such as nuts, flax, seeds, and cold-water fish) may reduce inflammation in those without sensitivities to these foods.

Nutritional factors to consider in eczema would include:

Gamma-linolenic Acid (GLA)

GLA is an omega-6 essential fatty acid. There is some evidence that the metabolism of essential fatty acids is abnormal in people with eczema, resulting in low levels of GLA. Several early studies suggested that GLA derived from evening primrose oil (EPO) and borage oil is beneficial for relieving symptoms associated with this skin condition such as itching, redness, and scaling. However, more recent studies have not had the same positive results. Whether or not GLA or EPO supplements work for eczema may be very individual. Interestingly, preliminary studies show that pretreatment of skin with fatty acid-rich creams can reduce the severity of eczema or prevent

eczema entirely. Also, based on animal research, it has been found that arachidonic acid is essential for healthy skin function. This new understanding may have implications for treating the flaky, itchy skin that sometimes develops without an attributable cause in infants.

Our bodies make arachidonic acid from linoleic acid, an essential fatty acid that we must obtain through our diets. It is found mainly in vegetable oils. Scientists have long attributed healthy skin function to linoleic acid, which is important because it provides the lipids that coat the outer layer of the skin, keeping the body from losing water and energy, which would retard growth, the scientist said. But skin function seems to be more complicated than that. These itchy mice had plenty of linoleic acid. They just couldn't convert it to arachidonic acid because the gene to make the necessary enzyme had been knocked out, he noted.

Arachidonic acid is also essential to the production of prostaglandins, compounds that can lead to inflammatory reactions and are important to immune function. Common painkillers like aspirin and ibuprofen work by inhibiting the conversion of arachidonic acid to prostaglandins. "We usually think of inflammation as a bad thing, but in this case, prostaglandins prevented dermatitis, which is an inflammatory reaction. We measured prostaglandin levels in the animals' skin, and when we fed arachidonic acid to the knockout mice, they resumed making these important chemical compounds." *Journal of Lipid Research*, 2010

Probiotics

Probiotics, or "good" bacteria, inhabit the intestines and protect against the proliferation of "bad" organisms that can cause disease. Studies suggest that gut bacteria in babies at high risk for allergic disorders may be different from that of other babies. Two well-designed studies of mother-infant pairs showed that babies of mothers who took probiotics while pregnant and breastfeeding were less likely to have eczema in the first two years of life, and regarding supplementing the child with probiotics, infants exposed to probiotics through diet supplements from 35 weeks' gestation through 2 years of age had a significantly lower risk for eczema and rhino conjunctivitis. According to the study "Probiotics Associated With Reduced Eczema Risk in Young Children" in *Clin Exp Allergy*, published online February 6, 2012. The most commonly used probiotics are *Lactobacillus* species.

Sulfur/Keratin

Sulfur is found abundantly in keratin, a protein that strengthens hair, nails, and skin. Sulfur baths and other forms of sulfur, such as MSM creams (MSM Rejuvenator), applied directly to the skin seem to benefit eczema.

Melatonin

Reduced levels of nocturnal melatonin have been linked to sleep disturbance and increased disease severity in children with atopic dermatitis. Scratching in the night and sleep disturbance are always the major concerns for most of the atopic dermatitis children and their parents.

Conclusion:

Melatonin supplements are a safe and effective way to address sleep problems in children with atopic dermatitis." <http://bit.ly/1j8o7tL> — *JAMA Pediatr*, 2015

One question that often comes up is how long a trial of melatonin should last. "There is not a good study on this, but my expert opinion would be that for a child who has difficulty falling asleep, try it for a couple of weeks, and if it makes absolutely no difference, then it's probably time to talk to the pediatrician because that means there is probably something else going on," Dr. Shalini Paruthi (spokesperson for the American Academy of Sleep Medicine), advised.

Nutritional Supplementation Options for Eczema

NOTE: Regarding dosing for children. The general recommendations are dosed for an average 150 pound adult. For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc. Adult or child that can swallow tablets:

As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Acute Stage

UltraFlora™ Acute Care

Melatonin Pro

Recovery / Maintenance

Perimine®

Endefen™

Appropriate Wellness Essentials® Formula

Topical Application:

MSM Rejuvenator

For children that cannot swallow tablets but again if that is to be pursued it should be under the supervision of licensed health care provider who has proven expertise in pediatrics.

UltraCare for Kids®

UltraFlora™ Acute Care.

MELATONIN LIQUID

Dietary Considerations

- Modified Elimination Diet

Nutritional Formula Description & Supplementation Rationale

Perimine®

Perimine is a patented extract of perilla seed (*Perilla frutescens*), an herb that supports a healthy respiratory and immune response.

- Ongoing herbal support for normal breathing and a healthy immune response.
- Traditionally used to support respiratory health and modify the allergic response.

Endefen™

Endefen is uniquely designed with the goal of nutritionally supporting the overall health and function of the upper gastrointestinal (GI) tract. This exceptional formula goes far beyond the competition by addressing multiple factors that contribute to GI health.

Formulated To:

- Support the integrity of the gastric lining by promoting the growth of gastric mucosal cells.
- Promote the thickness and strength of the protective gastric mucin layer.
- Selectively promote Bifidobacterium and Lactobacillus acidophilus growth to support balanced, healthy flora.
- Provide key nutrients to enhance GI immune system function.

- Promote the production of beneficial short-chain fatty acids, and a decrease in generation of ammonia and beta-glucuronidase.

Wellness Essentials® Formula

The Wellness Essentials “family” is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition.

UltraCare for Kids®

UltraCare for Kids is formulated for children with atopic disorders such as eczema, rhinitis, and allergy responsive asthma.

- Features low-allergy-potential rice protein for children with dairy, egg, gluten, corn protein, or soy protein sensitivities.
- Provide non-dairy calcium—250 mg per serving. When combined with the accompanying diet plan, provides high quality nutrition for children with food sensitivities.
- Comes with a detailed Parent Guide explaining product use, a suggested food and snack list with sample menus for elimination diet programs, and a diary for recording diet and symptoms.
- Available in delicious vanilla flavor.
- GLA help support healthy fluidity and permeability of delicate cell membranes.
- GLA help balance series 1 prostaglandin levels.

“GLA is an unusual fatty acid found in evening primrose oil, black currant oil, and borage oil that is very hard to come by in the diet. It has specific nourishing effects on skin, hair, and nails that are not duplicated by omega-3 fatty acids. Supplemental GLA is recommended for eczema, an allergic skin condition common in infants, children, and young adults. Eczema produces itchy, thickened, red areas on various parts of the body. It tends to come and go and often occurs in conjunction with other allergic conditions such as asthma. GLA is quite beneficial for eczema. However, it doesn’t provide immediate relief for this and other skin problems. Results usually take six to eight weeks.” <http://www.drweil.com/drw/u/id/QAA137880>.

Primrose oil and Borage oil are high in GLA

It is theorized that individuals who suffer from Eczema may have a familial impairment in omega-6 fatty acid metabolism, specifically the conversion of linoleic acid (LA) to gamma-linoleic acid (GLA). Evening Primrose oil and Borage oil are high in GLA, the conversion of which from linoleic acid may be reduced in atopic eczema. Mothers of children with atopic eczema have a significantly greater proportion of linoleic acid, and a smaller proportion of DGLA (derived from GLA) in their breast milk than controls.

- Wright, S. et al. Breast milk fatty acids in mothers of children with atopic eczema. *Br J Nutr* 62(3) :693-98, 1989. University of Illinois scientists have learned that a specific omega-6 fatty acid may be critical to maintaining skin health and the lack of omega-6 fatty acid is led to severe dermatitis. *Journal of Lipid Research*, 2010.

UltraFlora™ Acute Care

UltraFlora Acute Care is a unique probiotic that combines the widely recommended, targeted relief of *S. boulardii* with the strains *B. lactis* HN019 and *L. rhamnosus* HN001 to support immune health and provide relief for occasional loose stools. Formulated with the goal of:

- Supporting a healthy intestinal environment and immune response.
- Provide the *Lactobacillus rhamnosus* HN001 probiotic strain associated with a reduced risk of eczema (see attached research below) .

- Provide targeted support for healthy intestinal function.
- Designed for reliable outcomes and acute care with a concentrated dose of *S. boulardii*.
- The ID Guarantee: The purity, clinical reliability, and predicted safety of Metagenics probiotic formulas are guaranteed through the scientific identification of strains with established health benefits. Assuring potency and high viability, each strain is also tested for acid tolerance and cell adherence in vitro. Probiotics Associated With Reduced Eczema Risk in Young Children *Clin Exp Allergy*. Published online February 6, 2012. Clinical Context.

Probiotic role in Immunomodulating Properties,

Probiotic supplements can have important immunomodulating properties, particularly among children. Wickens and colleagues, the authors of the current study, previously reported on their results of a placebo-controlled randomized trial of *Lactobacillus rhamnosus* HN001 and *Bifidobacterium animalis subsp lactis* strain HN019. These probiotics were administered from 35 weeks' gestation among pregnant women to age 2 years among their offspring. The study's results, which were published in the October 2008 issue of the *Journal of Allergy and Clinical Immunology*, found that the HN001 strain reduced the risk for incident eczema by age 2 years by approximately half. Infants exposed to L rhamnosus through diet supplements from 35 weeks' gestation through 2 years of age had a significantly lower risk for eczema and rhino conjunctivitis, according to a study published online February 6, 2012 in *Clinical and Experimental Allergy*.

Melatonin Pro – Liquid Form

Formulated To:

- Support healthy sleep
- May help with normal sleep cycles May assist with jet lag
- Melatonin is a potent antioxidant.

What is Melatonin?

Melatonin is a hormone that is produced by the pineal gland in the brain. Melatonin levels vary in 24 hour cycles and are controlled by our body clock. Normally its production is reduced by being in bright light. Levels increase at night. Due to stress and natural aging, the production of melatonin can drop off significantly. Melatonin appears to be important in helping regulate the internal body clock's cycle of sleep and wakefulness. People with sleep disorders and altered circadian rhythms, such as occur in jet lag, night shift work, and various neuropsychiatric disorders, oral administration of melatonin may provide the necessary resynchronization of those cycles. "Reduced levels of nocturnal melatonin have been ed to sleep disturbance and increased disease severity in children with atopic dermatitis"... "Scratching in the night and sleep disturbance are always the major concerns for most of the atopic dermatitis children and their parents."

Conclusion: "Melatonin supplements are a safe and effective way to address sleep problems in children with atopic dermatitis" –Source: <http://bit.ly/1j8o7tL> - JAMA Pediatr 2015. One question that often comes up, she noted, is how long a trial of melatonin should last. "There is not a good study on this, but my expert opinion would be that for a child who has difficulty falling asleep, try it for a couple of weeks, and if it makes absolutely no difference, then it's probably time to talk to the pediatrician because that means there is probably something else going on," Dr. Shalini Paruthi (spokesperson for the American Academy of Sleep Medicine), advised.

MSM Rejuvenator

MSM Rejuvenator lotion contains a therapeutic blend that rejuvenates the skin's natural ability to protect itself. MSM is a form of sulfur, which is responsible for the flexible disulfide bonds

between cells, including those that make up the skin. Consequently, MSM enhances tissue pliability and encourages repair of damaged skin.

Edema / Water — Fluid Retention

It should be the first priority to determine the underlying cause(s) for the edema/fluid retention, here are a few of the primary factors to consider:

Hormonal Dys-regulation

If the hormonal dys-regulation is causing fluid retention, address with hormone balance nutritional support.

Toxicity / Medication Side Effects

Remember, “the solution to pollution is dilution.” In the bodies case it tries to dilute the toxin load by retaining extra-cellular fluid (thus diluting the toxin(s) at the cellular level), so in that case, a detoxification program that addresses toxicity and supports kidney function/fluid balance would be appropriate

Congestive Heart / Circulation Issues (See Congestive Heart Failure)

Consider CoQ-10 and Cardiogenics® Intensive Care for Peripheral Artery Disease, Argincor®

Is the patient **drinking enough clean water** for healthy turnover of fluids in the body?

What Can You Do? First and foremost reduce yourself intake. Check the labels for salt. We need sodium Chloride but by and large the majority of prepared foods are excessively high in salt:

- 1. Wear loose clothing;** tight clothing around ankles and feet can exacerbate swelling.
- 2. Sit when you can;** don't stand for extended periods of time if you can avoid it.
- 3. Don't cross your legs;** sitting with legs crossed can slow blood flow to your legs even more.
- 4. Drink water (Preferably spring water that is certified as free of toxins. Staying well hydrated will help your kidneys flush fluids out of your body.**
- 5. Eat protein;** without enough protein, your body may retain even more fluids. Preferably vegetable and if it is of chicken, turkey, duck skinless and there is a high probability that the fat in poultry is saturated fat.
- 6. Eat cucumbers;** they are a natural, gentle diuretic.
- 7. Nettles (stinging nettles, Urtica dioica);** this leafy green provides a gentle, fluid balancing, natural diuretic.
- 8. Dandelion greens or tea (taraxacum officinale);** supports the kidney's excretion of excess fluids.

Nutritional Supplementation Options for Edema / Water — Fluid Retention

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any food supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s) When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Herbal Water Balance.

Renagen™ DTX.

Nutritional Formula Description & Supplementation Rationale

Herbal Water Balance Natural diuretic suitable for all ages.

One capsule supplies:

Active ingredients—Proprietary Blend 120 mg. (Buchu [leaf], couch grass [root])

Other ingredients—Proprietary Blend 330 mg

(Hydrangea [root], corn [silk], juniper [berry], burdock [root], uva ursi [leaf], ginger [root], parsley [leaf] and marshmallow [root]) Hydrangea arborescens 1x, Sabal serrulata 1x, Stigmata maidis 1x, Triticum repens 1x, Barosma crenata 1x, Natrum phosphoricum 1x, Kalium phosphoricum 1x, 30% alcohol in distilled water.

Renagen™ DTX

Natural kidney and detoxification support formula. Renagen DTX is a specific blend of nutrients and traditional herbs to promote healthy detoxification and protect against free radical damage.

Also provides targeted B vitamins including L-5-methyl tetrahydrofolate—a body-ready, nature-identical form of folate— designed to support cardiovascular health for individuals with signs of renal stress.

Facet Syndrome - Lumbar/Cervical Facet Syndrome

Facet syndrome is used to describe chronic or acute inflammation of the articular facet joints that are vital in assisting in the guiding vertebral motion. In effect they are like shingles on a roof of a building (spine) that have varying angles which decrease in angle from the cervical (45degrees) through the thoracic and lumbar spine. At the top they are referred to as the superior surface and at the bottom the inferior surface and they are involved in all motions of the adjacent vertebrae therefore the movement and location of the vertebrae affects the status of the facets. In normal health the surfaces the facets are lined by cartilage and surrounded by capsular ligaments which are richly innervated by pain fibers that originate in the spinal cord.

Inflammation and Vertebral Malalignments

These joints are inflamed by trauma (as in flexion/extension injuries; “whiplash “involving the cervical, thoracic or lumbar spine), spinal subluxations, curvatures, degenerative spinal bone disease or in overloading injuries such as lifting a heavy load and extending back to carry the load on the facet joints (lumbar spine).

Untreated Spinal Issues

Whether induced by heredity, trauma or overloading, this condition usually worsens unless treated by someone like a Doctor of Chiropractic who has considerable education and the non-invasive care of such conditions. Local muscles spasm can cause aberrant motion of the joints. When untreated or in correctly treated the local connective tissues inflame and begin to scar causing further aberrant motion.

Note: Similar to medicine there are many sub specialty’s in Chiropractic there are different approaches to treating spinal problems therefore one should do what they can to evaluate the approach that they feel would perhaps best suit them. Likewise if you have tried some aspect of chiropractic care and it has not satisfied your wants then move onto another approach.

Bone Spurs- Osteophytes

Facet joint deterioration can lead to the development of bone spurs (osteophytes), which grow along the edges of vertebral openings in response to diminished spinal stability. If these spurs come into contact with adjacent nerve roots or the nearby nerve emitting from the intervertebral

foraminal in the neck, mid or lower back which can cause pain, tingling, numbness, and muscle weakness in the upper and lower extremities.

Cervical Facet Syndrome

Cervical facet syndrome (radiculitis) is the term used to describe the pain associated with arthritis of the facet joints within cervical spine (lower neck and one or both of the upper extremities) region of the spine. The flexible and weight-bearing (average 8-10) of the skull and spinal curvatures, degenerative diseases and spinal subluxations are the most common site for deterioration of the facet joints, which are hinges that connect the vertebrae. While the causes are obscure, it is known that the aging process is a factor and people age 50 and older are far more likely to develop the condition.

Lumbar Facet Syndrome

Lumbar facet syndrome is the term used to describe the pain associated with arthritis of the facet joints within the lumbar (lower back) region of the spine. The flexible and weight-bearing lumbar region is the most common site for deterioration of the facet joints, which are hinges that connect the vertebrae. While the causes are obscure, it is known that the aging process is a factor and people age 50 and older are far more likely to develop the condition.

Symptoms

- Pains in the neck, back, upper or lower extremities.
- Muscle spasms
- Palpable localized swelling and tenderness at the facet joint
- Antalgia –postural asymmetry's
- Neck held in flexion to relieve the facet and overall guarded posture with loss of flexibility and normal pain free ranges of movement.
- Pain with spinal extension
- Pain with axial loading

Nutritionnel Supplémentation Considérations for Facet Syndrome /Lumbar and Cervical Facet Syndrome

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes Touch For Health Applied Kinesology Muscle Response Test whole person health and wellness care will have expertise in giving counsel.

- **Chondro Jointaide-** depending upon degree of discomfort; as pain diminishes, gradually reduce dosage down. While some people experience relief within one week, full effect generally takes 2-3 months.

- **Glycogenics®.**

Dietary Suggestions

- Anti-Inflammatory Diet

Interventional Chiropractic Care

Many people diagnosed with facet syndrome either have spinal curvatures and/or spinal subluxations which in one way or others effect the facets, spinal discs, vertebrae and the intervertebral foramina and the nerves, arteries, veins, lymphatics and acupuncture meridians that pass through those foramina. Therefore very often chiropractic corrective manipulations,

chiropractic supervised massage and acupuncture help people recover from those issues. But keep in mind that there are many different forms of Chiropractic treatment therefore if one doesn't accomplish your goal then consider moving on and try another approach.

Chiropractic supervised Exercise Considerations

First keep in mind that as potentially good as physical exercise can be everyone's body is different therefore responds differently to physical exercise. That being the case everyone has physical limitations thus we should learn and respect them.

The No Pain – No Gain” philosophy might be called for in some situations but when possible it is far better to exercise to tolerance.

Secondly muscles, ligaments, tendons and articular joints have the following ranges of motion potentiality's - Flexion, Extension, Rotation, Lateral flexion and Circumduction. Thus it doesn't matter what music were hear playing, the equipment we might be attempting to utilize muscles, ligaments, tendons and articular joints have the following potentiality's- Flexion, extension, Rotation, Lateral flexion and Circumduction have limitations and when we exceed them not only are those muscles, ligaments, tendons and articular joints going to rebel but so do the nerves, artery's, veins, lymphatics and acupuncture meridians and the organs they innervate.

Thirdly no human body is thus its functions are influenced by their DNA, previous medical history therefore what may see others doing in excess may not be appropriate for us. To varying degrees we can do things to create positive influences on our DNA and past medical history but DNA remains the same and the damages that come from past health incidents continue to have effects.

Fourth there are untold numbers of books, CD's, DVD's, health clubs and those who promote themselves, the company they're employed by or own . Some are trained in physical therapy, Chiropractic and that's fine but in spite of their formal education the younger they are the less experienced they are therefore take everything they say consciously.

Fifth if you're going to become involved with a trainer, Chiropractor, Physical Therapist then (a) stand back and watch them and (b) look into their eyes as the eyes are reflectors of the soul (were not talking about religion). The eyes can tell us if they are coming from the bright or dark side.

Sixth go slow, be moderate, gradually acclimate your body to the exercise program. Don't try and do what others are doing.

Seventh is there one physical exercise that not only is superior to all other exercises and has the least potential harmful physical ramifications: Yes walking and if possible.

Eight Food Supplements When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure.

Nutritionnel Formula Description & Supplementation Rationale

Chondro Jointaide – it is important that any food supplement be GMP Certified Pharmaceutical Quality as when it is there is a greater opportunity that it could have more potential benefits.

Chondro Jointaide is a unique combination of nutrients that support regeneration and healing of cartilage and soft tissue in convenient packets.

Glycogenics®

Glycogenics is an advanced balanced B-complex formula that features a blend of B vitamins and complementary nutrients. Designed to promote healthy homocysteine metabolism, energy levels, and a healthy stress response. Supports normal growth and development.

Fibromyalgia(FM)

Adapted from “Nutritional Therapies for Fibromyalgia Syndrome,” written by Kristi Hughes, ND and re-adapted and updated by Gerald and P. Diane Lalla and Richard W. Jensen

Fibromyalgia is a syndrome characterized by generalized musculoskeletal pain and stiffness, chronic aching, fatigue, and multiple areas of local tenderness that can be identified during physical examination. Research studies suggest that fibromyalgia pain may be the result of a combination of factors affecting the activity of muscle cells and the central nervous system. Various conventional treatment modalities have been tested in fibromyalgia patients; unfortunately, these are often ineffective and may result in adverse side effects. A natural approach that incorporates nutritional support and chiropractic spinal and muscle skeletal care for the body processes implicated in the pathogenesis of fibromyalgia holds great promise for the millions suffering from this chronic syndrome. Fibromyalgia (FM) is a syndrome that presents with concurrent signs and symptoms characterized by chronic fatigue; widespread musculoskeletal pain; and tenderness at specific sites in the neck, spine, shoulders, and hips referred to as “tender points.” Sleep disturbances, morning stiffness, headaches, irritable bowel syndrome (IBS), depression, and anxiety are also commonly associated with this syndrome.

Interventional Chiropractic

Being that every tissue in the body is related to the brain, spinal cord and spine when there are FM issues it behooves the person to seek the expertise of a Doctor of Chiropractic – the nerve, spine and muscle skeletal specialist who includes Touch For Health Applied Kinesology Muscle Response Tests . This is so as no tissue can function harmoniously without proper amounts of nerve energy (life force), or blood all of which are regulated by the spine through which the nervous and vascular systems are regulated. This is of vital importance as good as the following nutraceuticals can be in helping prevent and/or treat FM if the tissues are not receiving proper nerve and blood supply the potential effectiveness of nutraceuticals will be limited. This is especially so in that very often people with FM have un-recognized dysbiosis – gastrointestinal issues that are one of the roots FM.

Pathology

Because FM is a multi-factorial syndrome that involves a wide range of bodily processes, treating biochemical pathology is helpful. A good treatment program addresses the four main areas that have established roles in the etiology or progression of the disease. These include mitochondrial dysfunction, hypothalamus-pituitary-adrenal (HPA) dysregulation, toxicity, and intestine/nervous system abnormalities.

Mitochondrial Dysfunction

Malfunction of mitochondria is believed to be a primary factor in the etiology of FM, and abnormalities of the mitochondrial membranes in these patients have been reported. Mitochondria, which are concentrated in muscle tissue, are often referred to as the “electromagnetic generating powerhouses” of the cells due to their role in energy (ATP) production. Compromised mitochondrial activity can result in alterations in muscular function, as well as nervous, immune, and cardiac dysfunction. Certain nutritional factors play a role in maintaining the integrity and proper functioning of the mitochondria.

The following formulas have been used in FM patients in clinical settings: Mitochondrial Antioxidant Formula:

A combination of nutrients known to positively influence mitochondrial energy production, along with antioxidants, may support a higher rate of ATP synthesis, as well as protect mitochondria from free radicals.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Lipoic Acid and B Complex vitamins.

Nutrients such as lipoic acid and B vitamins serve as cofactors for cellular energy production and metabolism; thiamin supports the activity of enzymes that influence citric acid cycle activity and activities of the respiratory chain.

Amino Acids

Amino acids like Creatine are believed to allow muscles to regenerate ATP, and N-acetyl-L-carnitine helps transport nutrients (i.e., fatty acids) into the mitochondria for energy production. Keep in mind that most nutrients are attached (Chelated) to amino acids in the small intestine and then absorbed and transported to various locations in the body.

Q10, L-Glutathione, N-Acetylcysteine, Vitamin C and E

Furthermore, antioxidants such as coenzyme Q10, L-glutathione, N-acetylcysteine, and vitamins C and E help prevent oxidative damage that can affect cellular and/or mitochondrial function negatively.

Malic Acid/Magnesium Aspartate Complex:

Malic acid is a natural compound that is necessary for ATP production. Combined supplementation with 1,200 mg of malic acid and 300 mg magnesium administered in a dose-escalated fashion produced significant reductions in the severity of 3 primary pain/tenderness measures in FM patients. In another study, supplementation with malic acid (1,200-2,400 mg) and magnesium (300-600 mg) resulted in subjective improvements in myalgia within 48 hours and reduced tender point index scores were recorded at 8 weeks.

Magnesium/Potassium Aspartate Complex:

Magnesium, potassium, and aspartate have roles in intermediary metabolism (enzyme-catalyzed processes that extract energy from nutrients to build new cells) that may mitigate physical fatigue. In a study examining the effects of potassium, magnesium, and aspartate.

HPA Dysregulation

Many patients with FM have had exposure to significant life stress and/or have inordinate responses to daily life stressors. Altered reactivity of the hypothalamic-pituitary-adrenal (HPA) axis, resulting in hypo secretion of adrenal androgens (e.g., cortisol) has been observed in these patients. One study has postulated that HPA dysfunction may involve serotonergic neurotransmission and alterations in the activity of arginine-vasopressin (AVP) and corticotrophin-releasing hormone (CRH). HPA dysregulation is far reaching and can interfere with proper functioning of the hypothalamus-pituitary-thyroid (HPT) axis. Neuroendocrine abnormalities along the HPT axis are also common in FM patients. Furthermore, due to the association between hypothyroidism and Fibrocitis and myalgia, it is recommended that FM patients be given a comprehensive thyroid hormone test.

Adaptogens

The use of Adaptogens—herbs are believed to possibly help normalize bodily processes and increases the ability to “adapt” to stress—and B vitamins provide a general approach to managing stress.

Traditional Holy Basil Combination:

Adaptogens such as holy basil (*Ocimum sanctum*), ashwaganda (*Withania somnifera*), and brahmi (*Bacopa monnieri*) have a history of use in Ayurvedic medicine which many Doctors of Chiropractic are trained in and are scientifically well supported to improve stress tolerance. Ashwaganda was shown to enhance adaptability to both physical and chemical stress in animals, showing the ability to suppress adrenal enlargement, as well as adrenal ascorbic acid and corticosterone depletion. Ashwaganda also produces positive changes in stress-related prostaglandin and catecholamine production. In other animal testing, brahmi was shown to improve adaptations in sensory, motor, and motivational systems. In humans, it exhibits beneficial effects on anxiety, as well as mental functions such as mental fatigue.

B6/Pantothenic Acid Complex:

The B vitamins, pantothenic acid, and B6 are important in energy production and the response to stress by supporting adrenal hormone production and regulation. In conjugation with ATP and cysteine, pantothenic acid plays an integral role in the synthesis of coenzyme A, which initiates various metabolic processes including the production of glucocorticoids. In an animal study, vitamin B was found to stimulate the secretion of adrenal catecholamines.

Thyroid Support: While normalizing stress-induced changes in HPA function may have a positive influence on the HPT axes, some patients may need additional thyroid support. Several nutrients are believed to possibly support healthy thyroid hormone synthesis, to promote the conversion of thyroxine (T4) to the more bioactive triiodothyronine (T3), and to address receptor dynamics and the expression of thyroid hormone sensitive genes. Such nutrients include iodine, selenium, zinc, and vitamins E, A, and D.

Toxicity

Toxin exposure has been suggested to play a significant role in the development and progression of both FM and CFS, as approximately 47-67% of patients with FM and 53-67% of patients with CFS have reported at least one episode of symptom exacerbation after specific chemical exposure. (Please see Detoxification Section.)

Intestine/Nervous System Support

Another area of interest is the between intestinal dysfunction and FM. Although statistics vary, research suggests that up to 70% of patients with FM complain of symptoms associated with irritable bowel syndrome (IBS). IBS is a functional disorder characterized by chronic abdominal pain with alternating diarrhea and constipation. In comparison with healthy subjects, patients with IBS also tend to experience extra intestinal symptoms that overlap with FM complaints, including increased nerve sensitivity, morning stiffness, headaches, sleep disturbances, and fatigue.

Improved GI health can be achieved with a nutritional regimen known as the 5R® GI Restoration Program, which addresses the four primary stages of healing: Remove, Replace, Reinoculate, Regenerate, and Retain.

Natural Treatment Approaches

An important nutritional foundation for optimal health and healing in both healthy individuals and patients suffering from chronic conditions (e.g., FM) includes a diet rich in fruits and vegetables, an adequate intake of omega-3 fatty acids, and a balanced multivitamin/mineral supplement. It should be noted that when patients were asked to list the top 10 most beneficial therapies for fibromyalgia, no drugs were mentioned. When they were asked to list what they considered to be the 10 most harmful therapies, they named only approved drugs. Clin Exp Rheumatol. 2013;31[6 Suppl 79]:S34-S40.

Nutritional Supplementation Considerations for Fibromyalgia

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor and are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

CoQ-10

EPA-DHA 1000.

Vitamin D3 5000. Consider patient-appropriate adaptogenic herbal formula for stress.

Dietary Options

Anti-Inflammatory Diet

Can ingesting Night Shade foods or monosodium glutamate containing foods trigger fibromyalgia?

Yes four women with fibromyalgia (duration of illness, 2-17 years) who had previously received multiple treatments with limited success had complete or nearly complete resolution of their symptoms within months after eliminating monosodium glutamate (MSG) or MSG plus aspartame from their diet. In each patient, symptoms recurred whenever MSG was ingested. **Comment:**

MSG and aspartate (one of the two amino acids present in aspartame) acts as excitatory neurotransmitters, and can lead to neurotoxicity when used in excess. Research suggests that MSG alone, or MSG plus aspartame, may be a cause of symptoms in some patients with fibromyalgia. Because neither MSG nor aspartame is a necessary component of the diet, a therapeutic trial of avoiding these substances seems worthwhile for patients with fibromyalgia.

Similarly the same holds true with ingesting Night Shade foods

Additional Considerations

Frequency-specific micro current and acupuncture have proven clinically effective in managing pain associated with fibromyalgia. “Aerobic exercise (To tolerance) is the most effective weapon we have; healthy people profit from continuous physical exercise, and so do patients with fibromyalgia.” *European League Against Rheumatism (EULAR) Congress 2013: Abstract SP0061; presented June 13, 2014*

Nutritional Formula Description & Supplementation Rationale

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor.

The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Stabilized, Highly Absorbable Coenzyme Q10. Coenzyme Q10 is believed essential for the health of virtually all human tissues and organs. CoQ-10 also functions as an antioxidant. Current research seems to support the stabilized ubiquinol form of Coenzyme Q10 as the preferred form to ingest as the ubiquinone form of Coenzyme Q10 to be properly utilized, must first be reduced in the body to its active metabolite, ubiquinol. While most ubiquinone is naturally reduced to ubiquinol, the optimal way to supplement Coenzyme Q10 would be to ingest it in its “ready-to-use ubiquinol form.”

D3 5000

D3 5000 features 5000 IU of vitamin D3—the most bioavailable form of vitamin D. Designed to improve Nonspecific Musculoskeletal Pain according to research from The Netherlands: “If you have patients with long-lasting, non-specific musculoskeletal problems, find out if vitamin D level is too low (through Blood and/or and Touch For Health Applied Kinesiology Muscle Responses tests) if so, try to help them with vitamin D supplementation,” Dr. Ferdinand Schreuder from Erasmus MC, Rotterdam advised in an email to Reuters Health. Consider patient appropriate adaptogenic herbal formula for stress.

Adreset®

Adreset features standardized extracts of the adaptogenic herbs ginseng, rhodiola, and cordyceps targeting individuals who are “stressed and tired.”

- Research suggests that these Adaptogens aid the body in adapting to various stressful environmental challenges and thus may help to reduce some of the negative effects of stress.
- These Adaptogens may help promote vitality, immune function, and overall well-being—key components of a comprehensive longevity program.
- Features Adaptogens traditionally used to provide overall stress protection, increased energy, and enhanced mental clarity.
- Promotes healthy hypothalamic-pituitary-adrenal axis function for enhanced ability to adapt to stress.

Exhilarin®

Exhilarin is a proprietary blend of Ayurvedic herbs that are traditionally used to relieve stress, and to help maintain mental acuity and support overall well-being in that they may:

- Promote healthy nervous system function and optimal energy levels.
- Assist the body’s natural ability to adapt to stressful environmental conditions.
- Features adaptogenic herbs that support the balance of body functions during periods of stress.
- A powerful, synergistic herbal blend processed according to the extraction method that optimizes its efficacy.

Serenagen®

Serenagen is a classic, comprehensive herbal stress management formula targeting individuals who are “stressed and wired.” It has been used throughout China since the Yuan Dynasty (1279-1368 A.D.).

- According to traditional Chinese Herbology, a demanding, hectic lifestyle deeply influences mood, mental function, cognitive processes, the cardiovascular system, the liver, and tolerance to change.
- Expertly designed to help maintain equilibrium between body systems and promote a sense of inner calm.
- Provide herbal support for those who may be overworked, sleep too little, or have exhausted physical reserves.

If the patient has thyroid issues consider:

Thyrosol®

Thyrosol is an exciting multi-faceted formula featuring targeted nutrients that promote healthy thyroid function. Many aspects of health, including body composition, energy level, and cognitive function are impacted by thyroid hormone activity. Designed To Support:

- the healthy synthesis of thyroid hormones.
- the steps in hormone metabolism negatively affected by stress.
- the conversion of thyroxine (T4) to the more bioactive triiodothyronine (T3).

- May enhance the binding of T3 receptors to DNA, thereby supporting the expression of thyroid hormone-responsive genes.

If the person has sleep disturbances consider adding:

Benesom®

Benesom is formulated to promote a restful, relaxed state and relieve occasional sleeplessness by beneficially modulating the metabolism of melatonin and GABA. Designed to act centrally, within the brain, this advanced formula features melatonin, which research suggests is able to cross the blood-brain barrier. A typical consumption range for melatonin is 1 mg to 3 mg for supporting occasional sleeplessness. Passionflower extract is added to round out this formula for targeted neurological support.

- Features melatonin, a hormone naturally produced in the brain that helps regulate sleep, waking, and the body's circadian rhythm (or time clock).
- Provides passionflower, which may favorably modulate the metabolism of GABA.
- Features supplemental melatonin, which research suggests is able to cross the blood-brain barrier.

5-HTP Extra Strength

5HTP (5-Hydroxytryptophan) is the precursor to serotonin. Altered serotonin levels have been associated with fibromyalgia.

FirstLine Therapy® Diet

The following food choices guidelines are designed to help you achieve sustained moderate fat loss and improved body composition. Foods with a low glycemic index are emphasized, with the goal of controlling insulin levels and improving your body's ability to utilize insulin. Of course, your menu plan should be individualized depending on your caloric needs, personal health issues, and health goals. You are advised to consult with your medical provider before embarking on any changes in your diet.

Forgetfulness / Memory Loss / Cognitive Function Decline

What is Cognitive Decline and Dementia?

Cognitive decline is when the brain doesn't work as well as it used to and to some varying degrees seems more prominent today than years ago when in fact the reason for this increased instance is that it talked about more mostly through advertisements by drug companies. For example, a person who is experiencing cognitive decline may have trouble with temporary learning, using language, or remembering how to spell some words things. Some cognitive decline is a normal part of growing older – the brain in early stages of decline but as troubling as it can be it is not necessarily a sign of rapid mental decline. One serves themselves well by remembering that in all probability other aspects of their body are in some decline as well but very often there are things we can do to minimize those issues.

Gradual Onset

Cognitive decline that happens some time seems to occur quickly and sometimes gradually but in one way or another affects day-to-day activities and very often it's called dementia. Dementia may be a symptom of a more serious condition such as stroke, Alzheimer's disease, head or injury's to the spine. Dementia is the name for a group of symptoms caused by disorders that affect the brain. People with dementia may not be able to think well enough to do normal activities, such as getting dressed or eating. They may lose their ability to solve problems or control their emotions. Their personalities may change. They may become agitated, see or imagine things that are not there. Memory loss is a common symptom of dementia. However, memory loss by itself does not mean

a person has dementia. People with dementia have serious problems with two or more brain functions, such as memory and language. Although dementia is common in very elderly people, it is not part of normal aging.

The Brain-Spine Connection

Many people suffering with memory issues very often have curves in the cervical spine (particularly in the Atlanto/Occipital region (upper neck.) When that's the situation there is a high probability that spinal subluxations in the neck are interfering with the normal blood and nerves in the brain therefore restricting proper functioning with the brain and spinal cord.

Very often those people either complain of neck pains or not but regardless it is a good idea to have a Doctor of Chiropractic conduct a spinal examination to determine if there are any problems in the cervical spine. Interventional Chiropractic care may not cure the memory and other functions of the brain but it could decrease what would be the continued diminishment of mental acuity.

B.D.N.F. Exercise and the Brain – Miracle Grow

“Researchers and the University of New York’s Langone Medical Center and other institutions conducted a study involving two groups of mice - one group were placed in cages with wheels the other not. The ones in the cage with a wheel utilized the wheel and when their brains were latter examined the researchers found the brain cells to be significantly higher in B.D.N.F. a protein Brain-Derived Neurotrophic Factor sometimes referred to as Miracle-Gro. Which helps neurons to grow and remain vigorous and also strengthens the synapses that connect neurons, allowing the brain to function better. Low levels of **B.D.N.F.** have been associated with cognitive decline both people and animals. Exercise increases levels of **B.D.N.F.** in brain tissue. **B.D.N.F.** gene was partially covered with clusters of a particular type of molecule that binds to the gene, through different amounts. During strenuous exercise the body relies in part on fat for fuel and winds up creating ketones, some of which migrate to the brain. (They are tiny enough to cross the blood brain barrier.) The brain uses these ketones for fuel when blood sugar levels grow low. But it appears that ketones also cause the molecules that hinder the **B.D.N.F.** to loosen its grip, as the scientists realized when they experimentally added ketones to brain tissue from some of the mice. Afterward, their B.D.N.F. genes were blocked by nearly as many of the bothersome molecules, and those genes could get on with the job of making B.D.N.F.”(New York Times 06/22/2016.)

What does that tell us? It tells us that there is a possibility that not only is interventional chiropractic care, nutrition (see below) and exercise that precipitated lowering blood glucose and rising ketones through the body relying on stored fat for metabolic energy could very well enhance the health of the brain and its functions as well as decrease the incidence of Type II Diabetes. It also brings back the fact that when the mass majority of weight loss programs were scientifically compared it was the Atkins low carbohydrate program was the most effect in losing weight, keeping it off and lower amongst other things the incidence of Type II Diabetes and cardiovascular Disease.

Insulin Resistance (IR)

Unbeknownst to many people with health problems there exists with their body insulin resistance (IR), the inability of the body to efficiently use insulin to help metabolize (burn) blood sugar (glucose). When that's the situation it is often accompanied by generalized abdominal obesity, cardiovascular disease, Type II Diabetes, Cognitive issues, etc.

How it Develops: The more refined carbohydrates (High Glycemic Index Foods) a person consumes, the faster their blood sugar raises after a meal. In normal health the body's response is to secrete large amounts of insulin to help move that blood sugar into cells. But insulin (a powerful hormone synthesized by the pancreas including pancreatic amylase, protease and lipase) also promotes fat storage, increased blood pressure, and elevated cholesterol and triglyceride levels. Approximately 55% of Americans are overweight, a sign of metabolic syndrome. In addition, 25% of thin people have insulin resistance, the cornerstone of metabolic syndrome. Based on these numbers, more than 65% of American adults either have or are at risk of metabolic syndrome.

All of this blood sugar and insulin generates large numbers of hazardous free radicals, which predisposes the aging of the body and set the stage for heart disease, cancer, Alzheimer's, and other diseases. Due to the prevalence of obesity and the aging population, and given the relationship among MetS, T2DM, and cardiovascular disease (CVD), a long-term solution is urgently needed. Although pharmaceutical treatment options are available for managing symptoms related to MetS, lifestyle change programs are the recommended "first line of therapy" for the prevention or management of metabolic syndrome.

How much Physical exercise? When physically possible any exercise that consists of walking, jogging, running, bike riding 3-4 miles per hour qualifies. In addition to having positive effects on the muscle skeletal system exercise has many positive effects on the body includes circulation, metabolism, the immune system and the brain therefore mental wellbeing.

Nutritional Supplementation Considerations for Forgetfulness /Memory Loss / Cognitive Function Decline.

As we look at some of the nutritional considerations of mental issues there is in fact nothing to be lost and everything to be gained through attempting to support the brain and nervous system through Interventional Chiropractic care and nutritional supplementation. Aging is inevitable but where there exists nutritional deficiencies and issues in the spine there then is an unnecessary propensity to aging. Following is a discussion of nutritional protocols involved in preventing and/or treating cognitive issues.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any food supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way meant to make a diagnosis, treatment promise cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Preventive-Maintenance:

- Ceralin® Forte.
- Wellness Essentials® Healthy Balance.
- Ceriva®.
- Exhilarin®.
- Ceralin® Forte.
- D3 5000™ .
- Wellness Essentials® Healthy Balance.

Dietary Considerations

- Mediterranean Diet

"Mediterranean Diet led to Less Cognitive Decline" *Neurology* 2013;80:1684-1692.

Healthy eating and reduced risk of cognitive decline.

According to a study published in the journal *Neurology*, a higher diet quality was associated with a reduced risk of cognitive decline. Improved diet quality represents an important potential target for reducing the global burden of cognitive decline. *Published online May 6, 2015*

•• See “The Best Foods for the Brain” below.

Nutritional Formula Description & Supplementation Rationale

Ceralin® Forte

Ceralin Forte is formulated to provide well-rounded support for brain and nerve protection, addressing multiple pathways involved in neurological health. Supports healthy cognitive function, possible by enhancing cellular energy dynamics and designed to:.

- Provide potent antioxidant protection for the central nervous system.
- Support a healthy life cycle of neurons and other cells.
- May protect the blood-brain barrier and nerve cells from oxidative stress.
- Help maintain overall neurological health by supporting healthy mitochondrial function, methylation, homocysteine metabolism, and circulatory function.

Ceriva®

Designed to support for healthy brain aging, cognition, and memory. Ceriva is a proprietary formula containing Huperzine A (from *Huperzia serrata* whole plant extract) and proline-rich Polypeptide Complex (from colostrum), designed to support healthy brain aging, Forgetfulness / Memory Loss / Cognitive Function cognition, and memory by providing ingredients that may beneficially modulate the metabolism of the neurotransmitter acetylcholine and provide neuroprotection. This advanced formula features clinically effective levels of huperzine A (HupA) from toothed club moss and a proline-rich polypeptide (PRP) complex known as Colostrinin™ from colostrum for multidimensional support for neurological health.

- The brain-supportive benefits of HupA and PRP are backed by extensive research.
- Helps support healthy mental function during the aging process.
- Supports the healthy metabolism of acetylcholine, the primary neurotransmitter associated with cognitive function and memory.
- May help maintain brain cell health.
- HupA supports healthy nerve cells.
- Research suggests that HupA may be able to cross the blood-brain barrier to beneficially influence acetylcholine metabolism and provide antioxidant protection.
- Colostrinin is the only proline-rich polypeptide concentrated from colostrum shown in research to target the central nervous system.
- Several clinical studies have demonstrated PRP complex supports healthy cognition in the elderly.
- Laboratory studies with PRP complex have demonstrated antioxidant and DNA protective properties, suggesting it may have beneficial effects on brain aging.

Exhilarin®

Exhilarin is a proprietary blend of Ayurvedic herbs (Holy Basil Leaf, Ashwagandha Root, Amla Fruit, Bacopa Leaf) that are traditionally used to relieve stress, help maintain mental acuity, and support overall well-being with the hopes of: .

- Promoting a healthy nervous system function and optimal energy levels.
- Assist the body’s natural ability to adapt to stressful environmental conditions.
- Features adaptogenic herbs that support the balance of body functions during periods of stress.
- A powerful, synergistic herbal blend processed according to the extraction method that optimizes its efficacy.

Ceralin® Forte

Ceralin Forte is formulated to provide well-rounded support for brain and nerve protection, addressing multiple pathways involved in neurological health. Supports healthy cognitive function, possible by enhancing cellular energy dynamics.

- Provide potent antioxidant protection for the central nervous system.
- Support a healthy life cycle of neurons and other cells.
- May protect the blood-brain barrier and nerve cells from oxidative stress.
- Help maintain overall neurological health by supporting healthy mitochondrial function, methylation, homocysteine metabolism, and circulatory function.

D3 5000™

“There is a recent and growing literature on the associations between vitamin D status and risk of Alzheimer’s disease/dementia, cognitive decline, and brain atrophy.” “Independent of race or ethnicity, baseline cognitive ability, and a host of other risk factors, vitamin D insufficiency was associated with significantly faster declines in both episodic memory and executive function performance, which may correspond to elevated risk for incident AD dementia.” JAMA Neurol. Published online September 14, 2015

Wellness Essentials® Healthy Balance

Advanced Nutritional Blood Sugar Support. Wellness Essentials Healthy Balance is a combination of four premium supplements in convenient packets to provide essential vitamins and minerals, omega-3 fatty acids, antioxidants, and phytonutrients to support healthy blood sugar levels (associated with cognitive decline), and overall health when taken as part of a healthy diet.

Note: The reason for suggesting the Wellness Essentials Healthy Balance (blood sugar support), is that one complicating factor in cognitive decline is the effect of insulin resistance on the brain’s function. (Alzheimer’s dementia is being referred to as “Type-3 Diabetes.”) de la Monte, S. M., & Wands, J. R. “Alzheimer’s disease is type 3 diabetes—evidence reviewed.” *J Diabetes Sci Technol.* Nov 2008; 2(6): 1101–1113. Published online Nov 2008. PMID: PMC2769828. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

The Best Foods for the Brain:

Bret S. Stetka, MD — January 24, 2013 and many similar opinions have been re-confirming since then.

Diet for Depression research from the past several years suggests that consumption of monounsaturated fatty acids (found in olive oil, avocados, and nuts), polyunsaturated fatty acids (PUFAs; found in nuts, seeds, fish, and leafy green vegetables), and supplements containing Eicosapentaenoic acid decreases depression risk over time. To that end, adhering to Mediterranean dietary patterns specifically—that is, a diet rich in fruits, vegetables, nuts, whole grains, and fish and high in unsaturated fat—is associated with a 30% reduction in depression risk, compared with meat- and dairy-heavy diets and diets high in trans-fatty acids; intake of the latter is associated with an increased depression risk over time. Conversely, low levels of PUFAs may increase the risk of developing postpartum depression, according to a 2012 literature review published in the Canadian Journal of Psychiatry. Keep in mind, however, that although there is strong evidence of an association between diet and depression, most studies to date have not proven causality, supporting the need for large, randomized primary prevention trials.

Rethinking Fat

Beyond reducing depression risk, the unsaturated fatty acids common in the Mediterranean diet have other benefits for the brain but as much as we hear about the deleterious effects of saturated fats the human body's intake of saturated fat should be 20%. And unsaturated 80%. A 2012 review published in *Pediatrics* reported on the evidence of PUFA deficiency to attention-deficit/hyperactivity disorder, as well as findings from trials where these fats were used successfully to address ADHD symptoms. Another small study showed that increasing omega-3 fatty acid consumption enhances working memory in young adults. Previous work has linked Mediterranean diets high in olive oil consumption with a lower risk for ischemic stroke, mild cognitive impairment, and Alzheimer disease, and particularly the latter two when associated with high levels of physical activity. Let us not forget the primary food source of hormones is fat therefore if we are to encourage our body to produce hormones we need adequate amounts of fat intake.

Consider Salmon

If you're not allergic to salmon its oily, cold-water fish like salmon, trout, and mackerel are especially good sources of PUFAs, namely omega-3 fatty acids. According to a 2012 study, two servings a week are associated with a modest but clinically significant reduction in stroke risk. A 2010 study suggested that consuming a moderate amount of oily fish was protective against the risk for psychotic symptoms; however, greater intakes were associated with an increased risk. This J-shaped relationship between fish or PUFA intake and mental health problems has also been suggested by other studies and is consistent with the importance of a balanced diet. However, concurrent work from randomized controlled trials has suggested that fish oil may help prevent psychosis in high-risk individuals. A multicenter, randomized double-blind study is underway to determine whether omega-3 fatty acid supplementation can help prevent the onset of psychosis and improve symptoms and outcomes in those at high risk for schizophrenia.

Fruit to Fend Off Stroke

2012 was a good year for fruit. An analysis from the Nurses' Health Study found that high consumption of flavanones, a flavonoid subclass found in high concentrations in grapefruits and oranges, is associated with a 19% lower risk for ischemic stroke in women. A Finnish study published in *Neurology* reported that a diet high in lycopene, a potent antioxidant found in tomatoes, may cut stroke risk in men. Previous work has shown that polyphenols, namely anthocyanins, found in berries and other darkly pigmented fruits and vegetables may slow cognitive decline by inducing autophagy (a process by which cells clear proteinaceous debris to memory loss) and reduce cardiovascular disease risk by reducing oxidative stress and attenuating inflammatory gene expression. Each of these studies points to the importance of a healthy diet high in plant foods and low in processed foods for a range of health outcomes, both physical and mental.

Cut the Soda, Keep Up the Coffee

2012 saw more evidence that coffee might be the original wonder drug. A new observational study to be presented at the American Academy of Neurology meeting in March shows that people who drink four cups of coffee a day are 10% less likely to develop depression. Those who opted for four or more servings a day of diet soda or fruit punch were 30% and 38% more likely, respectively, to develop depression. Past work also suggests that the world's most widely used stimulant cuts depression risk, possibly by altering serotonin and dopamine activity and through its antioxidant and anti-inflammatory properties.

Alcohol: Always in Moderation If Any

The Greeks touted “nothing in excess,” a refrain that still rings true: Low to moderate* alcohol consumption has been associated with numerous potential physiologic benefits with neurologic implications, including improved cholesterol profiles, beneficial effects on platelet and clotting function, and improved insulin sensitivity. Last year we reported that limited alcohol use is associated

with a lower risk for dementia and that moderate alcohol—especially antioxidant-rich red wine—intake may protect against cerebrovascular disease. A new study published in *Circulation Research* found that dealcoholized Merlot reduced blood pressure by approximately 6/3 mm Hg in a sample of 67 men at high cardiovascular risk, suggesting that the beneficial effects of wine consumption may not strictly be due to its alcohol content. However, the health costs to the brain of alcohol consumption can quickly outweigh the benefits, as heavy and long-term alcohol use can lead to alcohol abuse and dependence, impair memory function, contribute to neurodegenerative disease, and hinder psychosocial functioning. *The US Food and Drug Administration defines “moderate alcohol consumption” as up to 1 drink per day for women and up to 2 drinks per day for men. One drink is equivalent to 12 fluid ounces of regular beer, 5 fluid ounces of 12% alcohol wine, or 1.5 fluid ounces of distilled spirits.

Chocolate — and Still More Antioxidants

Many recent studies have added to the already robust body of evidence suggesting that dark, flavonol-rich chocolate may have cardiovascular benefits. A meta-analysis published in *Cochrane Database of Systematic Reviews* reported that individuals who consumed 100 g of dark chocolate every day—a standard Hershey bar weighs 43 g—saw an average blood pressure drop of 2.77/2.20 mm Hg compared with control participants.³⁴ A study out of Finland³⁵ published in *Neurology* reported that individuals who eat at least 52 g of chocolate per week have a 17% lower risk for stroke, compared with those who eat less than 12 g per week. The flavonols in dark chocolate likely contribute to the reported benefits by scavenging free radicals and improving endothelial and platelet function. But always check the label, as some processed chocolate contains trans-fats, which should be avoided.

What Not to Eat: Cut the Carbs

Various 2012 studies further clarified how overly sweet, unhealthy foods affect the brain. An animal study³⁶ out of UCLA found that diets high in fructose can impair cognitive function, which is reversible with omega-3 fatty acid supplementation. Coauthor Fernando Gomez-Pinilla, PhD, told *Medscape Medical News*: “High fructose consumption can induce some signs of metabolic syndrome in the brain and can disrupt the signaling of the insulin receptors and reduce the action of insulin in the brain.” Other work published in *JAMA* suggests that fructose consumption modulates the neurophysiologic pathways involved in appetite regulation and encourages overeating. An October 2012 study³⁸ published in the *Journal of Alzheimer’s Disease* reported that a diet high in carbohydrates and sugar raises the risk for mild cognitive impairment in the elderly, while a diet high in fat and protein may reduce this risk. Lead author Rosebud O. Roberts, MD, an epidemiologist at Mayo Clinic in Rochester, Minnesota commented to *Medscape Medical News* that an “optimal balance” of carbohydrates, fat, and protein may help “maintain neuronal integrity and optimal cognitive function in the elderly.”

What Not to Consider Eating: Red Meat (non-grass fed)

Mounting evidence in 2012 reinforces that high consumption of red meat increases stroke risk. The largest meta-analysis to date looking at the atherogenic effects of red meat found that the risk for total stroke increased by up to 13% for each increase in a single serving of fresh, processed,

and total amount of red meat consumed per day. Earlier in the year another study found that processed and unprocessed red meat is associated with a higher risk for stroke, while poultry was associated with a reduced risk. A study by Sánchez-Villegas and colleagues⁴⁰ found that a diet high in fruits, vegetables, grains, and fish led to a 30% lower depression risk compared with a meaty diet. But, as we pointed out last year, meat quality might be a factor; moderate consumption of unprocessed, free-range red meat may actually protect against depression and anxiety.⁴¹ Mental health nutrition expert Dr. Felice Jacka, a research fellow at Deakin University in Geelong, Australia comments in this report that despite the growing locavore movement, much of the livestock in the United States is raised on industrial feedlots, which “increases saturated fat and decreases very important good fatty acids...pasture-raised animals have a much healthier fatty acid profile.”

Références

1. Sánchez-Villegas, A., Verberne, L., & de Irala, J., et al. Dietary fat intake and the risk of depression: The SUN project. *PLoS One*. 2011;6:e16268.
2. Sánchez-Villegas, A., Toledo, E., de Irala, J., Ruiz-Canela, M., Pla-Vidal, J., & Martínez-González, M. A. Fast-food and commercial baked goods consumption and the risk of depression. *Public Health Nutr*. 2012;15:424-432.
3. Sublette, M. E., Ellis, S., Geant, A. L., & Mann, J. J. Meta-analysis of the effects of Eicosapentaenoic acid (EPA) in clinical trials in depression. *J Clin Psychiatry*. 2011;72:1577-1584.
4. Sánchez-Villegas, A., Delgado-Rodríguez, M., & Alonso, A., et al. Association of the Mediterranean dietary pattern with the incidence of depression: The Seguimiento Universidad de Navarra/University of Navarra follow-up (SUN) cohort. *Arch Gen Psychiatry*. 2009;66:1090-1098.
5. Pierre, J. M. Mental illness and mental health: Is the glass half empty or half full? *Can J Psychiatry*. 2012;57:704-712.
6. Sanchez-Villegas, A., & Martinez-Gonzalez, M. A. Diet, a new target to prevent depression? *BMC Med*. 2013;11:3. [Pub ahead of print.]
7. Millichap, J. G., & Yee, M. M. The diet factor in attention-deficit/hyperactivity disorder. *Pediatrics*. 2012;129:330-337.
8. Narendran, R., Frankle, W. G., Mason, N. S., Muldoon, M. F., & Moghaddam, B. Improved working memory but no effect on striatal vesicular monoamine transporter type 2 after omega-3 polyunsaturated fatty acid supplementation. *PLoS One*. 2012;7:e46832.
9. Fung, T. T., Rexrode, K. M., Mantzoros, C. S., Manson, J. E., Willett, W. C., & Hu, F. B. Mediterranean diet and incidence of and mortality from coronary heart disease and stroke in women. *Circulation*. 2009;119:1093-1100.
10. Kastorini, C. M., Milionis, H. J., & Ioannidi, A., et al. Adherence to the Mediterranean diet in relation to acute coronary syndrome or stroke nonfatal events: A comparative analysis of a case/case-control study. *Am Heart J*. 2011;162:717-724.
11. Scarmeas, N., Stern, Y., Mayeux, R., Manly, J. J., Schupf, N., & Luchsinger, J. A. Mediterranean diet and mild cognitive impairment. *Arch Neurol*. 2009;66:216-225.
12. Scarmeas, N., Luchsinger, J. A., & Schupf, N., et al. Physical activity, diet, and risk of Alzheimer disease. *JAMA*. 2009;302:627-637.
13. Chowdhury, R., Stevens, S., & Gorman, D., et al. Association between fish consumption, long chain omega 3 fatty acids, and risk of cerebrovascular disease: Systematic review and meta-analysis. *BMJ*. 2012 Oct 30;345:e6698.

14. Hedelin, M., Löf, M., & Olsson, M., et al. Dietary intake of fish, omega-3, omega-6 polyunsaturated fatty acids and vitamin D and the prevalence of psychotic-like symptoms in a cohort of 33000 women from the general population. *BMC Psychiatry*. 2010;10:38.
15. Sanchez-Villegas, A., Henriquez, P., & Figueiras, A., et al. Long chain omega-3 fatty acids intake, fish consumption and mental disorders in the SUN cohort study. *Eur J Nutr*. 2007;46:337-346.
16. Jacka, F. N., Pasco, J. A., Williams, L. J., Meyer, B. J., Digger, R., & Berk, M. Dietary intake of fish and PUFA, and clinical depressive and anxiety disorders in women. *Br J Nutr*. 2012 Oct 10:1-8. [Pub ahead of print.]
17. Amminger, G. P., Schäfer, M. R., & Papageorgiou, K., et al. Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders: A randomized, placebo-controlled trial. *Arch Gen Psychiatry*. 2010;67:146-154.
18. Cassidy, A., Rimm, E. B., & O'Reilly, E. J., et al. Dietary flavonoids and risk of stroke in women. *Stroke*. 2012;43:946-951.
19. Karppi, J., Laukkanen, J. A., & Sivenius, J. Serum lycopene decreases the risk of stroke in men. *Neurology*. 2012;79:1540-1547.
20. Brooks, M. New mechanism for berries' potential brain benefits uncovered. *Medscape Medical News*. August 31, 2010. Accessed January 10, 2013. <http://www.medscape.com/viewarticle/727764>
21. Polouse, S. Berry extracts and brain aging: Clearance of toxic protein accumulation in brain via induction of autophagy. Program and abstracts of the 240th National Meeting of the American Chemical Society. August 22-26, 2012. Boston, Massachusetts. [Abstract 60.]
22. Basu, A., Rhone, M., & Lyons, T. J. Berries: Emerging impact on cardiovascular health. *Nutr Rev*. 2010;68:168-177.
23. Chen, H. Sweetened beverages, coffee, and tea in relation to depression among older US adults. American Academy of Neurology 65th Annual Meeting. March 16-23, 2013. San Diego, California. [Abstract 2257.]
24. Lucas, M., Mirzaei, F., & Pan, A., et al. Coffee, caffeine, and risk of depression among women. *Arch Intern Med*. 2011;171:1571-1578.
25. Pasco, J. A., Nicholson, G. C., & Williams, L. J., et al. Association of high-sensitivity C-reactive protein with de novo major depression. *Br J Psychiatry*. 2010;197:372-377.
26. Ng, F., Berk, M., Dean, O., & Bush, A. I. Oxidative stress in psychiatric disorders: Evidence base and therapeutic implications. *Int J Neuropsychopharmacol*. 2008;11:851-876.
27. O'Connor, A. Coffee drinking led to less depression in women. *New York Times*. February 13, 2012. Accessed January 11, 2013. <http://well.s.nytimes.com/2011/09/26/coffee-drinking-ed-to-less-depression-in-women/>
28. Wayerer, S., Schäufele, M., & Wiese, B., et al. German AgeCoDe Study group (German Study on Ageing, Cognition and Dementia in Primary Care Patients). Current alcohol consumption and its relationship to incident dementia: Results from a 3-year follow-up study among primary care attenders aged 75 years and older. *Age Ageing*. 2011;40:456-463.
29. Peters, R., Peters, J., Warner, J., Beckett, N., & Bulpitt, C. Alcohol, dementia, and cognitive decline in the elderly: A systematic review. *Age Ageing*. 2008;37:505-512.
30. de Gaetano, G., Di Castelnuovo, A., Rotondo, S., Iacoviello, L., & Donati, M. B. A meta-analysis of studies on wine and beer and cardiovascular disease. *Pathophysiol Haemost Thromb*. 2002;32:353-355.

31. Matos, R. S., Baroncini, L. A., & Précoma, L. B., et al. Resveratrol causes antiatherogenic effects in an animal model of atherosclerosis. *Arq Bras Cardiol.* 2012;98:136-142.
32. Bertelli, A. A., & Das, D. K. Grapes, wines, resveratrol, and hearth health. *J Cardiovasc Pharmacol.* 2009;54:468-476.
33. Chiva-Blanch, G., Urpi-Sarda, M., & Ros, E., et al. Dealcoholized red wine decreases systolic and diastolic blood pressure and increases plasma nitric oxide: Short communication. *Circ Res.* 2012;111:1065-1068.
34. Ried, K., Sullivan, T. R., & Fakler, P., et al. Effect of cocoa on blood pressure. *Cochrane Database Syst Rev.* 2012; DOI: 10.1002/14651858.CD008893.pub2
35. Larsson, S. C., Virtamo, J., & Wolk, A. Chocolate consumption and risk of stroke: A prospective cohort of men and meta-analysis. *Neurology.* 2012;79:1223-1229.
36. Agrawal, R., & Gomez-Pinilla, F. 'Metabolic syndrome' in the brain: Deficiency in omega-3 fatty acid exacerbates dysfunctions in insulin receptor signaling and cognition. *J Physiol.* 2012;590:2485-2499.
37. Page, K. A., Chan, O., & Arora, J., et al. Effects of fructose vs glucose on regional cerebral blood flow in brain regions involved with appetite and reward pathways. *JAMA.* 2013;309:63-70, 85-86.
8. Roberts, R. O., Roberts, L. A., & Geda, Y. E., et al. Relative intake of macronutrients impacts risk of mild cognitive impairment or dementia. *J Alzheimer's Dis.* 2012;32:329-339.
39. Kaluza, J., Wolk, A., & Larsson, S. Red meat consumption and risk of stroke. *Stroke.* 2012;43:2556-2560.
40. Bernstein, A. M., Pan, A., & Rexrode, K. M., et al. Dietary protein sources and the risk of stroke in men and women. *Stroke.* 2012;43:637-644.
41. Jacka, F. N., Pasco, J. A., & Williams, L. J., et al. Red meat consumption and mood and anxiety disorders. *Psychother Psychosom.* 2012;81:196-198.

Frozen Shoulder

A syndrome in which a stiff shoulder is restricted and painful in both active and passive movement. Also known as *adhesive capsulitis*, *periarthritis*, and *pericapsulitis*. The primary involved joints are the scapulothoracic and glenohumeral but it is highly possible that the cervical/thoracic spine (neck and upper back) and the Acromio/clavicular, and Sterno/clavicular joints will also be involved. How is that possible? It is highly probable in that all of those structures are inter related and as a inter related muscle skeletal complex when one area is dysfunctional all of the others are compromised as all of those joints are inter related. Generally speaking in Acute Frozen Shoulder there is no bony ankyloses (degenerative issues) but it is possible that there may be preexisting ankyloses, degenerative issues and subluxations in the cervical thoracic spine, scapulothoracic and glenohumeral, Acromio/clavicular, and Sterno/clavicular joints- X-Rays of the spine and shoulders are the way to determine if there exists degenerative issues in the spine and/or shoulders.

Causes

Most commonly there is pain in the shoulder there are also problems in the person's neck and upper back that are extenuated upon movement, and immobilization resulting from a shoulder injury or over use. Frozen shoulder is seen most often in patients with tendency to tension, anxiety, and passive apathy (termed the *periarthritis personality*), combined with a low pain

tolerance. The pathology of frozen shoulder is believed to be as follows: pain in the shoulder (neurologic, vascular, musculoskeletal, or referred visceral) causes vasospasm which leads to congestion, and myospasm which leads to disuse and further vascular congestion. This initiates the development of fibrous tissues that are responsible for functional disability. The untreated course ends in total immobilization of the shoulder joint. Prevention is the best treatment. Once the condition is established, cure becomes increasingly difficult. It is unusual for a complete recovery to occur in frozen shoulder patients. Conventional treatment consists of drug therapy (muscle relaxants, sedatives, tranquilizers, analgesics).

Interventional Chiropractic

Chiropractic manipulation of the shoulder; chiropractic administered acupuncture, Myofascial Release and Neuro/Muscle Skeletal Reeducation, Trans Cutaneous Nerve Stimulation, supervised passive and active range of motion exercises; ice; physiotherapy; and if called for psychological counseling to dispel any anxiety and dependency that may be primary or secondary to the frozen shoulder.

Symptoms

Painful limitation of the neck, upper back, the glenohumeral (shoulder) joint which gradually becomes less painful but more restricted in motion. Abduction is normal at first and then, as the condition progresses, is restricted because of pain.

Advanced states: no pain with immobilization but pain in all ranges of motion of the shoulder; patient carries the arm in adduction and internal rotation.

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Nutritional Supplementation Options for Frozen Shoulder

- EC Matrixx®
- Chondro Jointaide

Dietary Considerations:

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

EC Matrixx®

EC Matrixx is designed to support connective tissues, tendons, ligaments, and cartilage by modulating the expression of Matrix Metalloproteinases (MMPs).

- Features berberine and tetrahydro iso-alpha acids (THIAA), which have been shown in laboratory research to influence MMP-13, an enzyme involved in the maintenance of connective tissue structure.
- THIAA has also been shown to beneficially influence multiple cellular signaling processes related to connective tissue health.
- Support biochemical processes that influence the health of the extracellular matrix.

Gastritis / H. Pylori Infection / Ulcers (Duodenal and Gastric)

Gastritis is a condition in which the stomach lining—known as the mucosa—is inflamed. The stomach lining contains special cells that produce acid and enzymes, which help break down food for digestion, and mucus, which protects the stomach lining from acid. When the stomach lining is inflamed, it produces less acid, enzymes, and mucus. Gastritis may be acute or chronic. Sudden, severe inflammation of the stomach lining is called acute gastritis before symptoms present themselves. Inflammation that lasts for a long time is called chronic gastritis. If chronic gastritis is not treated, it may last for years or even a lifetime wherein there exists serious damage to the gastrointestinal mucosa. The term gastritis refers specifically to abnormal inflammation in the stomach lining. However, gastritis is sometimes mistakenly used to describe any symptoms of pain or discomfort in the upper abdomen. Many diseases and disorders can cause these symptoms. Most people who have upper abdominal symptoms do not have gastritis.

The most common causes of gastritis are H. pylori infections and prolonged use of nonsteroidal anti-inflammatory drugs (NSAIDs).

- Many people with gastritis have no initial symptoms. Those who do have symptoms may experience dyspepsia—upper abdominal discomfort or pain, nausea, or vomiting.
- Treating H. pylori infection is important, even if a person is not experiencing symptoms. Left untreated, H. pylori infection may lead to peptic ulcer disease or cancer.

<http://digestive.niddk.nih.gov/ddiseases/pubs/gastritis>.

Erosive Gastritis

Erosive gastritis is a type of gastritis that often does not cause significant inflammation, but can wear away the stomach lining. Erosive gastritis can cause bleeding, erosions, or ulcers. Erosive gastritis may be acute or chronic. The relationship between gastritis and symptoms is not clear. People who have gastritis may experience pain or discomfort in the upper abdomen, but many people with gastritis do not have any symptoms. *What causes gastritis?* Helicobacter pylori (H. pylori) infection causes most cases of chronic non-erosive gastritis. H. pylori are bacteria that infect the stomach lining. H. pylori are primarily transmitted from person to person. In areas with poor sanitation, H. pylori may be transmitted through contaminated food or water. In industrialized countries like the United States, 20-50% of the population may be infected with H. pylori. Rates of H. pylori infection are higher in areas with poor sanitation and higher population density. Infection rates may be higher than 80% in some developing countries. The most common cause of erosive gastritis—acute and chronic—is prolonged use of nonsteroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen. Other agents that can cause erosive gastritis include alcohol, cocaine, and radiation. Traumatic injuries, critical illness, severe burns, and major surgery can also cause acute erosive gastritis. This type of gastritis is called stress gastritis. Less common causes of erosive and nonerosive gastritis include:

- *Autoimmune disorders in which the immune system attacks healthy cells in the stomach lining*

- *Some digestive diseases and disorders, such as Crohn's disease and pernicious anemia*
- *Viruses, parasites, fungi, and bacteria other than H. pylori.*
- *Lee, Y., Liou, J., Wu, M., Wu, C., & Lin, J. Review: Eradication of Helicobacter pylori to prevent gastroduodenal diseases:*

Hitting more than one bird with the same stone. Therapeutic Advances in Gastroenterology. 2008;1(2):111–120.

NOTE: Relieving Indigestion with Antacids Many individuals use over-the-counter antacids to relieve indigestion. Unfortunately, long-term antacid use may negatively impact digestion and make the environment more susceptible to bacterial overgrowth, such as H. pylori infection.

- *Naylor, G., & Axon, A. Role of bacterial overgrowth in the stomach as an additional risk factor for gastritis. Can J Gastroenterol. 2003;17(B Suppl):13B-17B.*

Symptoms

Many people with gastritis do not have any symptoms, but some people experience symptoms such as:

- Upper abdominal discomfort or pain
- Nausea
- Vomiting

(These symptoms are also called dyspepsia)

Erosive gastritis may cause ulcers or erosions in the stomach lining that can bleed.

Signs of bleeding in the stomach include:

- Blood in vomit
- Black, tarry stools
- Red blood in the stool.

Chronic back pains which very often they do not relate to their dyspepsia. How is that? There is with the body a Safety Pin Cycle that involves the Autonomic Nervous System (ANS) the Involuntary Nervous System – the nervous system that functions normally without us thinking about it. It is comprised of the Sympathetic (SNS) and Parasympathetic Nervous System (PSNS) which most people can relate to the Fight or Flight phenomenon but it also includes all other organs in the body in that it involves nerves that send images from our body to our brain that activate involuntary actions in the body. In the situation of gastric hyperacidity in the stomach the nerves in the stomach send signals to the brain (through the spinal cord), the brain interprets the hyperacidity and in turn sends impulses back to the stomach to neutralize the hyperacidity or re-establish hemostasis.

The Brain, Spinal Cord, Spine Organ Connection

All of this can be visualized as the brain being like the main power house in the body which sends power (nerve energy/life force) through the spinal cord which in turn passes through the spines intervertebral foramina (Vertebral windows) nerves, artery's, lymphatics and meridians out to every organ and cell with the body.

The Spine- The Switchboard of The Nervous System

Because the spine is like the switchboard of the nervous system if there is any dysfunctional issue (subluxations, curves, etc.) with the spine there then is a high propensity of there being interruption of that life force to the organs/tissues.

Treating The Cause Rather Than The Symptoms

That being the case very often traditional medicine looks at the symptoms of the malfunctioning organ/tissue but fails to also look at the source from which the organ/tissue is supplied by and it

always or takes its origin in the brain through the spinal cord and spine. This is often particularly true in that when drugs (analgesic, steroids, etc.) are utilized they may help reduce the patient's pain but in reality are less likely to treat the cause(s) which is similar to putting frosting on a burnt cake doing so just covers up the burnt cake and the cause still exists.

What are the complications of gastritis? Most forms of chronic nonspecific gastritis do not cause symptoms. However, chronic gastritis is a risk factor for peptic ulcer disease, gastric polyps, and benign and malignant gastric tumors. Some people with chronic *H. pylori* gastritis or autoimmune gastritis develop atrophic gastritis. Atrophic gastritis destroys the cells in the stomach lining that produce digestive acids and enzymes. Atrophic gastritis can lead to two types of cancer: gastric cancer and gastric mucosa-associated lymphoid tissue (MALT) lymphoma.

Diagnosis

How is gastritis diagnosed? Traditional medicine most common diagnostic test for gastritis is endoscopy with a biopsy of the stomach. The doctor will usually give the patient medicine to reduce discomfort and anxiety before beginning the endoscopy procedure. The doctor then inserts an endoscope, a thin tube with a tiny camera on the end, through the patient's mouth or nose and into the stomach. The doctor uses the endoscope to examine the lining of the esophagus, stomach, and first portion of the small intestine. If necessary, the doctor will use the endoscope to perform a biopsy, which involves collecting tiny samples of tissue for examination with a microscope.

Other tests used to identify the cause of gastritis or any complications include the following:

- **Upper gastrointestinal (GI) series.** The patient swallows barium, a liquid contrast material that makes the digestive tract visible in an x-ray. X-ray images may show changes in the stomach lining, such as erosions or ulcers.
- **Blood test.** The doctor may check for anemia, a condition in which the blood's iron-rich substance, hemoglobin, is diminished. Anemia may be a sign of chronic bleeding in the stomach.
- **Stool test.** This test checks for the presence of blood in the stool, another sign of bleeding in the stomach.
- **Tests for *H. pylori* infection.** The doctor may test a patient's breath, blood, or stool for signs of infection. *H. pylori* infection can also be confirmed with biopsies taken from the stomach during endoscopy.

***H. Pylori* Infection**

H. pylori infection occurs when a type of bacteria called *Helicobacter pylori* infects the stomach, usually during childhood. A common cause of peptic ulcers, *H. pylori* infection is present in about half the people in the world. Most people don't realize they have *H. pylori* infection, because they never get sick from it. If you develop signs and symptoms of an ulcer, your doctor will probably test you for *H. pylori* infection, because it can be a causative factor in ulcer.

Symptoms

Most people with *H. pylori* infection will never have any signs or symptoms. It's not clear why this is, but scientists believe some people may be born with more resistance to the harmful effects of *H. pylori*. When signs or symptoms do occur with *H. pylori* infection, they may include:

- An ache or burning pain in your abdomen
- Nausea
- Vomiting
- Frequent burping
- Bloating
- Weight loss

Neck and back pains. What does neck or backache have to do with Gastritis? The gastrointestinal system (like all other systems in the body) is dependent first on the nerve and blood supply it receives from the brain and spinal cord –the spinal cord being housed in the spinal column. Therefore if there is some dysfunctional issue in the spine the gastrointestinal system is going to be predisposed to health problems.

The Safety Pin Cycle

Interestingly in part the nervous system (Autonomic Nervous System) is composed of Afferent (Sympathetic) and Efferent Nerves (Parasympathetic) Nerves which comprise the Autonomic Nervous System (ANS)– The Master Nervous System that most people don't think about until some health issue occurs or don't recognize that it is at the basis of health. The Afferent nerves originate in the brain, pass from the brain along through the spinal cord and out through intervertebral foramina to (for example) the stomach where upon one of their functions are to interpret what is taking place in the stomach where upon the Efferent component carry's the status of the stomach back to the brain through the spinal cord – The Safety Pin Cycle and if there are no interruptions in that cycle the body responds accordingly.

For example when any dysfunctions are occurring in the stomach the brain tells us (through those symptoms) that something is wrong. If in fact there is some problem in the brain, spinal cord or spinal column and or if the person is involved in symptom ameliorating drugs then that safety pin cycle is interrupted and if it is of a prolonged nature worsening health issues take place.

Interesting as simple as that is it very often is either not recognized or recognized but ignored.

Drugs

As potentially good as some drugs are many treat the symptoms rather than the cause therefore in effect are like putting frozen on top of a burnt cake. The frozen cover the burnt cake but the cause/problem is still there and more likely to grow worse as long as the cause goes untreated.

What then does interventional Chiropractic have to do with gastrointestinal problems?

If there exist problems in the spine then the nerve and blood supply to it is altered contributing to abnormal issues in the gastrointestinal system. Therefore interventional Chiropractic care that includes Touch For Health Applied Kinesiology Muscle Response Test can help the body recover from the gastrointestinal and/or any other health related problems.

- Severe or persistent abdominal and/or back pain
- Difficulty swallowing
- Bloody or black tarry stools
- Bloody or black vomit or vomit that looks like coffee grounds.

Causes

Other than the possibility that there exist problems within the spine that are interfering with the proper nerve and blood supply to the stomach physiologically speaking H. pylori bacteria can gain a strong hold and be passed from person to person through direct contact with saliva, vomit, or fecal matter. H. pylori can also be spread through contaminated food or water. The infection is usually acquired during childhood.

Risk Factors

Many people contract H. pylori as children. Contracting H. pylori in adulthood is much less common. Risk factors for H. pylori infection are related to living conditions in your childhood, such as:

- Living in crowded conditions. You have a greater risk of H. pylori infection if you live in a home with many other people.

- Living without a reliable supply of hot water. Having a reliable hot water supply can help you keep your living area clean and reduce your risk of H. pylori.
- Living in a developing country. People living in developing countries, where crowded and unsanitary living conditions may be more common, have a higher risk of H. pylori infection.
- Living with someone who has an H. pylori infection. If someone you live with has H. pylori, you're more likely to also have H. pylori.

Complications

- Ulcers. H. pylori can damage the protective lining of your stomach and small intestine. This can allow stomach acid to create an open sore (ulcer).
- Inflammation of the stomach lining. H. pylori infection can irritate your stomach, causing inflammation (gastritis).
- Stomach cancer. H. pylori infection is a strong risk factor for certain types of stomach cancer.
- Infection with H. pylori may promote higher rates of type 2 diabetes.

Nutritional Supplementation Options for Gastritis / H. Pylori Infection /Ulcers (Duodenal and Gastric).

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

• **Zinlori 75™.**

Zinlori 75 has been documented to potentiate standard antibiotic therapy for H. Pylori.

• **Pylori stat.**

• **UltraFlora™ Spectrum**

• **Endefen™.**

Nutritionnel Formula Description & Supplementation Rationale

Zinlori 75™

Zinlori 75 is an extensively researched zinc-carnosine supplement for gastric discomforts such as heartburn, indigestion, ulcers, gastritis, and helicobacter pylori (H. Pylori). Zinlori 75 contains a high potency zinc-carnosine complex formulated to provide relief of gastric discomfort. Zinc-carnosine supports the healthy ecology, natural defenses, and integrity of the gastric mucosal lining.

Designed to:

- Relieve gastric discomforts such as occasional heartburn and indigestion, upset stomach, mild nausea, bloating, belching, and burping.
- Promote a healthy gastric bacterial balance.
- Provide antioxidant protection for gastric mucosal cells.
- Help maintain the integrity of the protective gastric mucosal lining by supporting healthy mucus secretion.
- Some research indicates that zinc-carnosine may protect gastric mucosal cells without altering prostaglandin metabolism.
- Gastro-supportive benefits demonstrated in over 20 published studies.
- Same raw material used successfully by healthcare practitioners in Japan since 1994.
- Clinically effective dosage in just two tablets.

NOTE: Zinlori 75 has been documented to potentiate standard antibiotic therapy for H. Pylori.

Pyloristat

Multi-dimensional support to inhibit H. Pylori bacterium proliferation. Inhibition of H. Pylori bacterium proliferation with a combination of mastic gum extract, bismuth citrate, berberine sulphate, and ginger root extract:

- **Mastic Gum Extract for H. Pylori** — “Our results show that administration of mastic extract may be effective in reducing H. pylori colonization and that the major triterpenic acids in the acid extract may be responsible for such an activity.”
- Paraschos, S. et al. In vitro and in vivo activities of Chios mastic gum extracts and constituents against *Helicobacter pylori*. *Antimicrob Agents Chemother.* 2007. Laboratory of Pharmacognosy and Natural Products Chemistry, Department of Pharmacy, University of Athens, Greece.
- **Bismuth Citrate for H. Pylori** — “Bismuth citrate is used to treat *Helicobacter pylori*, a bacterial infection involved in causing stomach ulcers.”
- “Reflux Remedies: Ranitidine.” *PharmaSight* OTC Health. PharmaSight.org.
- **Berberine Sulphate for H. Pylori** — Berberine is an isoquinoline alkaloid with a bright yellow color that is easily seen in most of the herb materials that contain any significant amount of this compound. Among Chinese herbs, the primary sources are phellodendron and coptis. Coptis and phellodendron have been used in China for treating gastrointestinal diseases with reported success.

References

- Rabbani, G. H., et al. *Randomized controlled trial of berberine sulfate therapy for diarrhea due to enterotoxigenic E. coli and Vibrio cholerae.* *Journal of Infectious Diseases.* 1987; 155(5): 979-984.
- Kaneda, Y., et al., *In vitro effects of berberine sulphate on the growth and structure of Entamoeba histolytica, giardia lamblia, and trichomonas vaginalis.* *Annals of Tropical Medicine and Parasitology.* 1991; 85(4); 417-425.
- Chang, H. M., & But, P. P. H. (Eds.). *Pharmacology and Applications of Chinese Materia Medica, (vol 2).* 1986 World Scientific, Singapore.

UltraFlora™ Spectrum

UltraFlora Spectrum is designed to provide multidimensional support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of seven beneficial probiotic strains (*Saccharomyces boulardii*, *Bifidobacterium lactis* Bi-07, *Lactobacillus plantarum* Lp-115, *Lactobacillus salivarius* Ls-33, *Lactobacillus acidophilus* NCFM®, *Streptococcus thermophilus* St-21, and *Bifidobacterium lactis* BI-04) formulated to:

- Promote a healthy intestinal environment and immune response.
- Help relieve recurring functional bowel discomforts and intestinal irritation.
- Contain NCFM, one of the most well-researched probiotic strains.
- Designed for reliable outcomes with a concentrated dose of *S. boulardii*.

Endefen™

Endefen is uniquely designed to nutritionally support the overall health and function of the upper gastrointestinal (GI) tract. This exceptional formula goes far beyond the competition by addressing multiple factors that contribute to GI health.

- Support the integrity of the gastric lining by promoting the growth of gastric mucosal cells.
- Promote the thickness and strength of the protective gastric mucin layer.
- Selectively promotes *Bifidobacterium* and *Lactobacillus acidophilus* growth to support balanced, healthy flora.
- Provide key nutrients to enhance GI immune system function.

- Promote the production of beneficial short-chain fatty acids, and a decrease in generation of ammonia and beta-glucuronidase. Research Rationale for the Nutritional Support Strategies in H. Pylori Infection

Role in Indigestion

An estimated two-thirds of people worldwide are infected with H. pylori bacteria. While the majority of infected individuals do not have symptoms, H. pylori can increase risk of developing conditions such as indigestion, gastritis, peptic ulcer, and stomach cancer. To date, the method of H. pylori transmission remains unclear. It is thought to either be passed down from generation to generation, transmitted orally, or caused by contaminated food or water consumption. What is clear is that H. pylori has an extraordinary ability to infect human stomachs. It is able to survive in the stomach environment where many other bacteria cannot. H. pylori produces substances that weaken the stomach lining and make it susceptible to the digestive action of stomach acid. In some cases, this can result in wasting away or ulceration of the stomach lining.

Relieving Indigestion with Antacids

Many individuals use over-the-counter antacids to relieve indigestion. Unfortunately, long-term antacid use may negatively impact digestion and make the environment more susceptible to bacterial overgrowth, such as H. pylori infection.

Antibiotic Therapy for H. pylori Infection

Antibiotics are usually prescribed to eradicate H. pylori when it is detected. Unfortunately, with the upsurge in antibiotic usage, there is increasing concern about the development of antibiotic-resistant H. pylori strains. This has led researchers to investigate alternative therapies that can also be used to enhance the effectiveness of antibiotic therapy for H. pylori eradication.

Zinc-Carnosine (Zinlori 75®) in Supporting Stomach Health & Addressing H. Pylori Infection.

Zinc-carnosine (Zinlori 75) is a specific form of zinc that has been recommended by healthcare practitioners in Japan since 1994 to relieve indigestion and promote healing of the stomach lining. Over 20 published studies support the use of zinc-carnosine in promoting stomach health. In addition, when combined with antibiotic therapy, it has been found to significantly increase the cure rate of H. pylori infection. In fact, when combined with a 7-day triple antibiotic therapy, zinc-carnosine significantly improved the eradication rate of H. pylori infection over the antibiotic therapy alone (from 90% to 100%). Zinc-carnosine (Zinlori 75) has also been clinically demonstrated to reduce symptoms of indigestion, such as heartburn, nausea, upset stomach, belching, and bloating. Zinc-carnosine (Zinlori 75) has also demonstrated positive results in individuals with gastritis. In a clinical study of 173 subjects with acute or chronic gastritis, supplementation with zinc-carnosine at 75 mg twice daily was shown to inhibit stomach erosion and bleeding (74.5% and 82.5%, respectively), as well as relieve symptoms such as abdominal pain, heartburn, nausea, and vomiting. In another clinical study, 44 patients with gastric ulcers were given 75 mg of zinc-carnosine (Zinlori 75) twice daily. Patients were assessed by endoscopic examination and self-reported symptoms of abdominal pain, bloating, heartburn, belching, nausea, and other symptoms of indigestion. Patients demonstrated a 75.7% improvement in symptoms at 4 weeks and 89.3% at 8 weeks.

References

- Koretz, R., & Talley, N. H. pylori and nonulcer dyspepsia: To eradicate or not to eradicate? *Medical Crossfire*. 2000;2(7):62-78.
- *InteliHealth: Health A to Z. Gastritis*. Retrieved July 26, 2003 from <http://www.intelihealth.com/IH/ihtIH/WSIHW000/9339/10054>.

html.

- CDC: Division of Bacterial and Mycotic Diseases. "Helicobacter pylori and peptic ulcer disease." Retrieved July 7, 2003 from <http://www.cdc.gov/ulcer/md.htm>.
- Versalovic, J. *Helicobacter pylori: Pathology and diagnostic strategies*. *Am J Clin Pathol*. 2003;119(3):403-12.
- CDC: Division of Bacterial and Mycotic Diseases. "Helicobacter pylori infections (*H. pylori*)."
Retrieved July 7, 2003, from <http://www.cdc.gov/ulcer>.
- Delaney, B. C., Moayyedi, P., & Forman, D. *Initial management strategies for dyspepsia*. *Cochrane Database Syst Rev*. 2003;(2):CD001961.
- Solnick, J., & Schauer, D. *Emergence of diverse Helicobacter species in the pathogenesis of gastric and enterohepatic diseases*. *Clin Microbiol Rev*. 2001;14(1):59-97.
- Roma-Giannikou, E., Karameris, A., & Balatsos, B., et al. *Intrafamilial spread of Helicobacter pylori: A genetic analysis*. *Helicobacter*. 2003;8(1):15-20.
- Kersulyte, D., Mukhopadhyay, A., & Velapatino, B., et al. *Differences in genotypes of Helicobacter pylori from different human populations*. *J Bacteriol*. 2000;182(11):3210-18.
- Sidebotham, R. L., Worku, M. L., & Karim, Q. N., et al. *How Helicobacter pylori urease may affect external pH and influence growth and motility in the mucus environment: Evidence from in-vitro studies*. *Eur J Gastroenterol Hepatol*. 2003;15(4):395-401.
- Medical Economics Staff, eds. *Physicians' Desk Reference*. Montvale, NJ: Medical Economics Company, Inc. 2000:1199-1204.
- Naylor, G., & Axon, A. *Role of bacterial overgrowth in the stomach as an additional risk factor for gastritis*. *Can J Gastroenterol*. 2003;17(B Suppl):13B-17B.
Gastritis / H. Pylori Infection / Ulcers (Duodenal and Gastric) 275
- Sanduleanu, S., Jonkers, D., & De Bruine, A., et al. *Double gastric infection with Helicobacter pylori and non- Helicobacter pylori bacteria during acid-suppressive therapy: Increase of pro-inflammatory cytokines and development of atrophic gastritis*. *Aliment Pharmacol Ther*. 2001;15(8):1163-75.
- Basaran, U. N., Belayir, S., & Eray, N., et al. *The effect of an H2-receptor antagonist on small-bowel colonization and bacterial translocation in newborn rats*. *Pediatr Surg Int*. 1998;13(2-3):118-20.
- Ferri, F. *Ferri's Clinical Advisor: Instant Diagnosis and Treatment (4th ed.)*. Philadelphia: Elsevier. 2002.
- Perez, A., Aldana, L., Kato, M., & Nakagawa, S., et al. *The relationship between consumption of antimicrobial agents and the prevalence of primary Helicobacter pylori resistance*. *Helicobacter*. 2002;7(5):306-09.
- Boyanova, L., Mentis, A., & Gubina, M., et al. *The status of antimicrobial resistance of Helicobacter pylori in eastern Europe*. *Clin Microbiol Infect*. 2002;8(7):388-96.
- Osato, M. S., Reddy, R., & Reddy, S. G., et al. *Pattern of primary resistance of Helicobacter pylori to metronidazole or clarithromycin in the United States*. *Arch Intern Med*. 2001;161(9):1217-20.
- Hojo, M., Miwa, H., Kikuchi, S., & Sato, N. *Do mucosal defensive agents improve the cure rate when used with dual or triple therapy regimens for eradicating Helicobacter pylori infection?* *Aliment Pharmacol Ther*. 2000;14:193-201.
- Amakawa, T. *Clinical effect of Z-103 tablets against gastric ulcers: Phase III clinical study*. *Jpn Pharm Ther*. 1992;20(1):199-223.

- Hayakawa, A., Inoue, M., & Kunizaki, M., et al. *Clinical evaluation of Z-103 on gastric ulcer. Jpn Pharm Ther.* 1992;20(1):1-18.
 - Shibata, H. *Clinical phase I study of Z-103. Clin Pharmacol.* 1992;20(1):149-63.
 - Kashimura, H., Suzuki, K., & Hassan, M., et al. *Polaprezinc, a mucosal protective agent, in combination with lansoprazole, amoxicillin and clarithromycin increases the cure rate of Helicobacter pylori infection. Aliment Pharmacol Ther.* 1999;13:483-87.
 - Miyoshi, A., Matsuo, H., & Miwa, T., et al. *Clinical evaluation of Z-103 in the treatment of gastric ulcer: A multicenter double-blind dose finding study. Jpn Pharm Ther.* 1992;20:181-97.
 - Misawa, T., Chijiwa, Y., & Nawada, A., et al. *Clinical study of Z-103: Clinical effects on gastric ulcer and influence on endocrine dysfunction. Jpn Pharm Ther.* 1992;20(1):245-54.
 - Miyoshi, A., Matsuo, H., & Miwa, T., et al. *Clinical evaluation of Z-103 in the treatment of gastritis: A multicenter double-blind dose finding study. Jpn Pharm Ther.* 1997;25(5):1403-42.
 - Korolkiewicz, R., Fujita, A., & Seto, K., et al. *Polaprezinc exerts a salutary effect on impaired healing of acute gastric lesions in diabetic rats. Dig Dis Sci.* 2000;45(6):1200-09.
 - Prasad A. *Zinc: an overview. Nutrition.* 1995;11:93-99.
 - Soderberg, T. A., Sunzel, B., & Holm, S., et al. *Antibacterial effect of zinc oxide in vitro. Scand J Plast Reconstr Surg Hand Surg.* 1990;24(3):193-07.
 - Bao, B., Prasad, A. S., & Beck, F. W., et al. *Zinc modulates mRNA levels of IL-2 and IFN- γ positively in HUT-78 and D1.1 cells and negatively mRNA levels of TNF- α , IL-1 β , and IL-8 in HL-60 cells. Am J Physiol Endocrinol Metab.* 2003: 5452002.
 - Wollschlaeger, B. *Zinc-carnosine for the management of gastric ulcers: Clinical application and literature review. JANA.* 2003;6(2):33-38.
 - Hiraishi, H., Sasai, T., & Oinuma, T., et al. *Polaprezinc protects gastric mucosal cells from noxious agents through antioxidant properties in vitro. Aliment Pharmacol Ther.* 1999;13:261-69.
 - Matsukura, T., & Tanaka, H. *Applicability of zinc complex of L-carnosine for medical use. Biochemistry (Moscow).* 2000;65(7):817-23.
 - Shimada, T., Watanabe, N., & Ohtsuka, Y., et al. *Polaprezinc down-regulates proinflammatory cytokine-induced nuclear factor kappaB activation and interleukin-8 expression in gastric epithelial cells. J Pharmacol Exp Ther.* 1999;291:345-52.
 - Naito, Y., Toshikazu Y., & Yagi, N, et al. *Effects of Polaprezinc on lipid peroxidation, neutrophil accumulation, and TNF- α expression in rats with aspirin-induced gastric mucosal injury. Dig Dis Sci.* 2001;46(4):845-51.
 - Handa, O., Yoshida, N., & Tanaka, Y., et al. *Inhibitory effect of Polaprezinc on the inflammatory response to Helicobacter pylori. Can J Gastroenterol.* 2002;16(11):785-89.
 - Katayama, S., Nishizawa, K., & Hirano, M. *Effect of Polaprezinc on healing of acetic acid-induced stomatitis in hamsters. J Pharm Pharmaceut Sci.* 2000;3(1):114-17.
 - Arakawa, T., Satoh, H., & Nakamura, A., et al. *Effects of zinc L-carnosine on gastric mucosal and cell damage caused by ethanol in rats. Correlation with endogenous prostaglandin E2. Dig Dis Sci.* 1990;35(5):559-66.
- 276 Gastritis / H. Pylori Infection / Ulcers (Duodenal and Gastric)

Gestational Diabetes / Diabetes and Pregnancy

Diabetes is a disease in which blood glucose, or sugar, levels are too high. When you pregnant, too much glucose is not good for the baby. Out of every 100 pregnant women in the United States, between three and eight get gestational diabetes. Gestational diabetes is diabetes that happens for the first time when a woman is pregnant. Gestational diabetes goes away when the baby is born, but it does increase the risk for having diabetes later. If you already have diabetes before you get pregnant, you need to monitor and control your blood sugar levels. Either type of diabetes during pregnancy raises the risk of problems for the baby and the mother. To help reduce these risks, follow the diabetic/low glycemic index—Mediterranean-type diet meal plan, exercise, and monitor your blood sugar.

- Eat something healthy and low glycemic index every two waking hours. This will promote a more balanced, healthy overall blood sugar (some recent studies have indicated that spikes in blood sugar levels frequent during the pregnancy have deleterious effect on pregnancy outcome, so any dietary improvements to eliminate or minimize blood sugar spikes are a good idea.
- Make sure the patient is on a quality prenatal vitamin formula with omega-3 fatty acids, active folic acid, and choline (such as Wellness Essentials® Pregnancy).
- Since gestational diabetes is diabetes that happens usually for the first time when a woman is pregnant, and usually goes away once the baby is born, it is important that the patient understands that it does increase the risk for having diabetes later. Gestational diabetes is essentially a warning sign to implement diet, lifestyle, and exercise changes to minimize the risk of diabetes. This would also include nutritional supplementation of blood sugar balance supporting nutrients such as in Wellness Essentials® Healthy Balance after the pregnancy and breastfeeding time frame has passed.

Nutritional Supplementation Options for Gestational Diabetes /Diabetes and Pregnancy

Note: As potentially good as the following can be all pregnant women should be under the care of a Gynecologist/Ob-gyn and if they are contemplating any diet or food supplements they should consult with those medical specialists before embarking on them. When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- **Wellness Essentials® Pregnancy.**

Dietary Considerations

- Low glycemic index Mediterranean-type Diet / **FirstLine Therapy® Diet Program**

If you have diabetes, your body cannot make or properly use insulin. This leads to high blood glucose, or sugar, levels in your blood. Healthy eating helps to reduce your blood sugar. It is a critical part of managing your diabetes, because controlling your blood sugar can prevent the complications of diabetes. Wise food choices are a foundation of diabetes treatment. Diabetes experts suggest meal plans that are flexible and take your lifestyle and other health needs into account.

Healthy diabetic eating includes

- Limiting sweets
- Eating often (at least every two waking hours)
- Being careful about when and how many carbohydrates you eat (low glycemic index foods)
- Eating lots of whole-grain foods, fruits, and vegetables
- Eating less fat
- Limiting your use of alcohol.

Nutritional Formula Description & Supplementation Rationale

Wellness Essentials® Pregnancy

Daily Essentials for Before, During, and After Pregnancy.

Note: A woman should begin taking Wellness Essentials Pregnancy the moment she starts planning to have a child, rather than waiting until after a positive pregnancy test. Research shows that fetal brain and spinal cord development begins in the earliest stages of pregnancy—a time when a woman may not even realize she is pregnant—indicating the need to establish healthy levels of supportive nutrients early on. This is especially true when it comes to proper levels of omega-3 fatty acids, folate, choline, calcium, magnesium, and antioxidants (essential nutrients found in Wellness Essentials Pregnancy).

Glaucoma

Glaucoma is a group of diseases that damage the eye's optic nerve and can result in vision loss and blindness. However, with early detection and treatment, you can often protect your eyes against serious vision loss. The optic nerve is a bundle of more than 1 million nerve fibers. It connects the retina to the brain. The retina is the light-sensitive tissue at the back of the eye. A healthy optic nerve is necessary for good vision. *How does the optic nerve get damaged by open-angle glaucoma?* Several large studies have shown that eye pressure is a major risk factor for optic nerve damage. In the front of the eye is a space called the anterior chamber. A clear fluid flows continuously in and out of the chamber and nourishes nearby tissues. The fluid leaves the chamber at the open angle where the cornea and iris meet. When the fluid reaches the angle, it flows through a spongy meshwork, like a drain, and leaves the eye. In open-angle glaucoma, even though the drainage angle is “open,” the fluid passes too slowly through the meshwork drain. Since the fluid builds up, the pressure inside the eye rises to a level that may damage the optic nerve. When the optic nerve is damaged from increased pressure, open-angle glaucoma—and vision loss—may result. That's why controlling pressure inside the eye is important.

Another risk factor for optic nerve damage relates to blood pressure. Thus, it is important to also make sure that your blood pressure is at a proper level for your body. Who is at risk for open-angle glaucoma? Anyone can develop glaucoma. Some people, listed below, are at higher risk than others:

- African Americans over age 40
 - Everyone over age 60, especially Mexican Americans
 - People with a family history of glaucoma.
- A comprehensive dilated eye exam can reveal more risk factors, such as high eye pressure, thinness of the cornea, and abnormal optic nerve anatomy. In some people with certain combinations of these high-risk factors, medicines in the form of eye drops reduce the risk of developing glaucoma by about half.

Glaucoma Symptoms

At first, open-angle glaucoma has no symptoms. It causes no pain. Vision stays normal. Glaucoma can develop in one or both eyes. Without treatment, people with glaucoma will slowly lose their peripheral (side) vision. As glaucoma remains untreated, people may miss objects to the side and out of the corner of their eye. They seem to be looking through a tunnel. Over time, straight-ahead (central) vision may decrease until no vision remains. *What are some other forms of glaucoma and how are they treated?*

Open-angle glaucoma is the most common form. Some people have other types of the disease. In **low-tension or normal-tension glaucoma**, optic nerve damage and narrowed side vision occur in people with normal eye pressure. Lowering eye pressure at least 30 percent through medicines slows the disease in some people. Glaucoma may worsen in others despite low pressures. A comprehensive medical history is important to identify other potential risk factors, such as low

blood pressure, that contribute to low-tension glaucoma. If no risk factors are identified, the treatment options for low-tension glaucoma are the same as for open-angle glaucoma.

In **angle-closure glaucoma**, the fluid at the front of the eye cannot drain through the angle and leave the eye. The angle gets blocked by part of the iris. People with this type of glaucoma may have a sudden increase in eye pressure. Symptoms include severe pain and nausea, as well as redness of the eye and blurred vision. If you have these symptoms, you need to seek treatment immediately. This is a medical emergency. If your doctor is unavailable, go to the nearest hospital or clinic. Without treatment to restore the flow of fluid, the eye can become blind. Usually, prompt laser surgery and medicines can clear the blockage, lower eye pressure, and protect vision.

In **congenital glaucoma**, children are born with a defect in the angle of the eye that slows the normal drainage of fluid. These children usually have obvious symptoms, such as cloudy eyes, sensitivity to light, and excessive tearing. Conventional surgery typically is the suggested treatment, because medicines are not effective and can cause more serious side effects in infants and be difficult to administer. Surgery is safe and effective. If surgery is done promptly, these children usually have an excellent chance of having good vision.

Secondary glaucoma's can develop as complications of other medical conditions. For example, a severe form of glaucoma is called neovascular glaucoma, and can be a result from poorly controlled diabetes or high blood pressure. Other types of glaucoma sometimes occur with cataract, certain eye tumors, or when the eye is inflamed or irritated by a condition called uveitis. Sometimes glaucoma develops after other eye surgeries or serious eye injuries. Steroid drugs used to treat eye inflammations and other diseases can trigger glaucoma in some people.

There are two eye conditions known to cause secondary forms of glaucoma.

Pigmentary glaucoma occurs when pigment from the iris sheds off and blocks the meshwork, slowing fluid drainage. **Pseudoexfoliation glaucoma** occurs when extra material is produced and shed off internal eye structures and blocks the meshwork, again slowing fluid drainage.

Drug Caution

Drugs that can damage the optic nerve, retina and other vital parts are ACTH, allopurinol (gout); anti-coagulants; aspirin; corticosteroids, **Diabinese®**, diuretics, antihistamines, digitals, indomethcin, streptomycin, sulfur drugs, tetracycline, diazepam, haloperidol, quinine.

Causes

Doctors are not sure what causes glaucoma in most cases. For some reason, the ducts or other structures that regulate the pressure in the eye become damaged. Nutritional causes for glaucoma may include:

- **Inflammation**, often due to the presence of toxic levels of manganese, iron, aluminum, or other metals in and around the eyes.
- **Oxidant damage**. Toxic metals, nutrient deficiencies, liver damage, and other causes may contribute.
- **Copper toxicity**. In particular, copper imbalance, which is very common, can damage connective tissue, such as that in the ducts of the eyes. This may occur because too much bio unavailable copper oxidizes vitamin C and may damage the disulfide bonds that give all connective tissue such as collagen its flexibility and strength.
- **Liver toxicity**. Liver damage is associated with most eye diseases. In Chinese medicine, the liver meridian passes through the eyes. As a result, disturbance of this meridian affects the eyes,

often in subtle but important ways. Cataracts, glaucoma, retinitis pigmentosa, and other diseases of the eyes are often related to liver toxicity, which is extremely common.

Lifestyle

Nutritional tips include the following:

- **Eliminate all suspected food allergens**, including dairy (milk, cheese, eggs, and ice cream), wheat (gluten), soy, corn, preservatives, and chemical food additives. Your health care provider may want to test you for food allergies.
- **Eat more antioxidant-rich foods** (such as green, leafy vegetables and peppers) and berries (such as blueberries, cherries, and raspberries). Berries contain high levels of beneficial antioxidants for eye health.
- **Avoid refined foods**, such as white breads, pastas, and sugar.
- **Eat fewer red meats** and more lean, grass-fed meats, cold-water fish, tofu (soy, if no allergy), or beans for protein.
- **Use healthy cooking oils**, such as coconut oil, olive oil, or vegetable oil.
- **Reduce or eliminate trans-fatty acids** found in such commercially baked goods as cookies, crackers, cakes, French fries, onion rings, donuts, processed foods, and margarine.
- **Avoid stimulants such as alcohol and tobacco.**
- **Drink 6-8 glasses of filtered water daily.**
- **Exercise moderately**, if tolerated, 5 days a week.

Nutritional Supplementation Considerations

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. Likewise they are not presented as a diagnosis, treatment nor have the products necessarily been evaluated by the FDA.

- **Visio Plex®.**
- **Hyaluronic Acid.**
- Appropriate **Wellness Essentials®** Formula.

Dietary Considerations

- FirstLine Therapy® Diet / Mediterranean Diet (See “Fighting Vision Loss with Food — The Impact of Vision Loss” below.)

Nutritional Formula Description & Supplementation Rationale

Visio Plex®

Nutrients and Herbs to Nourish the Eyes. Visio Plex is formulated to provide key nutrients, that may be lost with aging, which are beneficial and/or necessary for proper functioning of the eyes. Vitamin A, besides being beneficial to mucous membranes, is essential to the formation of visual purple pigment which is necessary for proper night vision. Raw eye concentrate is added to assist in cellular repair. Lecithin provides lipotropic factors, and the herb eyebright has been used for many years to benefit vision. Lutein and Zeaxanthin are found naturally in the lens and retina. The amino acids are precursors of Glutathione, which is found abundantly in the lens, but its concentration diminishes with age. Antioxidant minerals are added to retard progression of cataracts and macular degeneration.

Hyaluronic Acid

Hyaluronic acid (HA) is highly concentrated inside the eyeball. Research indicates that HA is essential for healthy eye function, promotes healthy eye lubrication, is anti-viral, and may have a

positive effect in individuals with “floaters” in the eye. The fluid inside the eye called the vitreous humor is composed almost completely of hyaluronic acid. The HA gives the fluid inside the eye a viscous gel like property. This gel acts as a shock absorber for the eye and also serves to transport nutrients into the eye. HA has been directly injected into the eye during procedures to help maintain the shape of the eye during surgery. It has been said that after the 5th decade of life, our eyes stop producing the much needed hyaluronic acid resulting in various eye needs.

Appropriate Wellness Essentials® Formula

Key Vitamins & Minerals, Essential Fatty Acids, PLUS Patient Specific Nutrition. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. *“Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”*

Fighting Vision Loss with Food — The Impact of Vision Loss

Vision loss on a grand scale would have a far-reaching impact on society. Yet, if we continue in the direction we are headed now, we could be facing a future in which a large segment of the population suffers vision loss from diseases such as age-related macular degeneration (AMD), cataracts, glaucoma, and diabetic retinopathy. Vision loss, in turn, is a key reason for loss of independence in the elderly. Certainly, improved methods of diagnosing and treating age-related eye disease can obviate some of the vision loss that would otherwise cripple millions of older adults. Prevention, however, is not only cheaper but likely to be far more effective in averting such a tragedy.

Prevention Is the Key

How can healthcare providers motivate patients to take steps to prevent age-related eye disease? A recent survey[1] found that baby boomers (born between 1945 and 1964) fear vision loss almost as much as they fear heart disease or cancer. Still, almost half do not receive an annual eye exam, and few are knowledgeable about how dietary factors influence eye health.[2] Furthermore, supplement use to promote eye health is low, even in patients already diagnosed with age-related eye disease.[2] Eye care providers, primary care providers, and specialists in diabetes can point to a burgeoning body of research to convince their patients to increase their dietary intake of key nutrients.

Gout / Gouty Arthritis

Gout is a common, painful form of arthritis. It causes swollen, red, hot, and stiff joints. Gout occurs when uric acid builds up in your blood. This happens if your body produces extra acid or does not eliminate enough, or if you eat too many foods with purines, such as liver and dried beans. Pseudo gout has similar symptoms and is sometimes confused with gout. However, it most common caused by calcium phosphate, not uric acid. Often, gout first attacks your big toe. It can also attack ankles, heels, knees, wrists, fingers, and elbows. You are more likely to get gout if you:

- Are a man
- Have a family member with gout
- Drink alcohol

At first, gout attacks usually get better in days. Eventually, attacks last longer and occur more often. Uric acid buildup can lead to kidney stones. Untreated gout can cause permanent joint and kidney damage. NIH: National Institute of Arthritis and Musculoskeletal and Skin Diseases.

What Causes Gout / Gouty Arthritis? A number of risk factors are associated with hyperuricemia and gout. They include:

- **Genetics.** Many people with gout have a family history of the disease. Estimates range from 20 to 80 percent.
- **Gender and age.** It is more common in men than in women and more common in adults than in children.
- **Weight.** Being overweight increases the risk of developing hyperuricemia and gout because there is more tissue available for turnover or breakdown, which leads to excess uric acid production.
- **Alcohol consumption.** Drinking too much alcohol can lead to hyperuricemia, because alcohol interferes with the removal of uric acid from the body.
- **Diet.** Eating too many foods that are rich in purines can cause or aggravate gout in some people.
- **Lead exposure.** In some cases, exposure to lead in the environment can cause gout.

Other Health Problems:

- **Renal insufficiency,** or the inability of the kidneys to eliminate waste products, is a common cause of gout in older people. Other medical problems that contribute to high blood levels of uric acid include:
 - High blood pressure
 - Hypothyroidism (underactive thyroid gland)
 - Conditions that cause an excessively rapid turnover of cells, such as psoriasis, hemolytic anemia, or some cancers
 - Kelley-Seegmiller syndrome or Lesch-Nyhan syndrome, two rare conditions in which the enzyme that helps control uric acid levels either is not present or is found in insufficient quantities

Medications:

A number of medications may put people at risk for developing hyperuricemia and gout. They include:

- **Diuretics,** which are taken to eliminate excess fluid from the body in conditions like hypertension, edema, and heart disease, and which decrease the amount of uric acid passed in the urine.
- **Salicylate-containing drugs,** such as aspirin.
- High-dose **niacin,** a vitamin also known as nicotinic acid and chronic intake of high dosages of Vitamin A.
- **Cyclosporine,** a medication that suppresses the body's immune system (the system that protects the body from infection and disease). This medication is used in the treatment of some autoimmune diseases, and to prevent the body's rejection of transplanted organs.
- **Levodopa,** a medicine used to support communication along nerve pathways in the treatment of Parkinson's disease. Note should be made that not only do chemicals effects nerve pathways but all nerve pathways are regulated by the condition of the spine as it not only house and protects the spinal cord and nervous system but the transmission of life force that flows through the nerves. That being the case when a person has been diagnosed with gout them (in addition to diet and food supplementation is well advised to seek the services of Interventional Chiropractic Physician.

Foods To Consider Avoiding

- Anchovies

- Asparagus
- Beef kidneys
- Animal brain tissue
- Dried beans and peas
- Wild game meats
- Gravy
- Herring
- Liver
- Mackerel
- Mushrooms
- Sardines
- Scallops
- Sweetbreads

High-Purine Foods:

Complementary and Alternative Therapies for Gout / Gouty Arthritis

A combination of therapies can be very effective at decreasing both the length and frequency of attacks.

Lifestyle

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s, make a diagnosis, treatment imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **Improve body composition.**

- **Drink plenty of water** to help the kidneys flush uric acid from the body. Dehydration often triggers a gout attack.

- **Restrict purines in your diet.** Foods with a high purine content include beef, goose, organ meats, sweetbreads, mussels, anchovies, herring, mackerel, and yeast. Foods with a moderate amount of purines include meats, poultry, fish, and shellfish not listed above. Spinach, asparagus, beans, lentils, mushrooms, and dried peas also contain moderate amounts of purines.

- **Do not drink alcohol, especially beer.** Research finds that all types of alcohol, even previously exempt wine, can bring on attacks of the painful condition.

- **Cherries** — One half pound of cherries per day (fresh or frozen) for 2 weeks lowers uric acid and prevents attacks. Cherries and other dark red berries (hawthorn berries and blueberries) contain anthocyanidins that increase collagen integrity and decrease inflammation. You may prefer to take cherry fruit extract as a pill (1,000 mg three times per day during an attack; 1,000 mg per day to prevent attacks). Cherry juice (8-16 ounces per day) is also helpful.

- **Coffee** — Five studies show that coffee is good for the prevention of gout and/or lowering uric acid. Note that in these studies, coffee is described as simply coffee; no distinction has been drawn between roasted beans, ground, or instant—nor between quality or brand names. So you can't assume with certainty you'll get a better anti-gout performance from a certain type of coffee, although you might. The only explained difference is between regular and decaffeinated.

- **Vitamin C**, taken in high doses, can help decrease blood uric acid levels. *Note that there is a small subset of people with gout who will actually get worse with high levels of vitamin C.*

•• **Folic acid** — 400-800 mcg per day is reported to inhibit xanthine oxidase, which is required for uric acid production. *Note:* In many individuals prone to gout there is a suspected impairment in converting folic acid into its active forms, such as MTHFR C677T polymorphism). Thus the reason we suggest **FolaPro®**.

•• **Bromelain**, an enzyme found in pineapple with an anti-inflammatory capability's.

•• **Quercetin and Proanthocyanidins are bioflavonoids**, which are reported to have the ability to be active free-radical quenchers and natural anti-inflammatories that research indicates also help reduce uric acid levels.

•• **EPA (Eicosapentaenoic acid)** found in fish oil and have the possibility to inhibit pro-inflammatory leukotrienes.

•• **Avoid taking extra niacin and vitamin A.** Both may play a role in some attacks of gout.

Options For Nutritional Supplementation for Gout / Gouty Arthritis

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

•• **FolaPro®.**

•• **Pro-Antho Forte.**

•• **Inflavonoid Intensive Care®**

•• **Ultra Potent-C® Powder.**

Note: There is a small subset of people with gout who will actually get worse with high levels of vitamin C. If unresponsive to nutritional support strategies:

•• Consider heavy metal toxicity as a contributing factor. Lead exposure. In some cases, exposure to lead in the environment can cause gout therefore having a Hair Mineral/Toxic Metal Analysis is a good idea.

•• Consider renal insufficiency, or the inability of the kidneys to eliminate waste products, which is a common cause of gout in older people.

Fish Oils

Safety of Fish Oil Supplements with Gout

Question: A doctor advised me to take fish oil supplements to improve my cholesterol level. But the source of fish oil in many preparations includes sardines, trout, and herring—fish that are high in purines and on the list of foods I should avoid because I have gout. How much purine is in fish oil supplements? Should I take them or not?

Answer: Purines are found in the meat of the fish but not in highly purified, molecularly distilled fish oil, so it should not affect your gout. “It is recommended everyone consume at least 2,000 milligrams (mg) per day of EPA and DHA (two fatty acids in fish oil crucial to human health). Those with autoimmune disorders and arthritis should consume 3,000 to 6,000 mg in divided doses with meals.” —James McKoy, MD, Rheumatologist.

Dietary Considerations

•• Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale

FolaPro®

FolaPro features Metafolin®, the active, preferred form of folate called L-5 methyl tetrahydrofolate (L-5-MTHF). Folic acid inhibits xanthine oxidase, which is required for uric acid production.

Note: In many individuals prone to gout, there is a suspected impairment in converting folic acid into its active form, such as MTHFR C677T polymorphism. Thus the reason we suggest FolaPro.

Pro-Antho Forte

Pro-Antho Forte is a herbal dietary “Flavonoid / Pycnogenol / Proanthocyanidin / antioxidant complex.” Quercetin and Proanthocyanidins are bioflavonoids, which are free-radical quenchers and natural anti-inflammatories that research indicates also help reduce uric acid levels.

Inflavonoid Intensive Care®

Inflavonoid Intensive Care is a standardized herbal relief formula with vitamin C and bioflavonoids for pain and inflammation and also helps reduce uric acid levels.

- Features an extract of boswellia, as well as turmeric and ginger; all premium quality and standardized to key compounds to ensure effectiveness, reproducibility, and consistent results.
- Provides cayenne, an herb that has long been prized for its many health benefits such as the relief of minor pain, which complements the activity of the other herbs.
- Offers added antioxidant support from quercetin.
- Provides excellent muscle tissue support and relief of minor pain.

Ultra-Potent-C® Powder

Ultra-Potent-C Powder is an exclusive, patented formula that is designed to enhance the utilization of vitamin C.

- Provides valuable antioxidant protection.
- Supports the production of collagen and connective tissue.
- Supports immune function by helping to promote natural killer cell and white blood cell activity as compared to simple ascorbic acid.
- Features a unique metabolite support system designed to enhance utilization.
- Buffered to help prevent potential stomach upset.

Headache (Nonvascular and Vascular / Migraine) Headaches: Nonvascular

Headache without vascular related cause. The most commonly diagnosed condition in the United States with 70% of these caused by muscle tension. Causes include spinal issues, curvatures, subluxations in the cervical spine (Neck), sub occipital (back of the base of the skull) muscle spasms from injury (whiplash), postural strain (caused, for example, by a computer screen angled incorrectly), pillow too large that forces flexion of the neck during rest and exposure to cold temperatures/air hitting the back of the neck which predisposes people to tightening of neck muscles.

Onset

Usually gradual onset, but tends to persist in cyclical patterns of tension and relaxation. In time, patterns will be held in tension as somatic dysfunction leads to segmental malposition (cervical subluxations) and abnormal function of the cranial and cervical thoracic muscles.

Symptoms

- Most commonly arising from tension in the sub occipital and cervical back in the neck) spine musculature
- Generally do not throb but are felt as a constant dull ache in various areas of the head and neck and sometimes accompanied with dizziness and light headedness.

- Areas of pain are varied because they are often referred pain zones from trigger points in neck and skull muscles

Nutritional Supplementation Considerations for Headache: Nonvascular

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- **Cenitol®.**

- Appropriate **Wellness Essentials®** formula.

Note: for all headaches: If headaches worsen with exercise, urinary nitrates may be low—urinary nitrates reflect systemic nitric oxide levels. Consider low systemic nitric oxide levels as nitric oxide modulates vasodilation.

Consider adding Arginine Plus™.

Dietary Considerations

- **FirstLine Therapy® Diet**

Avoid: spicy foods, alcohol, excess stimulation, coffee, caffeine, chocolate, fried foods, stimulating foods, MSG, aspartame, dairy foods (allergy), tyramine foods (aged cheese, red wine, fermented sausage)

Increase: potassium foods for the 2 PM or evening headache

Headache: Vascular / Migraine

Headaches from vascular disturbance. There are several types of vascular headaches:

Migraine: Periodic throbbing headaches. The problem seems to be due to a vasoconstriction of the cerebral blood vessels (or the vessels leading into the brain), while the headache itself seems to be due to a vasodilation of the blood vessels with subsequent congestion of tissues; seen more often in women and is thought to affect up to 20-30% of the population; usually begins between the ages of 10-30, and remissions commonly occur after age 50, suggesting the possibility of hormonal relationship.

Hypertension

There is a history of renal or cardiovascular disease. If you've been prescribed a medication for hypertension/hypotension do not stop taking it and if you're contemplating ingesting food supplements for hypertension/hypotension –discuss that idea with the physician who prescribed said medication(s).

Cluster (histamine headaches): Much more frequent in men; associated histaminic (a nitrogenous compound) involved in immune responses) symptoms.

Miscellaneous: Toxic states: infections, alcoholism, uremia, lead, arsenic, morphine, carbon monoxide poisoning, encephalitis's; headache is moderate in intensity; there is a history of exposure to a toxin or other signs and symptoms that would point to an associated microorganism.

Symptoms Migraine:

- May be unilateral or bilateral, often located about or behind an eye and spreading to one or both sides of the head and pain at the base of the skull and back of the neck.
- Frequently there is nausea and vomiting with a desire for darkness and quiet
- The headache lasts from hours to 1-3 days
- Classic type has a problem of various symptoms: scintillating scotomas, mood swings, dizziness and tinnitus, dazzling zigzags, perhaps feeling of impending doom.
- Physical and neurological findings between attacks are unremarkable; during attacks there may be transient neurological signs and/or Hypertension:
- Physical exam will reveal hypertension with retinopathy, edema, and cardiac findings
- Generally, the hypertensive headache is associated with advanced hypertensive disease or attacks of potentially serious Hypertension

Cluster Headaches:

- Headaches are paroxysmal
- Often wake the patient at night
- Abrupt onset of severe pain that lasts 1-2 hours
- Occur typically in clusters of days to weeks and then are not experienced again for months or years
- Unilateral with associated histaminic symptoms (lacrimation, plugged nose, ptosis, cheeks flushed and endemic)
- Remissions may occur, lasting for years or permanently
- The physical exam shows facial vasodilation (Flushing/redness), pupillary constriction, injected conjunctiva
- Tenderness to palpation of external and common carotid arteries. When the examination includes Chiropractic intervention very often there exists restrictions in cervical (neck) ranges of motion, postural asymmetry's and muscles spasm, and/or fixations and subluxations in the cervical soft tissues.

Miscellaneous:

There is a history of exposure to a toxin or other signs and symptoms that would point to an associated microorganism.

Course & Prognosis

In general, migraine and cluster headaches are chronic conditions that recur and are not cured by conventional treatment. Although they are both benign, the pain can be debilitating and cause much morbidity. Conventional treatment usually involves ergotamine prophylaxis and narcotic analgesics. The hypertensive headache is correctable by controlling the patient's hypertension. If uncontrolled, then serious hypertensive sequelae may occur (e.g. stroke). The toxic headache is treated by dealing with the toxic exposure and ridding the body of the substance. Prognosis for migraine headache is favorable if thorough assessment and avoidance of triggers, along with biochemical/metabolic therapy is undertaken. Commonly, the etiology of the vascular / migraine headache seems to fall into one or more of the following:

- **Food sensitivities / allergy** — Consider an allergy/sensitivity screen, such as a serum allergy test (IgG and IgG4) or a form of energetic testing such as Applied Kinesiology Muscle Response Test or EDS (Electro-Dermal Screening), Acupuncture, Interventional Chiropractic Spinal Manipulation and the implementation of a program to desensitize, minimize, or eliminate exposure to the allergen(s).

- **Hormonal dysregulation** — consider promoting healthy estrogen metabolism with **Estrium®** or **EstroFactors®**.
- **Environmental factors / chemical toxicity** — consider implementing a balanced detoxification program such as the 10-Day or 28-Day Clear Change™ Detoxification Programs.
- **Structural / bio-mechanical and/or muscle and soft tissue issues** — Address with Interventional chiropractic care and massage therapy as all forms of headaches have musculo ligamentous entities.
- **Neurotransmitter imbalances** (especially GABA / Glutamate balance) — Consider supplementing with Trancor™ for healthy GABA/Glutamate balance very often determined through Urine Neurotransmitter Tests or Touch For Health Applied Kinesiology Muscle Response Test.
- In migraine headaches in particular, **stress plays a complicating role in the onset and frequency**. If stress is a factor, consider addressing with the Identi-T™ Personalized Stress Relief Program.
- **Sleep disorders and stress** — Two days of either high stress and/or lack of healthy sleep was strongly predictive of headache
- Houle, T. T. Stress and sleep duration predict headache severity in chronic headache sufferers. *Pain*. 2012 Dec;153(12):2432-40.

Note: In all forms of headaches, sensitivities to certain food or environmental factors can be a significant entity to address. If determined to be, consider adding **Perimine** @ 1 tablet twice daily to the outlined protocols, and follow the Modified Elimination Diet (if food sensitivity/allergy is determined) or the Anti-Inflammatory Diet (if an environmental sensitivity exists).

Note for all headaches: If headaches worsen with exercise, urinary nitrates may be low—urinary nitrates reflect systemic nitric oxide levels. Consider low systemic nitric oxide levels as nitric oxide modulates vasodilation. Consider adding **Arginine Plus™** to the program @ 3-6 tablets daily to modulate and support healthy nitric oxide levels.

Nutritional Supplementation Considerations for Headache:

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Vascular

Vascular / Migraine — At Onset:

- **Trancor™.**
- **Dynagesi.**

Vascular / Migraine — Preventive Maintenance:

- **Trancor™.**
- **Melatonin Pro.**
- **5-HTP Extra Strength.**

Interventional Chiropractic Care involving Touch For Health Applied Kinesiology Muscle Response Test and manipulations of any subluxation, acupuncture, Myofascial Release and Neuro/muscle Skeletal Reeducation, massage, exercise, acupuncture. According to research published in the *International Journal of Headache - Cephalalgia* (Cephalalgia 31(14) 1428-1438; 2011),

“Exercise may be an option...in patients who do not benefit from or do not want to take daily migraine medication.”

Dietary Considerations

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- Modified Elimination Diet or the Anti-Inflammatory Diet

Vascular / Hypertension

- Vasotensin™.

Vascular / Cluster

- Lipo-Gen™

- LiverCare®.

Vascular / Toxic

- **Appropriate Detoxification Program** — see Detoxification section

Dietary Suggestions for all Vascular Headaches

- Modified Elimination Diet or Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale

Cenitol®

Cenitol is formulated to support a healthy mood and overall nervous system function by featuring inositol—an important, naturally occurring component of cell membranes. Cenitol also supplies magnesium in the form of a fully reacted amino acid chelate designed for enhanced nervous system support.

- Provide support for healthy brain and nervous system function.
- May support a positive mood by serving as a second messenger for several neurotransmitters.
- Important in regulating vital cellular functions such as signal transduction, cell proliferation and differentiation, and osmoregulation.
- Designed to promote healthy nerve tissue synthesis and nerve conduction.

Appropriate Wellness Essentials® formula- Key Vitamins & Minerals, Essential Fatty Acids, PLUS Patient Specific Nutrition.

Wellness Essentials is a combination of Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. *“Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”*

Trancor™

Trancor is formulated to support a sense of tranquility in those who may feel worried or nervous by beneficially modulating the balance between the calming influence of GABA and the excitatory effects of glutamate.

Melatonin Pro

Results from a multicenter, randomized, double-blind, placebo-controlled trial showed that 3 mg of melatonin was more effective than placebo and had efficacy similar to that of 25 mg of amitriptyline. Furthermore, it was better tolerated than amitriptyline, with lower rates of daytime sleepiness and no weight gain. American Academy of Neurology (AAN) 65th Annual Meeting.

Abstract S40.005. Presented March 20, 2012. The pineal hormone melatonin is a simple derivative of tryptophan and serotonin. Endogenous melatonin is synthesized and released in response to light and dark on the retina. Its secretion is inhibited by bright light. It has also been suggested that chronic exposure to electromagnetic fields may suppress melatonin production. Melatonin also functions as an antioxidant. It specifically scavenges the damaging hydroxyl radical. Like other “anti-aging” hormones, melatonin is produced in abundance in early life, but declines steadily with age suggesting the possibility of considering supplementation melatonin.

5 HTP Extra Strength

5-HTP (5-Hydroxytryptophan) is related to both L-tryptophan and serotonin. In the body L-tryptophan is converted to 5-HTP, which can then be converted to serotonin. 5-HTP readily crosses the blood-brain barrier and increases central nervous system (CNS) synthesis of serotonin. Serotonin can affect sleep, appetite, temperature, sexual behavior, and pain sensation. Serotonin also has a significant role in depression, anxiety, and aggression.

Vasotensin™

Vasotensin provides active peptides from bonito fish to help prevent the formation of angiotensin II, a potent vasoconstrictor, through their interaction with angiotensin converting enzyme (ACE). This activity supports healthy vascular function for optimal blood flow and healthy blood pressure levels.

Lipo-Gen™

Comprehensive lipotropic formula. Lipo-Gen is a highly specialized formula that features a broad-spectrum and unique blend of lipotropic nutrients combined with select amino acids, vitamins, and herbs to support healthy liver and gallbladder function.

- Provides nutrients involved in fat metabolism including inositol, choline, and taurine.
- Delivers methyl donors, folic acid, vitamins B6 and B12, and select herbs that are traditionally used to support bile flow and healthy liver function.

LiverCare®

Herbal liver support. LiverCare is clinically proven to support healthy detoxification and normal liver cell regeneration. LiverCare helps maintain healthy liver enzyme counts within the normal levels while promoting protein metabolism and nutrient digestion.

24/7/365/Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today
1. Go to www.nutri-dyn.com
2. Click on Create Account
3. Click on Patients
4. Complete the short form and type in the following Account Number 100160
5. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Hearing Loss

Gradual hearing loss that occurs as you age (presbycusis) is common. According to the National Institutes of Health, an estimated one-third of Americans between the ages of 65 and 75 and close to one-half of those older than 75 have some degree of hearing loss. Doctors believe that heredity and chronic exposure to loud noises are the main factors that contribute to hearing loss over time. Other factors, such as earwax blockage, can prevent your ears from conducting sounds as well as they should.

How You Hear

Hearing occurs when sound waves reach the structures inside your ear where the sound wave vibrations are converted into nerve signals that your brain recognizes as sound.

Ear Anatomy

Your ear consists of three major areas: the outer ear, middle ear, and inner ear. Sound waves pass through the outer ear and cause vibrations at the eardrum. The eardrum and three small bones of the middle ear—the hammer, anvil, and stirrup—amplify the vibrations as they travel to the inner ear. There, the vibrations pass through fluid in the cochlea, a snail-shaped structure in the inner ear. Attached to nerve cells in the cochlea are thousands of tiny hairs that help translate sound vibrations into electrical signals that are transmitted to your brain. The vibrations of different sounds affect these tiny hairs in different ways, causing the nerve cells to send different signals to your brain. That's how you distinguish one sound from another.

What Causes Hearing Loss

For some people, the cause of hearing loss is the result of a gradual buildup of earwax, which blocks the ear canal and prevents conduction of sound waves. Earwax blockage is a cause of hearing loss among people of all ages. In most cases, however, hearing loss results from damage to the inner ear. Aging and prolonged exposure to loud noise may cause wear and tear on the hairs or nerve cells in the cochlea that send sound signals to the brain. When these hairs or nerve cells

are damaged or missing, electrical signals aren't transmitted as efficiently and hearing loss occurs. Higher pitched tones may become muffled to you. It may become difficult for you to pick out words against background noise. Heredity may make you more prone to these changes. Ear infection and abnormal bone growths or tumors of the outer or middle ear can cause hearing loss. A ruptured eardrum also may result in loss of hearing. Another possible contributing cause of hearing loss are spinal problems. This is related to the brain and spinal cord nerve distribution from the spinal subluxations in the cervical spine to the middle ear.

The Brain, Spinal Cord and Spine Connection

Another cause of hearing loss (which is often over-looked) involves the possible relationship of the 2nd Cranial nerve, the spinal cord and spine, postural imbalance in that when there are issues involving disruption of the normal nerve and blood supply in the brain, spinal cord and cervical spine that innervates and vascular supply to the hearing mechanism there is then potential to loss of hearing.

Risk Factors

Factors that may damage or lead to loss of the hairs and nerve cells in your inner ear include:

- **Aging.** Exposure to sounds over the years can damage the cells of your inner ear.
- **Heredity.** Your genetic makeup may make you more susceptible to ear damage.
- **Occupational noises.** Jobs where loud noise is a regular part of the working environment such as farming, construction, or factory work can lead to damage inside your ear.
- **Recreational noises.** Exposure to explosive noises such as from firearms and fireworks can cause immediate, permanent hearing loss. Other recreational activities with dangerously high noise levels include snowmobiling, motorcycling, or listening to loud music. Personal music players such as MP3 players can cause lasting hearing loss if you turn the volume up high enough to mask the sound of other loud noises, such as a lawn mower.
- **Some medications.** Drugs such as the antibiotic gentamicin and certain chemotherapy drugs can damage the inner ear. Temporary effects on your hearing—ringing in the ear (tinnitus) or hearing loss can occur if you take very high doses of aspirin or nonsteroidal anti-inflammatory drugs (NSAIDs) (see graph), antimalarial drugs, or loop diuretics.
- **Some illnesses.** Diseases or illnesses that result in high fever, such as meningitis, may damage the cochlea.

Analgesics Increase Risk of Hearing Loss in Men

Men who take aspirin, acetaminophen (Tylenol®), and/or NSAIDs (Advil®, Motrin®, etc.) at least twice a week increase their risk of experiencing hearing loss:

- **Aspirin – 33%**
- **NSAIDs – 61%**
- **Acetaminophen – 99%**

Curhan, S. G., Eavey, R., Shargorodsky, J., & Curhan, G. C. Analgesic use and the risk of hearing loss in men. *Am J Med.* March 2010;123(3):231-7.

Spinal curvatures, spinal subluxations.

Prevention

Hearing loss prevention consists of steps you can take to help you prevent noise-induced hearing loss and avoid worsening of age-related hearing loss:

Protect your ears in the workplace. Specially designed earmuffs that resemble earphones can protect your ears by bringing most loud sounds down to an acceptable level. Foam, pre-formed, or custom-molded earplugs made of plastic or rubber also can effectively protect your ears from damaging noise.

Have your hearing tested. Consider regular hearing tests if you work in a noisy environment. Regular testing of your ears can provide early detection of hearing loss. Knowing you've lost some hearing means you're in a position to take steps to prevent further hearing loss.

Avoid recreational risks. Activities such as riding a snowmobile, hunting, and listening to extremely loud music for long periods of time can damage your ears. Wearing hearing protectors or taking breaks from the noise during loud recreational activities can protect your ears. Turning down the volume when listening to music can help you avoid damage to your hearing.

Interventional Chiropractic Care with particular attention to the cervical spine.

Nutrition Supplementation Suggestions for Hearing Loss

- Cellular Energy.

- NAC-600

- Appropriate Wellness Essentials® Formula

Additional Options:

Removing wax blockage. Earwax blockage is a common reversible cause of hearing loss. Your doctor may remove earwax by loosening it with oil and then flushing, scooping, or suctioning the softened wax out.

Hearing aids. If your hearing loss is due to damage to your inner ear, a hearing aid can be helpful by making sounds stronger and easier for you to hear. An audiologist can discuss with you the potential benefits of using a hearing aid, recommend a device, and fit you with it. In some cases, you may be satisfied with an inexpensive, over-the-ear microphone device available at electronic stores. You may need to try more than one device to find one that works well for you.

Cochlear implants. If you have severe hearing loss, a cochlear implant may be an option for you. Unlike a hearing aid that amplifies sound and directs it into your ear canal, a cochlear implant compensates for damaged or nonworking parts of your inner ear. If you're considering a cochlear implant, your audiologist, along with a medical doctor who specializes in disorders of the ears, nose and throat (ENT), will likely discuss the risks and benefits with you.

Dietary Considerations

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor in any way an attempt to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. . Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- FirstLine® Therapy Diet / Mediterranean-type diet

- Avoid Alcohol and Tobacco — These substances have been shown to be especially unhealthy in this condition.

- Avoid Sugar — Sugar is said to cause inner ear dysfunction by promoting Dysglycemia and consequent adrenaline release, which in turn causes vasoconstriction.

Nutritionnel Formula Description & Supplementation Rationale Cellular Ennergy

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

The acetyl-L-carnitine, Coenzyme Q10, and alpha lipoic acid (found in Cellular Energy) were able to reduce age-associated deterioration in auditory sensitivity and improve cochlear function related to their ability to protect against cochlear mitochondrial DNA damage as a result of aging.

- Sideman, M. D., et al. Biologic activity of mitochondrial metabolites on aging and age-related hearing loss. *Am J Oto.* 2000;21:161-167.

According to a study published in *Otolaryngol Head Neck Surg.* (2007 Jan; 136(1):72-7), CoQ-10 improved cochlear function and “for a subgroup of people, CoQ-10 may provide relief from symptoms of tinnitus.” The test group was administered 100 mg of CoQ-10 three times daily for 12 weeks.

NAC-600.

Preliminary studies indicate promise in using N-acetyl-cysteine (NAC) for prevention and treatment of drug- and noise- induced hearing loss, Meniere’s Syndrome/tinnitus, where N-acetyl-cysteine’s effects on increasing glutathione may reduce cochlear and hair cell damage in the ear.

- Kopke, R. D., Jackson, R. L., & Coleman, J. K. M., et al. NAC for noise: From the bench top to the clinic. *Hear Res.* 2007;226:114-25.

- Lorito, G., Giodano, P., & Prosser, S., et al. Noise-induced hearing loss: A study on the pharmacological protection in the Sprague Dawley rat with N-acetyl-cysteine. *Acta Otorhinolaryngol Ital.* 2006;26:133-9.

- Dickey, D. T., Muldoon, L. L., Kraemer, D. F., & Neuwelt, E. A. Protection against cisplatin-induced ototoxicity by N-acetyl-cysteine in a rat model. *Hear Res.* 2004;193:25-30.

- Duan, M., Qiu, J., & Laurell, G., et al. Dose and time-dependent protection of the antioxidant N-L-acetyl-cysteine against impulse noise trauma. *Hear Res.* 2004;192:1-9.

- Kopke, R. D., Weisskopf, P. A., & Boone, J. L., et al. Reduction of noise-induced hearing loss using L-NAC and salicylate in chinchilla. *Hear Res.* 2000;149:138-146.

Appropriate Wellness Essentials® Formula

Wellness Essentials contains key vitamins, minerals, and essential fatty acids necessary for optimal health and healthy auditory function along with patient-specific nutrition. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. “*Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.*”

Heavy / Toxic Metal Detoxification

Toxic metals such as lead, mercury, aluminum, arsenic, cadmium, cobalt, and tin can have a distinct negative impact on health and do need to be addressed if they are present in levels of concern. Many of the elements that can be considered heavy metals have no known benefit for human physiology. Lead, mercury, and cadmium are prime examples of such “toxic metals.” Yet, other metals are essential to human biochemical processes. For example, zinc is an important cofactor for several enzymatic reactions in the human body, vitamin B-12 has a cobalt atom at its core, and hemoglobin contains iron. Likewise, copper, manganese, selenium, chromium, and molybdenum are all trace elements, which are important in the human diet. Another subset of metals includes those used therapeutically in medicine; aluminum, bismuth, gold, gallium, lithium, and silver are all part of the medical armamentarium. Any of these elements may have pernicious effects if taken in quantity or if the usual mechanisms of elimination are impaired. The toxicity of

heavy metals depends on a number of factors. Specific symptomatology varies according to the metal in question, the total dose absorbed, and whether the exposure was acute or chronic.

Age and Toxicity

The age of the person can also influence toxicity. For example, young children are more susceptible to the effects of lead exposure because they absorb several times the percent ingested compared with adults and because their brains are more plastic and even brief exposures may influence developmental processes. The route of exposure is also important.

Absorption

Elemental mercury is relatively inert in the gastrointestinal tract and also poorly absorbed through intact skin, yet inhaled or injected elemental mercury may have disastrous effects. Some elements may have very different toxic profiles depending on their chemical form. For example, barium sulfate is basically nontoxic, whereas barium salts are rapidly absorbed and cause profound, potentially fatal hypokalemia. The toxicity of radioactive metals like polonium, which was discovered by Marie Curie but only recently brought to public attention after the 2006 murder of Russian dissident Alexander Litvinenko, relates more to their ability to emit particles than to their ability to bind cell proteins.

Life Style

Exposure to metals may occur through the diet, from medications, from the environment, or in the course of work or play. Where heavy metal toxicity is suspected, time taken to perform a thorough dietary, occupational, and recreational history is time well spent, since identification and removal of the source of exposure is frequently the only therapy required. Specific laboratory testing for metals should be undertaken when the likelihood of toxicity is significant, based on a history and/or symptoms consistent with excessive exposure.

Food Supplements

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Because most vitamins, mineral and herbs come directly from, water or foods grown in ground there can be a high probability of them being contaminated with heavy toxic metals as well as hormones (Xenobiotic) pesticides, herbicides and antibiotics.

How does one know if the food supplement is free of contaminants? Food Quality supplements manufactures submit their products to independent laboratory testing and that includes the following. Therefore if you look at the products label and/or ask the distributor or manufacture if they have proof of the following you will know if the product is pure.

- ❖ GMP Certification of the Natural Products Association (www.naturalproducts.org), by the International Society for Pharmaceutical Engineering
- ❖ NSF Manufacturing Facility status (www.nsf.org)
- ❖ TGA Therapeutic Administration (www.tga.gov.au). Unlike most other food supplement manufacturers, they have submitted all of their vitamins, minerals, homeopathic remedies and nutraceuticals for independent laboratory analysis and has:
 - ✓ GMP – Certified Manufacturing by NPA, NSF International, and TGA to ensure quality-every time.

- ✓ Independent Laboratory Scientific Evaluation of ingredients has been verified by those organizations that the ingredients of the formula, quality, presence and concentration of active factors to ensure efficacy,
- ✓ That comprehensive independent laboratory Safety Reviews were conducted before the formula was developed – putting the health and safety of patients first,
- ✓ Human Quality Clinical Evaluation was taken into consideration because they prove to put the health of you people first.
- ✓ Advanced Scientific Staff and Research Facilities, such as the Metal Proteomics Nutrigenomics Research Center, to help shape the future of vitamins, minerals, homeopathic remedies and nutraceuticals. This process evaluates the existence of inorganic Metal Proteomics Nutrients thus if the label states ASS and RF it means that there were no inorganic toxic metals found or that they were far below any scientific evidence of causing acute illnesses and/or accumulated health issues. That process investigates harvested plants' high or non-capability to extract toxic metals from the soil in which they were harvested.
- ✓ The Nutrigenomics Research Center is dedicated to researching how nutrients and genes interact influencing our inherited genomic nature and the genomic nature through life. It tells us that what our forbearers ate and what we eat in foods and/or food supplements does affect our genomic nature.
- ✓ A food supplement successfully meeting our rigorous testing and auditing criteria receives the USP Verified Mark. When you see the Mark, it means the supplement: Contains the ingredients listed on the label, in the declared strength and amounts; does not contain harmful levels of specified contaminants.

Diagnosis

The following standard laboratory determinations may help make the diagnosis of heavy metal toxicity or help gauge its severity:

- Complete blood cell count (CBC) with peripheral smear - Findings may include basophilic stippling of the RBCs on peripheral blood smears; basophilic stippling is not specific for lead toxicity and may be observed in arsenic toxicity, sideroblastic anemia, and thalassemia; the anemia of lead toxicity may be normocytic or microcytic.
- Renal function tests
- Urine analysis (look for proteinuria)
- Liver function studies

Hair Trace Mineral Analysis (HTMA) is considered by many practitioners to be a reliable, non-invasive, inexpensive assessment of body burden of toxic metals. This analysis can document the presence of heavy metals and the need for addressing them. HTMA is analogous to a “ticker-tape read-out” of the metals the body is trying to excrete.

Why Hair? With respect to its contained elements, hair is essentially an excretory tissue rather than a functional tissue. Hair element analysis provides important information which, in conjunction with symptoms and other laboratory values, can assist the nutritionally oriented physician with an early diagnosis of physiological disorders associated with aberrations in essential and toxic element metabolism.

The Vulnerabilities of Hair

Hair, however, is vulnerable to external elemental contamination by means of certain shampoos, bleaches, dyes, and curling or straightening treatments as well toxic elements in the environment. Therefore, the first step in the interpretation of a hair element report is to rule out sources of exogenous (external) contamination.

Hair element analysis is a valuable and inexpensive screen for physiological excess, deficiency or maldistribution. It should not be considered a stand-alone diagnostic test for essential element function, and should be used in conjunction with patient symptoms and other laboratory tests.

Excretion of Toxic Metals

The body attempts to excrete toxic metals but if they remain in the blood and body tissues for very long before moving them out and/or trying to excrete them.

Serum Toxic Metals

If toxic metals are found in the serum, it would indicate recent exposure, but not necessarily body burden and for some reason they have an affinity to the brain and nervous system predisposing people to countless health problems.

Protein: As protein is synthesized in the hair follicle, elements are incorporated permanently into the hair with no further exchange or equilibration with other tissues. Scalp hair is easy to sample, and because it grows an average of one to two cm per month, it contains a "temporal record" of elements metabolism and exposure to toxic elements. When scalp hair is not available pubic hair may be utilized.

How is Hair Mineral Analysis Performed?

A small sample of 1" to 1 1/2" of hair from the scalp will show what the body is excreting from a metal standpoint for the last several months thus giving a reflex ion of what has transpired in minerals, probable present health status indications of future health and indications of any dietary changes that might be indicated. If it is determined that there is significant amounts of toxic metals bound to the hair, there is most likely a body burden issue of the heavy/toxic element.

Nutrient Elements Available For Analysis: including Antimony, Barium, Boron, Calcium, Cobalt, Copper, chromium, Germanium, Iodine, Iron, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Magnesium, Phosphorus, Platinum, Potassium, Rubidium, Selenium, Sodium, Strontium, Sulfur, Thallium, Thorium, Tin, Titanium, Uranium, Zinc, and Zirconium are obligatory co-factors for hundreds of important enzymes and also are essential for the normal functions of vitamins. The levels of these elements in hair are highly correlated with levels in organs and other tissues but anyone contemplating a hair mineral analysis should inquire of the doctor ordering the test which elements ordered.

Making Sure Your Getting A Full Picture

When you inquire of the practitioner your thinking of having the hair mineral analysis ordered through it is important to inquire what elements she/he will be ordering. Why? Because sometimes the practitioner will minimize the tests being ordered in an attempt to maximize their potential financial profit.

Toxic Elements: may be up to several hundred times more highly concentrated in hair than in blood or urine. Therefore, hair is the tissue of choice for detection of body burden and past

exposure to elements such as Aluminum, Arsenic, Cadmium, Lead, and Mercury and if the person has health issues and the hair mineral analysis shows dangerous levels of a blood and urine testing would be appropriate to present levels of the aforementioned elements.

A Potentially Viable Diagnostic Health Test

Through recent vast improvements in technology, instrumentation, and application of scientific protocols, hair element analysis has become a valuable tool in providing dependable and useful data for physicians and their patients. The U.S. Environmental Protection Agency stated in a recent report that "...if hair samples are properly collected and cleaned, and analyzed by the best analytic methods, using standards and blanks as required, in a clean and reliable laboratory by experienced personnel, the data are reliable." (U.S.E.P.A. 600/4-79-049).

Hepatitis

Inflammation of the liver characterized by patchy or generalized hepatocellular necrosis. There are 4 major kinds of hepatitis: type A, type B, type D, and type C (non-A, non-B). The disease is viral in origin and although types A, B, and D can be distinguished by their antigenic properties, all four display a clinically similar picture.

Other less common infective causes of hepatitis include infectious mononucleosis, yellow fever, cytomegalovirus, and leptospirosis. Hepatitis may also follow exposure to substances like carbon tetrachloride, benzene, tetracyclines, amanita mushrooms, arsenic, phosphorus, and alcohol.

Hepatitis A.

The associated microorganism is an enterovirus and the disease is spread by the fecal-oral route. It is contagious during the incubation period of 2-6 weeks but only for a few days once symptoms appear. Epidemics are frequent, as the virus is spread very easily through food and water. Often, the disease may be so mild it is unrecognized and only blood work would discern the virus' presence. It does not create a carrier state and does not lead to chronic liver disease. Unlike the other hepatitis types which are seen in all ages equally, hepatitis A is seen mostly in children and young adults.

Hepatitis B

This type has a more varied range of expression, including subclinical carrier state, acute hepatitis, chronic hepatitis, post-hepatic necrosis, and liver cancer. Hepatitis B is spread parenterally, most notably through the infected needles of drug addicts; spread through sexual relations is possible, but of a much lesser risk. Medical personnel, especially surgeons, dentists, dialysis staff, and others in contact with blood are at particular risk for accidental transmission. The incubation time ranges from 4-25 weeks (average is 30 days).

Hepatitis C

Hepatitis C, in particular, is an AIDS-like virus that is spread via blood-to-blood contact. It is unclear, however, whether the C strain is spread through semen or saliva. Formerly known as "non-A, non-B," hepatitis C was identified in 1989 when a test for specific antibodies to the virus became available. The most common modes of transmission include blood transfusions prior to 1992, IV drug use, hemodialysis, tattooing, sharing razors and toothbrushes, body piercing, and cocaine snorting. Sexual intercourse is not a common mode of transmission.

Hepatitis D

This can only infect a person who is in a carrier state of hepatitis B.

Other People

Sometimes during a CT Scan cysts will show up on the scan – including the liver and/kidneys. Many of them appear to be there for many years and have had no related sicknesses. Fact is very seldom when X-rays, MRIs and CT scans are performed do those images reveal no abnormalities and even when abnormalities do appear the radiologist will also report that they have no apparent clinical significance. We do not say that to minimize abnormalities but rather to attempt to keep things in reality but it is possible that people can take some food supplements that may remove or hinder further development of those cysts.

We Have never seen a perfect spine

The same holds true with spinal problems in that with the many years of examining and reviewing spinal X-Rays we have never found a perfect spine but many of those issues in all probability will never be of any physical significance in those people's lives.

Prior to scientists investigations deeming that the Shroud of Turin had no relationship to Christ Jesus and even if it had been it does not indicate a perfect spine or posture.

Signs & Symptoms

May range from a minor flu-like illness to a severe liver disease ending in hepatic failure and death; there are usually several distinct stages:

Anicteric Phase:

- Malaise
- Fever
- Aversion to cigarettes
- Altered liver function tests

Preicteric Phase:

- Malaise
- Enlarged, tender liver
- Headache
- Fever
- Occasionally a patient will experience arthralgia and hives

Jaundice Phase (follows 3-10 days later):

- Liver enlarged and tender; the edge is smooth
- Mild splenomegaly is present in 15-20% of patients
- Dark urine and jaundice including the sclera; jaundice worsens for 1-2 weeks and then gradually disappears during the 2-4 week recovery period; when the jaundice appears, most patients begin to feel better, as the systemic symptoms decline.

Common Laboratory Findings

- AST/SGOT: 1000-3000 units (does not correlate with disease severity)
- ALT/SGPT: 1000-3000 units (does not correlate with disease severity)
- (+) urinary bilirubin
- Differential: atypical lymphocytes
- WBCs: low normal
- (+) serum bilirubin (usually direct)

Nutritional Supplementation Options for Hepatitis

There are many but we make them only available to those who make specific inquiry. Why do we have that policy? Because we do not want to make a diagnosis or propose any treatments to non-patients. Doing so might be considered being in violation of Federal or State Licensing Statutes, Rules and Regulations that govern our license to practice health care.

Dietary & Exercise Considerations

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Remember the Basics and the base begins with first consulting with the medical personnel who are involved in treating the Hepatitis.:

Healthful foods. Your body needs good nutrition whether you have chronic hepatitis or not. To achieve good nutrition means that you're getting the nutrients you need (vitamins, minerals, protein, fat, carbohydrates, fiber) from the foods you eat. The quality and types of foods are important: fresh fruits and vegetables, lean meats (chicken, turkey, pork), and whole grains (barley, brown rice, whole wheat breads, and oat meal).

Vitamin C.

Wellness Essentials

Exercise. Along with nutrition, exercise is an essential part of good health. Some of the common symptoms associated with chronic hepatitis in the setting of no cirrhosis or cirrhosis that isn't too advanced, such as fatigue or depressed mood, may be improved with regular, moderate exercise. You should begin any exercise program gradually and, depending on your level of health, under a physician's guidance. Most exercise, however small the amount, is very beneficial to your health and wellbeing. It is an excellent complement to good nutrition.

References

- Dienstag, J. L. (2008). Chronic hepatitis. In: A. S. Fauci, E. Braunwald, D. L. Kasper, S. L. Hauser, D. L. Longo, J. L. Jameson, & J. Loscaizo (Eds.), *Harrison's Principles of Internal Medicine*, (17 ed). New York: McGraw-Hill.
 - Malet, P. F. (2006). Chronic hepatitis. In: D. C. Dale, & D. D. Federman (Eds.), *ACP Medicine*. New York: WebMD Publishing.
 - Keefe, E. B. (2006). Cirrhosis of the liver. In: D. C. Dale, & D. D. Federman (Eds.), *ACP Medicine*. New York: WebMD Publishing.
- Senior Medical Advisor, and Mitra, S.K., M.D., Executive Director, Research and Technical Service, R&D Center, The Himalaya Drug Company, Bangalore, India, *Medicine Update* (2004): 12(2), 51-61

Herpes Simplex / Cold Sores / Fever Blisters — Genital Herpes (HSV Type 1 & HSV Type 2)

Herpes is an infection that is caused by a herpes simplex virus (HSV). Oral herpes causes cold sores around the mouth or face. Genital herpes affects the genitals, buttocks, or anal area. Genital herpes is a sexually transmitted disease (STD). Other herpes infections can affect the eyes, skin, or other parts of the body. The virus can be dangerous in newborn babies or in people with weak immune systems. There are two types of HSV:

- HSV type 1 most commonly causes cold sores. It can also cause genital herpes.
- HSV type 2 is the usual cause of genital herpes, but it also can infect the mouth. HSV spreads by direct contact. Some people have no symptoms. Others get sores near the area where the virus has entered the body. They turn into blisters, become itchy and painful, and then heal. Most people have outbreaks several times a year. Over time, you get them less often. Cold Sores / Fever Blisters A spreading cutaneous eruption. Any inflammatory skin disease caused by a herpes virus and characterized by the formation of clusters of small vesicles. When used alone, the term may refer to herpes simplex or to herpes zoster.

Herpes simplex, caused by type 1 virus and primarily spread by oral secretions, usually occurring as a concomitant of fever, but sometimes also developing in the absence of fever or prior illness,

and commonly involving the facial region, especially the vermilion border of the lips and the nares; the vesicular lesions are self-limited. Also called cold sore and fever blister.

Herpes simplex, a group of acute infections caused by herpes simplex virus type 1 or type 2, characterized by the development of one or more small fluid-filled vesicles with a raised erythematous base on the skin or mucous membrane, and occurring as a primary infection or recurring because of reactivation of a latent infection. Type 1 infections usually involve nongenital regions of the body, whereas in type 2 infections the lesions are primarily seen on the genital and surrounding areas. **Precipitating factors include** fever, exposure to cold temperature or to ultraviolet rays, sunburn, cutaneous or mucosal abrasions, emotional stress, and nerve injury.

Traumatic herpes, primary cutaneous herpes simplex acquired by direct exogenous infection of traumatized skin, usually associated with localization of lesions to the area of trauma and regional lymphadenopathy and often by symptoms of systemic illness such as fever and malaise. Such infections have been seen in wrestler's herpes and acquired from mats or body contact.

Nutritional Supplementation Considerations for Herpes Simplex / Cold Sores /Fever Blisters

Herpes Zoster (Shingles)

An acute infection caused by reactivation of the varicella-zoster virus and involving the dorsal root ganglia; causes eruptions and neuralgia on the skin corresponding to the distribution of the affected root ganglia; commonly known as "shingles." Shingles is a disease caused by the varicella-zoster virus—the same virus that causes chickenpox. After you have chickenpox, the virus stays in your body. It may not cause *problems for many years. As you get older, the virus may reappear as shingles.

Unlike chickenpox, you can't catch shingles from someone who has it. Early signs of shingles include burning or shooting pain and tingling or itching, usually on one side of the body or face. The pain can be mild to severe. Blisters then form and last from one to 14 days. If shingles appears on your face, it may affect your vision or hearing. The pain of shingles may last for weeks, months, or even years after the blisters have healed. NIH: National Institute of Allergy and Infectious Diseases

Nutritional Supplementation Considerations for Herpes Zoster (Shingles)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- **Neurosol®.**
- **ImmuCore™.**
- **E Complex-1:1™.**

Additional Considerations

- **Tocophodermis™ Ointment** — Apply topically to speed healing process and reduce scarring. L-Lysine.

Dietary Considerations

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- FirstLine Therapy® Diet / Mediterranean-type Diet

Nutritional Formula Description & Supplementation Rationale

Neurosol®

Neurosol is a unique, all-in-one combination of nutrients that directly supports peripheral nerve function.

- Formulated to promote healthy nerve conduction, blood flow to the nerves, and nerve tissue integrity by featuring gamma-linolenic acid (GLA).
- Designed to deliver the added benefits of vitamin C (Ultra Potent-C®) to synergistically enhance the effectiveness of GLA and, along with beta-carotene, protect delicate nerve tissue from oxidation.
- Supplies potent levels of folate and vitamins B12 and B6 to support methylation and homocysteine metabolism to support nervous system function.

ImmuCore™

ImmuCore is designed to provide a multiple mechanistic approach to support healthy immune system function through enhancing activities of macrophages, natural killer cells, and T cell subsets.

- Offers a three-pronged approach to wellness with Ultra Potent-C® combined with zinc and a concentrated blend of mushroom extracts.
- Uses a buffering delivery system to prevent potential stomach upset associated with vitamin C.
- Vitamin D for long-term immune health support.
- Ultra Potent-C has been shown to have 18% to 25% higher uptake in WBCs than plain vitamin C.
- Zinc supports immune system health.
- Nourishing mushrooms protect a stressed immune system.
- Oleanolic acid and selenium provide antioxidant protection and immune support.

E Complex-1:1™

Nutritional support for post-herpetic neuralgia. E Complex-1:1™ is a unique, natural vitamin E supplement that features a 1:1 ratio of alpha- to gamma-tocopherol; this ratio more closely resembles the tocopherol profile found naturally in vitamin E-rich plants and formulated to:

- Help maintain cardiovascular health by promoting healthy circulation, blood vessel integrity, and healthy blood lipids.
- Support prostate health, nervous system health, and healthy skin, and delivers a host of additional health benefits.
- Formulated to deliver an especially powerful blend of different tocopherols for a broader range of antioxidant protection against the ravages of free radicals.
- Provide balanced levels of gamma- and alpha-tocopherols that are more closely associated with consumption of vitamin E-rich foods.
- Provide gamma-tocopherol for unique protection against peroxynitrite—a highly reactive free radical.

L-Lysine

Lysine is known to assist the body in inhibiting activation of herpes virus (see information below), because shingles is caused by a herpes virus, some doctors believe that lysine supplementation could help people with the condition, since lysine inhibits replication of herpes simplex, a related virus. However, lysine has not been research documented to inhibit Varicella zoster, nor has it been shown to provide benefit for people with shingles outbreaks. Therefore, its use in Herpes Zoster (Shingles), remains speculative. Doctors at the UCLA School of Medicine found of 45 patients receiving L-Lysine for herpes, only two failed to respond (96% success). The patients were receiving about 1500 mg L-Lysine daily. Patients with active sores found that pain usually disappeared overnight, and went on further to show that herpes can be controlled in most people with one 500 mg capsule daily. The Kaiser Medical Center found a relationship between herpes infections and migraine headaches/neuritis. When inactive, the herpes virus is stored in nerves at the base of the brain. When the virus becomes active the nerve cells become inflamed, allowing the virus to pass down to the mucous membranes. Migraine headache has been successfully treated by the UCLA Medical Center with 4 grams of L-Lysine per day.

Tocophodermis™ Ointment

Tocophodermis is an ointment with a consistency like that of Vaseline. Vitamins E and A provide protection and healing for skin irritations such as burns, scrapes, sunburns, rashes, dry skin, diaper rash, etc.

Hives (Urticaria) and Angioedema

Hives—also known as urticarial—is a skin reaction that causes raised, red, itchy welts (wheals or swellings) in sizes ranging from small spots to large blotches several inches in diameter.

Individual welts appear and fade as the reaction runs its course. Angioedema is a reaction similar to hives that affects deeper layers of the skin, the tissues underneath the skin, and the lining of the throat and intestines. Angioedema often appears around the eyes, cheeks, or lips; but can also develop on the hands or feet, genitals, or inside the throat or bowel. Angioedema and hives can occur separately or at the same time. In most cases, hives and angioedema are harmless and don't leave any lasting marks, even without treatment. The most common treatment for hives and angioedema is antihistamine medications. Serious angioedema can be life threatening if swelling causes the throat or tongue to block the airway and leads to loss of consciousness.

Signs and Symptoms of Hives

- Raised red or white welts (wheals or swellings) of various sizes that can cover large areas of skin
- Welts that resolve while new welts erupt, making it seem as if the condition “moves”
- Itching, which may be severe
- Rarely, burning or stinging in the affected area
- Hives can be either acute or chronic: Acute hives last from less than one day up to six weeks; chronic hives last more than six weeks—sometimes for months to years.

Signs and Symptoms of Angioedema

- Large, thick, firm welts
- Swelling of the skin
- Pain or warmth in the affected areas
- Difficulty breathing or swallowing, in severe cases.

Causes

Hives and angioedema are caused by triggers that produce a skin or tissue reaction by stimulating certain cells (mast cells) to release histamine and other chemicals into the bloodstream. Sometimes it's not possible to pinpoint the cause of hives and angioedema, especially when these conditions become chronic or recur. Allergic reactions are one common trigger of acute hives and angioedema.

Common allergens include:

- **Foods.** Many foods can trigger reactions in people with sensitivities. Shellfish, fish, peanuts, tree nuts, eggs, and milk are frequent offenders.
- **Medications.** Almost any medication may cause hives or angioedema. Common culprits include penicillin, aspirin, ibuprofen (Advil®, Motrin®, others), naproxen (Aleve®, others), and blood pressure medications.
- **Other allergens.** Other substances that can cause hives and angioedema include pollen, animal dander, latex, and insect stings.

Additional triggers include:

- **Environmental factors.** In some people, environmental factors can stimulate release of histamine. Examples include heat, cold, sunlight, water, pressure on the skin, emotional stress, and exercise.
- **Dermatographia (also known as dermographia).** The name of this condition literally means "skin writing." Stroking or scratching the skin results in raised red lines in the same pattern as the pressure.
- **Hives and angioedema also occasionally occur in response to blood transfusions, immune system disorders such as:** lupus, some types of cancer such as lymphoma, certain thyroid conditions, and infections with bacteria or viruses such as hepatitis, HIV, cytomegalovirus, or Epstein-Barr virus.
- **Hereditary angioedema is a rare inherited (genetic) form of the condition.** It's related to low levels or abnormal functioning of certain blood proteins (C1 inhibitors) that play a role in regulating how your immune system functions.

Prevention

To lower your likelihood of experiencing hives or angioedema, take the following precautions:

- **Avoid known triggers.** These may include certain foods or medications, or situations such as temperature extremes, that have triggered past allergic attacks.
- **Keep a diary.** If you suspect foods are causing the problem, keep a food diary. Be aware that some foods may contain ingredients that are listed by less common names on the label.

Lifestyle and Home Remedies

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

If you're experiencing mild hives or angioedema, these tips may help relieve your symptoms:

- **Try to identify and avoid substances that irritate your skin or that cause an allergic reaction.** These can include foods best determined through Touch For Health Applied Kinesiology Muscle Response Test and IgG and IgG4 food sensitivity testing's), medications, pollen, pet dander, latex, and insect stings.

- **Use an over-the-counter antihistamine.** A nonprescription oral antihistamine, such as loratadine (Claritin®), cetirizine (Zyrtec®), or diphenhydramine (Benadryl®, others) may help relieve itching.
- **Apply cool, wet compresses.** Covering the affected area with bandages and dressings can help soothe the skin and prevent scratching.
- **Take a comfortably cool bath.** To relieve itching, sprinkle the bath water with baking soda, uncooked oatmeal, or colloidal oatmeal—a finely ground oatmeal that is made for the bathtub (Aveeno®, others).
- **Wear loose, smooth-textured cotton clothing.** Avoid clothing that is rough, tight, scratchy, or made from wool. This will help avoid irritation.

Nutritional Supplementation Considerations for Hives (Urticaria) and Angioedema

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- **Metagest®.**
- **Perimine®.**

Note: For children who cannot swallow tablets, consider crushing tablet and mix in applesauce or anything the child will eat.

- **500-C Methoxyflavone™.**
- **Niacin Sustained Release.**
- **Intrinsi B12/Folate™.**
- **Mag Glycinate™.**

Dietary Considerations. Again one should discuss those ideas with the medical personnel who are involved in their situation.

- Modified Elimination Diet

Additional Considerations

1. Rule out food and/or chemical sensitivities associated with Chronic Urticaria/Hives. *Lancet* 2:41-2, 1985; *Lancet* 2:907-909, 1986; *Lancet* 2:1157-58, 1986
2. Rule out hydrochloric acid deficiency associated with Chronic Urticaria/Hives. *South Med J* 38:235-241, 1945; *N Engl J Med* 252(19):802-5, 1955

If indicated, consider:

- **Metagest®.**

Nutritional Formula Description & Supplementation Rationale

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Metagest®

Digestive Support Formula. Metagest features betaine HCl combined with pepsin—a proteolytic enzyme—to complement the natural production of digestive agents in the stomach. Two tablets supply:

Betaine HCl 1300 mg

Pepsin (porcine) 90 mg

Perilla Seed Extract (Perimine®)

A unique herb that is designed to support a healthy immune response in individuals who may be sensitive to certain food or environmental factors. Perilla Seed has been shown to modulate a series of biochemical events—including histamine release (in simple terms, Perilla Seed Extract/Perimine modulates the immune response to minimize how significantly the body responds to an allergy/ sensitivity response). *Oriental Materia Medica: A Concise Guide*. Oriental Healing Arts Institute; 1986. Perilla Seed Extract (*Perilla frutescens*) has long been used in Traditional Chinese Medicine (TCM) and in Kampo—a Japanese variant of TCM. It is capable of modulating multiple processes in the allergic response, including histamine release, leukotriene synthesis, and oxidative stress. In addition, preliminary research performed in Japan suggests that perilla seed extract may suppress Th2 responses.

Perimine®

Respiratory Support Formula. Perimine is a patented extract of perilla seed (*Perilla frutescens*), an herb that supports a healthy respiratory and immune response.

500-C Methoxyflavone™

Vitamin C with Hesperidin/Methoxyflavone Complex.

- 500-C Methoxyflavone is a synergistic formula that features a specialized complex of bioflavonoids combined with vitamin C.
- Provides potent antioxidant protection and supports healthy immune system function.
- Supports healthy collagen production, the main component of connective tissue.
- Supports healthy capillary permeability.

Vitamin C and Bioflavonoid complex may be deficient. *Arch Dermatol Syphilol* 37:1010-14,1938

Niacin Sustained Release

Niacin Sustained Release is formulated to release part of the niacin quickly, with the remainder being released over several hours with little or no flushing.

- Supplies a high quality source of niacin, which contributes to healthy lipid metabolism.
- Provides an extended release delivery form to reduce potential for flushing, that has been clinically evaluated. Niacin: Inhibits mast cell degradation and histamine release. *Agents Actions* 4(3):196, 1974

Intrinsi B12/Folate™

B12 and Folate with Intrinsic Factor. Intrinsi B12/Folate provides vitamin B12 and folates in combination with intrinsic factor for enhanced absorption and assimilation and designed to:

- Supports healthy cardiovascular and nervous system function.
- Supplies high levels of vitamin B12 and folates, which play important roles in the proper synthesis of DNA and, therefore, the growth and function of all cells in the body.
- Features porcine-derived intrinsic factor, a natural glycoprotein that may enhance the absorption of vitamin B12.
- Features L-5-methyl tetrahydrofolate—a body-ready, nature-identical folate. Vitamin B12: Supplementation is reported by some to be beneficial in Chronic Urticaria/Hives. *J Am Geriatr Soc* 12:79-85, 1964

Mag Glycinate™

Highly Absorbable Magnesium. Mag Glycinate is a fully reacted amino acid chelate produced by a unique, patented process that is designed to enhance absorption and intestinal tolerance of magnesium.

- Support proper ATP (energy) production and plays important roles in biosynthesis, growth, and thermogenesis, as well as in bone mineralization and intestinal motility.
- Support muscle relaxation and nerve transmission.

- May help to prevent nocturnal leg muscle cramps.
- Unlike other formulations, the magnesium (magnesium bis-glycinate) in Mag Glycinate is absorbed via a mechanism similar to that used by amino acids; it is not dependent on stomach acid for absorption.

Magnesium: Blood levels may be reduced in Acute and Chronic Urticaria/Hives. *Arch Roum Pathol Exp Microbiol* 49(1):31, 1990

Homocysteine (High)

First identified by Kilmer McCully, M.D., as a significant risk factor in vascular disease, homocysteine is a natural amino acid metabolite of dietary methionine at low concentrations. Excess accumulation of homocysteine has been documented to lead to vascular damage and early stroke, atherosclerosis, and coronary heart disease. It has also been associated with systolic hypertension, rheumatoid arthritis, Alzheimer's disease, and depression. *"An estimated 10-20% of all cardiovascular disease is caused by excessive plasma homocysteine concentrations."* — Kilmer McCully, M.D.

Homocysteine Trends In U.S. Population

Normal range: 4-17 micromoles/L of blood. Desirable range: 4-8 micromoles/L of blood. Low risk: < 12 micromoles/L of blood. Medium risk: 12-17 micromoles/L of blood. High risk: > 17 micromoles/L of blood (21% of population: > 16.8 HIGH RISK)

Reference: Rimm et al., JAMA 1998 Feb 4; 279 (5): 359-64.

Causes of High Homocysteine

- Inadequate dietary folate, B12, B6, choline, betaine (TMG)
- High protein intake—methionine loading
- Age—homocysteine increases with advancing age
- Enzyme defects: cystathionine synthase, methyltetrahydrofolate homocysteine methyltransferase, methylenetetrahydrofolate reductase (12% homozygous in U.K.)
- Gastrointestinal disorders that reduce B12 uptake
- Gastric acid inhibitors (i.e., Tagamet®, etc.) that reduce availability of intrinsic factor
- High homocysteine is associated with renal disease.

Risk Factors for High Homocysteine

- Low fruit and vegetable diet
- High protein intake
- Age (over 50)
- Enzyme defects (approximately 12% of population)
- Hypochlorhydria
- Ulcer
- Use of antacids/gastric acid inhibitors
- Postmenopausal
- Elderly and institutionalized
- High stress
- Smoking
- Renal disease
- Hypothyroidism
- Family history or personal history of: atherosclerosis, peripheral artery disease, cerebral vascular disease, Alzheimer's disease, diabetes, or high homocysteine (High) 307.

Diagnosis

The importance of blood evaluation of homocysteine as well as a Blood Profile and CBC cannot be over emphasized. This is true for all people and especially so for those who have had histories of cardiovascular issues.

Nutritional Supplementation Considerations for Homocysteine (High)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **Vessel Care®**

- Appropriate **Wellness Essentials®** Formula.

- **Note:** Retest homocysteine levels in 6-8 weeks. When normalized, move to ongoing maintenance program.

Ongoing Maintenance:

- **Glycogenics®**.

Dietary Considerations

FirstLine® Therapy Diet

Nutritional Formula Description & Supplementation Rationale

Vessel Care®

Vessel Care is a comprehensive homocysteine formula that supplies optimal levels of folic acid, B12, B6, trimethylglycine (betaine) and choline, nutrients known to support healthy homocysteine metabolism.

Appropriate Wellness Essentials® Formula

Key Vitamins and Minerals, Essential Fatty Acids, PLUS Patient-Specific Nutrition. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition.

Glycogenics®

Glycogenics is a broad spectrum b-complex specifically designed to support healthy homocysteine metabolism.

Hypertension (High Blood Pressure)

Blood pressure consistently higher than 130/90 mm/Hg. **NOTE:** Acute Hypertension (>150 mm/Hg), or lower blood pressure accompanied by symptoms such as headache, visual disturbance, or lethargy indicate need for immediate crisis intervention. The treatment of hypertension is a complicated problem confronting the clinician. Medications currently used for blood pressure management include beta-blockers, diuretics, and other medications that have negative side effects. According to a four year study of hypertension published in *JAMA*, "Study findings demonstrated that **nutritional therapy** may substitute for drugs in a sizable proportion of hypertensives or, if drugs are still needed, can lessen some unwanted biochemical effects of drug treatment but noted that as we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from

discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

” Therefore, it is valuable to identify a nutritional program without negative side effects that would have a beneficial effect on reducing blood pressure and very often one of the contributing factors to hypertension is issues within the spine.

The Brain, Spine and Hypertension Connection

That possibility can be related to spinal curvatures, muscle problems and spinal subluxations. How is that? Being that the brain, spinal cord, are interrelated and also that the hearts nerve innervation is in part related to the spinal cord and spine it is possible that they may be involved in the cause of hypertension. That being the possibility anyone diagnosed with hypertension is well advised to include interventional chiropractic, Touch For Health Applied Kinesology Muscle Response Test with any medications they are taking as well as dietary changes. This is particularly so in that people who have thoracic hyperkyphosis (mid back rounding) tend to have a posture of slumping forward. When that’s the situation the person’s abnormal posture tends to compress the thorax thus putting undue pressure on the heart and lungs. When that’s the situation the heart has to beat harder therefore predisposing the person to hypertension. In the situation of the lungs being compressed it predisposes the persons to reduction of the oxygen capacity of their lungs.

Interventional Chiropractic

With the possibility of spinal issues causing and/or being contributing factor to hypertension it behooves people suffering with hypertension to seek the services of a Interventional Chiropractic Physician.

Nutritional Supplementation Considerations for Hypertension (High Blood Pressure) but if a person is taking prescribed medications for high blood pressure they should never neither stop taking those medications nor embark on a nutritional programs without consulting with their medical doctor. When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- **Appropriate Wellness Essentials® Formula**
- **Vasotensin™.**
- **CoQ10 Ubiquinol 100.**
- **Cardiogenics® Intensive Care.**
- **FolaPro®.**
- **Super Garlic 6000®.**

For the “high-stress” hypertensive individual, consider adding:

- **Serenagen®**

Dietary Considerations

- **FirstLine Therapy® Diet**—a modified Mediterranean-style, low glycemic load diet.

What YOU Can Do To Bring Your Blood Pressure Down? Regular Chiropractic Adjustments, Supervised massage, Myofascial Release, Neuro/Muscle Skeletal Reeducation, Acupuncture and Touch For Health Applied Kinesology Muscle Response Therapy.. How is that? Because no tissues, organ in the body can live without proper nerve and blood supply and because the brain and spinal cord are the originators of them and the spine is the switchboard of them it makes sense that problems within the spine could adversely affect the heart thus some form of chiropractic spinal intervention may contribute to a more normal blood pressure and/or assist in maintaining normal blood pressure. Designed To:

- **Maintain vital nerve flow to the cardiovascular system.**

- Reduce mechanical stress to the nervous system.
- Enhance all nutritional and dietary suggestions by allowing for optimal assimilation.

Give Your Body the Right Kinds of Food

- Obesity can often lead to increased blood pressure.
- Give up “empty” calories like sugar, white bread, cake, cookies, pie, saturated fats (lard, shortening), hard alcohol.
- Try eating more fish, lean meat, vegetables, and polyunsaturated fats (liquid corn oil); less butter, egg yolks, pork, bologna, sausage, juicy steaks.
- A pint of beer or about half as much wine has about as many calories as a pat of butter. So avoid beer, wine, and liquor.

Cut Down on Salt

- Try to decrease the salt you add while cooking and not add any salt at the table.
- Avoid salt-loaded foods such as chips, crackers, and canned foods high in sodium.
- Instead of salt, try cooking with other flavorings such as lemon juice, mint, mustard, herbs, curry, etc. Use your imagination!

Quit Smoking

Cigarette smokers not only drive up their blood pressure, but also run twice the risk of heart attack as nonsmokers.

Consider some form of supervised exercise that is appropriate to a healthy cardiovascular system

- Walk up and down stairs rather than taking the elevator.
- Walk the few blocks to the store rather than hopping in the car, etc.
- Try to be physically active every day, and twice as active on weekends.

Control Your Caffeine Intake

Coffee, tea, colas, and analgesics contain caffeine which can elevate blood pressure.

Increase Consumption of Calcium, Garlic, Magnesium, Potassium-Rich Foods Studies show that calcium, magnesium, garlic, and potassium may be more helpful in lowering blood pressure than salt restriction.

Omega-3 Fatty Acids

Studies indicate that oils in fish may help lower blood pressure. Remember:

- **High blood pressure is a dangerous disease.** If not brought under control, it can lead to strokes and heart attacks.
- **High blood pressure is a silent disease.** You cannot tell how high it is by how you feel. The only way of telling is in the doctor’s office with a blood pressure cuff.
- **High blood pressure is a lifelong disease.** Diet, exercise, and quitting smoking can bring blood pressure under control, but it will go back up again if these measures are stopped.

If appropriate Increase Your Leanness if Overweight•• Implement an medically supervised potentially effective weight loss program.

- Stay away from alcohol.

Nutritional Formula Description & Supplementation Rationale

Appropriate **Wellness Essentials®** Formula

Key Vitamins & Minerals, Essential Fatty Acids, PLUS Patient-Specific Nutrition. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good

health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

Vasotensin®

Vasotensin provides active peptides from bonito fish to help prevent the formation of angiotensin II, a potent vasoconstrictor, through their interaction with angiotensin converting enzyme (ACE). This activity supports healthy vascular function for optimal blood flow and healthy blood pressure levels.

CoQ10 Ubiquinol 100

Stabilized, highly absorbable coenzyme Q10 in the ubiquinol form for enhanced delivery and maximum absorption. Studies show that CoQ10 deficiency is present in 39% of people with hypertension. CoQ10 lowers blood pressure by lowering cholesterol levels and stabilizing the vascular membrane via its antioxidant properties.

Cardiogenics® Intensive Care

Nutritional support for healthy circulation and cardiac function. **Calcium** has been shown in studies to not only lower blood pressure, but also to help prevent it. Some scientists have stated that calcium counteracts the effects that sodium has on blood pressure. Numerous studies show that **magnesium** has a positive effect on hypertension. It works by relaxing and smoothing the muscle of blood vessels and also plays a role in cell membrane permeability to sodium and calcium. **Potassium** is perhaps the best-known natural remedy for lowering blood pressure. One study published in the *Journal of the American Medical Association* found that low potassium levels contribute to the development of hypertension.

FolaPro®

FolaPro is comprehensive folate nutrition in the active form. “Several studies have demonstrated that high-dose folic acid acutely lowers blood pressure and enhances coronary vasodilator function in patients with coronary artery disease.” *J Am Coll Cardiol* 2005; 45:1580-4, *Am J Clin Nutr* 2005; 82:26-31.

Super Garlic 6000®

SuperGarlic 6000 is a super-concentrated garlic supplement that is guaranteed to supply 6,000 mcg of allicin—garlic’s most important active ingredient—per tablet. Many studies confirm its effectiveness in lowering both blood pressure and cholesterol.

It protects against heart disease and strokes by affecting the process of atherosclerosis at many stages. According to Michael T. Murray, N.D., in *The Healing Power of Herbs* (Prima, 1995), “The mode of action of garlic as an anti-hypertensive appears to be related to its sulfur content and lipid-lowering properties.”

Serenagen®

Serenagen is a classic, comprehensive herbal stress management formula targeting individuals who are “stressed and wired.”

Influenza or “Flu”

Influenza, or “flu,” is a common infection caused by a virus affecting the respiratory tract (like the nose and upper airways). Its symptoms are usually more severe than the common cold and are more likely to affect other parts of your body like your stomach and muscles. The flu is very contagious—spreading easily from one person to the next. While most cases run their course in one to two weeks, life-threatening complications such as pneumonia are possible, especially in the elderly or people with chronic illnesses.

Signs and Symptoms

- Fever that comes on suddenly (101-104 F)
- Chills
- Nausea, vomiting, or diarrhea, especially in children
- Head ache
- Muscle aches
- Fatigue
- Nonproductive cough
- Sore throat
- Sneezing, runny nose, stuffy nose
- Loss of appetite

Causes

Influenza is caused by viruses that are spread through the air by sneezes and coughs. Some of these viruses cause a very mild illness, or none at all. Others cause serious, widespread illness and a compromised immune system.

Risk Factors

People most likely to get influenza are those whose immune systems are not working properly (for example, transplant recipients or people with HIV), or those whose lifestyle or work brings them into frequent contact with sick people (like health care workers). The following put you at greatest risk for complications from influenza:

- Age over 50
- Having a serious underlying medical condition like diabetes, heart disease, lung disease (such as asthma or cystic fibrosis) or kidney disease
- Having a weakened immune system.

Diagnosis

Your health care provider will probably be able to diagnose your case of flu from a physical examination and a description.

Lifestyle

- Drink a lot of water
- Rest to restore your energy and avoid complications like pneumonia
- Eat a diet rich in fresh fruits and vegetables; these foods provide lots of antioxidants (substances that may help boost your immune system), especially vitamins A and C
- Exercise regularly, which may diminish your chances of getting the flu
- Minimize your stress and your reaction to stress; consider yoga, tai chi, or other forms of relaxation on an ongoing basis—stress can put you at increased risk for viruses like influenza

Note: According to a 2015 study published in the journal *Respirology* (SOURCE: <http://bit.ly/1mknuzi>) “Acetaminophen may not have an effect on the flu virus or its symptoms, in theory, reducing fever, the adaptive response to infection, could actually worsen flu.

Acetaminophen would reduce fevers, resulting in higher levels of influenza virus for longer periods, and therefore worse symptoms of the flu for longer. According to coauthor Irene Braithwaite of the Medical Research Institute of New Zealand in Wellington.”A 2014 Cochrane review concluded that **Tamiflu has few if any beneficial effects**, and can have adverse side effects like increased nausea and vomiting (see Reuters story of April 10, 2014 here: <http://reut.rs/1P2shRf>).

Therefore, nutritional support remedies with the right type of immune regulatory activity may effectively relieve symptoms associated with the inflammation that results from viral infections.

That being the case being proactive especially during the so-called flu season as well as trying to maintain the highest possible standards of hygiene and that includes public contact.

Options for Nutritional Supplementation for Influenza or “Flu”

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to diagnose, treat or prevent or imply cure. Likewise we discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

•• UltraFlora™ Immune Booster

•• AndrographisPlus®.

•• ImmuCore™

If Vomiting: Be sure to telephone your medical doctor and seek his/her counsel.

•• Probioplex® Intensive Care.

If Diarrhea:

•• UltraFlora™ Acute Care.

Note: Regarding dosing for children

The general recommendations are dosed for an average 150 pound adult. For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc. Again Be sure to telephone your medical doctor and seek his/her counsel.

Nutritionnel Formula Description & Supplementation Rationale

UltraFlora™ Immune Booster

UltraFlora Immune Booster is designed to provide a blend of highly viable, pure strains of “friendly” bacteria that have been clinically shown to support nasal, sinus, and respiratory health. This formula is backed by the Metagenics ID Guarantee for purity, clinical reliability, and predicted safety via scientific identification of strains with established health benefits.

AndrographisPlus®

Andrographis Plus combines a proprietary blend of Ayurvedic and Asian herbs designed to promote healthy immune function.

- Provides Andrographis paniculata, an herb traditionally used in Ayurvedic formulas for supporting upper respiratory, liver, and immune system health.
- Provides amLa fruit (*Emblica officinalis*), a vitamin C-rich fruit, which supplies antioxidant and revitalizing properties.
- Provides a specialized preparation of herbs, including mulberry leaf and apricot seed extracts, traditionally used in Chinese medicine to support lung health.
- May encourage a positive immune response.

ImmuCore™

ImmuCore is designed to provide a multiple mechanistic approach to support healthy immune system function through enhancing activities of macrophages, natural killer cells, and T cell subsets.

- Offers a three-pronged approach to wellness with **Ultra Potent-C®** combined with zinc and a concentrated blend of mushroom extracts.
- Uses a buffering delivery system to prevent potential stomach upset associated with vitamin C.

- **Vitamin D** for long-term immune health support. Being that Vitamin D being a fat soluble vitamin over ingestion of it can produce toxic effects therefore one should seek the counsel of their medical doctor and/or a Chiropractic Physician who is nutritionally oriented
- Ultra Potent-C has been shown to have 18% to 25% higher uptake in WBCs than plain vitamin C.
- **Zinc** supports immune system health.
- Nourishing mushrooms protect a stressed immune system.
- **Oleanolic acid and selenium** provide antioxidant protection and immune support.

If Vomiting:

Probioplex® Intensive Care

Probioplex® Intensive Care is an innovative probiotic support formula featuring concentrated whey protein combined with fructooligosaccharides (FOS) and the advanced prebiotic factors lactoferrin and lactoperoxidase.

Designed To:

- Support the activity of “friendly” intestinal bacteria such as Lactobacilli and bifidobacteria.
- Supply FOS and significant quantities of lactoferrin and lactoperoxidase, proteins that support intestinal microbial balance.
- Support healthy intestinal function and supports the activity of the immune system.

If Diarrhea:

UltraFlora™ Acute Care

UltraFlora Acute Care is a unique probiotic that combines the widely recommended, targeted relief of *S. boulardii* with the strains *B. lactis* HN019 and *L. rhamnosus* HN001 to support immune health and provide relief for occasional loose stools. Designed To:

- Support a healthy intestinal environment and immune response.
- Provide targeted support for healthy intestinal function.
- Designed for reliable outcomes and acute care with a concentrated dose of *S. boulardii*.

Interstitial Cystitis (AKA: IC, Painful Bladder Syndrome (PBS), Urgency and Frequency Syndrome)

Interstitial cystitis is chronic inflammation of the bladder. People who have interstitial cystitis have a bladder wall that is inflamed and irritated (red and sore). This inflammation can scar the bladder or make it stiff. A stiff bladder can't expand as urine fills it. In some cases, the walls of the bladder may bleed slightly. A few people get sores in the bladder lining. More than 3 million American women and 1 million men have interstitial cystitis.

Symptoms

- An urgent need to urinate, both in the daytime and during the night (yet may pass only very small amounts of urine each time)
- Pressure, pain, and tenderness around the bladder, pelvis, and perineum (the area between the anus and vagina or the anus and the scrotum); this pain and pressure may increase as the bladder fills and decrease as it empties in urination
- A bladder that won't hold as much urine as it used to
- Pain during sexual intercourse
- In men, discomfort or pain in the penis or scrotum
- For many women, the symptoms get worse before their menstrual period; stress may also make the symptoms worse, but it doesn't cause them.

Causes & Risk Factors

Doctors don't know exactly what causes interstitial cystitis. However, they do know that it isn't caused by bacterial or viral infections. A defect in the lining of the bladder might cause interstitial cystitis. Normally, the lining protects the bladder wall from the toxic effects of urine. In about 70% of the people who have interstitial cystitis, the protective layer of the bladder is "leaky." This may let urine irritate the bladder wall, causing interstitial cystitis. Other possible causes may be an increase of histamine-producing cells in the bladder wall or an autoimmune response (when antibodies are made that act against a part of the body—autoimmune syndrome).

Diagnosis & Tests

Your doctor will ask you questions about your medical history. He or she may also ask you to keep track of how much fluid you drink, how often you urinate, and how much urine you pass. Your doctor will rule out other diseases such as urinary tract infections, bladder cancer, endometriosis, kidney stones, sexually transmitted infections, chronic prostatitis in men, and vaginal infections in women. Your doctor may also refer you to a urologist (a doctor whose specialty is problems of the urinary tract). Initially a macroscopic or microscopic analysis of the urine is necessary. If consulted with a urologist she/he may use a special scope called a cystoscope to look inside your bladder for inflammation, pinpoint bleeding, or ulcers. These things could indicate that you have interstitial cystitis.

Treatment

There is no cure for interstitial cystitis. You may need to try several treatments or a combination of treatments before you notice an improvement in your symptoms. Most people feel better after trying one or more of the following treatments:

- **Diet.** Your doctor may tell you to change what you eat. You may need to avoid alcohol, acidic foods, and tobacco.

- **Bladder distention.** Under anesthesia, a doctor overfills your bladder with gas or fluid. This stretches the walls of the bladder. Doctors are not sure exactly why distension helps. It may cause the bladder to have the ability to hold more urine. It may also interfere with the pain signals sent by nerves in the bladder.

- **Medicine.** Your doctor may prescribe an oral medicine such as Ciprofloxacin or pentosan polysulfate. Those medicines are designed to combat infections and help protect the lining of the bladder wall from the toxic parts of urine. Another oral medicine used to treat interstitial cystitis is an antihistamine called hydroxyzine. This medicine reduces the amount of histamine that is made in the bladder wall. Another medicine that may help is amitriptyline, which blocks pain and reduces bladder spasms. This medicine can cause drowsiness, so it is usually taken at bedtime. Your doctor may also suggest an over-the-counter pain medicine to ease pain.

When the medications are dispensed (such as Ciprofloxacin) the pharmacist will usually caution the person to drink lots of water, avoid dairy products and foods or food supplements that contain calcium for no less than 2 (two hours) before and after ingestion of Ciprofloxacin as not doing so could result in serious health problems.

- **Bladder instillation.** During a bladder instillation, a catheter (a thin tube) is used to fill your bladder with liquid medicine. You hold the medicine inside your bladder for a few seconds to 15 minutes. The liquid is then released through urination. Treatments are given every one to two weeks for six to eight weeks. The treatment can be repeated as needed.

Interventional Chiropractic Care

Because the urinary bladder (like all other organs in the body) receives its nerve and blood supply through the spine very often people with interstitial cystitis have issues within their spine (lower back) that are interfering with proper nerve and blood supply to their urinary bladder. That being

a possibility people with interstitial cystitis serve themselves well by consulting with a Chiropractic Physician.

Additional Considerations

- **Diet.** Alcohol, tomatoes, spices, carbonated drinks, chocolate, caffeine, citrus fruits and drinks, pickled foods, artificial sweeteners, and acidic foods may irritate your bladder, causing symptoms to worsen. Try removing these items from your diet for a couple of weeks, then try eating one food at a time to see if it makes your symptoms worse.
- **Smoking.** Many people who have interstitial cystitis find that smoking makes their symptoms worse. Because smoking is also a main cause of bladder cancer, people who have interstitial cystitis have another good reason to quit smoking.
- **Bladder training.** Many people can train their bladder to urinate less often. You can train your bladder by going to the bathroom at scheduled times and using relaxation techniques.
- **Chiropractic Care and Touch For Health Massage.** People who have interstitial cystitis may have painful spasms of pelvic floor muscles. If you have muscle spasms, you can learn exercises to help strengthen and relax your pelvic floor muscles.
- **TENS** (“transcutaneous electrical nerve stimulation”). You can use a TENS machine to put mild electrical pulses into your body through special wires. Some doctors think that electrical pulses increase blood flow to the bladder. The increased blood flow strengthens the muscles that help control the bladder. It also releases hormones that block pain.

Nutritional Support

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

From a nutritional support perspective, it makes most sense to support healthy bladder function, assist the body in dealing with the inflammatory response to minimize scarring and pain, and promote a balanced healthy immune response. It is suggested that interstitial cystitis is an auto-immune mediated response.

Autoimmune Disease

The term autoimmune disease refers to a varied group of more than 80 distinct, chronic illnesses in which the underlying problem is similar—the body’s immune system is misdirected, attacking the body tissues it was designed to protect. Autoimmune disease can affect any system, organ, or tissue in the body including the gastrointestinal (GI), nervous, and endocrine systems as well as the eyes, blood, blood vessels, and skin and other connective tissues. Examples of autoimmune conditions include the following:

- Rheumatoid arthritis (RA)
- Lupus (e.g., systemic lupus erythematosus [SLE])
- Type 1 diabetes
- Inflammatory bowel disease (IBD) (e.g., Crohn’s disease, ulcerative colitis)
- Hashimoto’s thyroiditis and Grave’s disease
- Raynaud’s phenomenon
- Neurological diseases (e.g., myasthenia gravis, multiple sclerosis [MS])

Options For Nutritional Supplementation for Interstitial Cystitis

- **UltraInflamX® Plus 360**
- **UltraFlora™ Women's** — Acute.
- **D3 10,000™ with K2**

Dietary Considerations

- Anti-Inflammatory Diet Program

Nutritionnel Formula Description & Supplémentation Rationale

UltraInflamX® Plus 360

UltraInflamX Plus 360 is a multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation.

UltraFlora™ Women's

Ultra-Flora Women's features the concentrated probiotic strains GR-1® and RC-14® (GR-1 was isolated in 1980 from the urethra of a healthy woman and identified as *L. rhamnosus*; RC-14 was isolated in 1985 from the vagina of a healthy woman and identified as *L. reutter*). These unique strains of probiotic--cs have been documented to support urogenital health and maintain healthy vaginal microflora. Both strains have been tested in numerous clinical studies with female subjects and have been used as a food supplement worldwide with no reported side effects since 2004.

D3 10,000™ with K2

D3 10,000 with K2 provides 10,000 IU per softgel of vitamin D (as D3), designed for greater absorption. This high potency formula also includes bioavailable forms of vitamin K2 to complement vitamin D. Deficiency of vitamin D is common among patients with inflammatory and autoimmune disorders and those with prolonged critical illness.

Iron-Deficiency Anemia

Iron is a necessary mineral for body function and good health. Every red blood cell in the body contains iron in its hemoglobin, the pigment that carries oxygen to the tissues from the lungs. But a lack of iron in the blood can lead to iron-deficiency anemia, which is a very common nutritional deficiency in children.

About Iron-Deficiency Anemia

The body needs iron to make hemoglobin. If there isn't enough iron available, hemoglobin production is limited, which in turns affects the production of red blood cells (RBCs). A decreased amount of hemoglobin and RBCs in the bloodstream is known as anemia. Because RBCs are needed to carry oxygen throughout the body, anemia results in less oxygen reaching the cells and tissues, affecting their function. Iron-deficiency anemia (IDA), often caused by insufficient iron intake, is the major cause of anemia in childhood. It has become much less common in the United States over the past 30 years, primarily due to iron-fortified infant formulas and cereals. Iron-deficiency anemia doesn't develop immediately. Instead, a person progresses through stages of iron deficiency, beginning with iron depletion, in which the amount of iron in the body is reduced while the iron in RBCs remains constant. If iron depletion isn't corrected, it progresses to iron deficiency, eventually leading to IDA.

Causes of IDA

Iron-deficiency anemia can be the consequence of several factors, including:

- Insufficient iron in the diet
- Poor absorption of iron by the body
- Ongoing blood loss, most commonly from menstruation or from gradual blood loss in the intestinal tract

- Excessive menstrual blood loss
- Periods of rapid growth

When can iron deficiency occur?

•• The World Health Organization considers iron deficiency the number one nutritional disorder in the world. As many as 80% of the world’s population may be iron deficient, while 30% may have iron-deficiency anemia.

•• Iron deficiency develops gradually and usually begins with a negative iron balance, when iron intake does not meet the daily need for dietary iron. This negative balance initially depletes the storage form of iron while the blood hemoglobin level, a marker of iron status, remains normal. Iron deficiency anemia is an advanced stage of iron depletion. It occurs when storage sites of iron are deficient and blood levels of iron cannot meet daily needs. Blood hemoglobin levels are below normal with iron-deficiency anemia. •• Iron-deficiency anemia can be associated with low dietary intake of iron, inadequate absorption of iron, or excessive blood loss. Women of childbearing age, pregnant women, preterm and low birth weight infants, older infants and toddlers, and teenage girls are at greatest risk of developing iron-deficiency anemia because they have the greatest need for iron.

Women

With heavy menstrual losses can lose a significant amount of iron and are at considerable risk for iron deficiency. Post-menopausal women lose very little iron, and have a low risk of iron deficiency.

•• Individuals with kidney failure, especially those being treated with dialysis, are at high risk for developing iron-deficiency anemia. This is because their kidneys cannot create enough erythropoietin, a hormone needed to make red blood cells. Both iron and erythropoietin can be lost during kidney dialysis. Individuals who receive routine dialysis treatments usually need extra iron and synthetic erythropoietin to prevent iron deficiency.

•• Vitamin A helps mobilize iron from its storage sites, so a deficiency of vitamin A limits the body’s ability to use stored iron. This results in an “apparent” iron deficiency because hemoglobin levels are low even though the body can maintain normal amounts of stored iron. While uncommon in the U.S., this problem is seen in developing countries where vitamin A deficiency often occurs.

•• Chronic malabsorption can contribute to iron depletion and deficiency by limiting dietary iron absorption or by contributing to intestinal blood loss. Most iron is absorbed in the small intestines. Gastrointestinal disorders that result in inflammation of the small intestine may result in diarrhea, poor absorption of dietary iron, and iron depletion.

•• A diet low in iron is most often behind IDA in infants, toddlers, and teens. Kids who don’t eat enough or who eat foods that are poor sources of iron are at risk for developing the condition. Poverty is a contributing factor to IDA because families living at or below the poverty level may not be getting enough iron-rich foods.

•• Iron deficiency can also cause the body to absorb more lead, which increases the risk of lead poisoning in kids, especially those living in older homes. The combination of IDA and lead poisoning can make kids very ill and can put them at risk for learning and behavioral problems.

•• During infancy and adolescence, the body demands more iron. Kids are at higher risk for IDA through these periods of rapid growth because they may not be getting enough iron in their diet to make up for the increased needs.

- In infants, discontinuing iron-fortified formula and introducing cow's milk before 12 months can lead to IDA. Cow's milk is low in the iron necessary for infant growth and development, and it often replaces the consumption of iron-rich foods.
- Milk decreases the absorption of iron and can also irritate the lining of the intestine, causing small amounts of bleeding. This slow, gradual loss of blood in the stool—combined with low iron intake—may eventually result in iron deficiency and anemia.

More Risks by Age

- Prematurity and low birth weight are other factors that put an infant at risk for IDA. Before birth, full-term, normal-weight babies have developed iron stores that can last them 4 to 6 months. Because preemies don't spend as much time in the uterus getting nutrients from the mother's diet, their iron stores are not as great and are often depleted in just 2 months.
- Kids between 1 and 3 years old are at risk of iron deficiency and iron-deficiency anemia, even though it isn't a period of exceptional growth. Most toddlers are no longer consuming iron-fortified formula and infant cereal, and they aren't eating enough iron-rich foods to make up the difference. Toddlers also tend to drink a lot of cow's milk, often more than 24 ounces a day, an amount that injures the lining of the stomach causing chronic blood loss leading to iron deficiency.
- During the first stages of puberty when a lot of growth occurs, boys are at risk of iron deficiency anemia. But adolescent girls are at higher risk than boys for IDA because of smaller iron stores and the iron lost in the blood in their monthly menstrual flow. Many girls also tend to consume a diet low in iron.
- Celiac Disease and Crohn's Syndrome are associated with gastrointestinal malabsorption and may impair iron absorption. Iron supplementation may be needed if these conditions result in iron-deficiency anemia.
- Women taking oral contraceptives may experience less bleeding during their periods and have a lower risk of developing an iron deficiency. Women who use an intrauterine device (IUD) to prevent pregnancy may experience more bleeding and have a greater risk of developing an iron deficiency. If laboratory tests indicate iron deficiency anemia, iron supplements may be recommended.
- Total dietary iron intake in vegetarian diets may meet recommended levels; however that iron is less available for absorption than in diets that include meat. Vegetarians who exclude all animal products from their diet may need almost twice as much dietary iron each day as non-vegetarians because of the lower intestinal absorption of non-heme iron in plant foods. Vegetarians should consider consuming non-heme iron sources together with a good source of vitamin C, such as citrus fruits, to improve the absorption of non-heme iron.

Iron & Intense Exercise

- Many men and women who engage in regular, intense exercise such as jogging, competitive swimming, and cycling have marginal or inadequate iron status. Possible explanations include increased gastrointestinal dehydration and blood loss after running and a greater turnover of red blood cells. Also, red blood cells within the foot can rupture while running. For these reasons, the need for iron may be 30% greater in those who engage in regular intense exercise.
- Three groups of athletes may be at greatest risk of iron depletion and deficiency: female athletes, distance runners, and vegetarian athletes. It is particularly important for members of these groups to consume recommended amounts of iron and to pay attention to dietary factors that enhance iron absorption. If appropriate nutrition intervention does not promote normal iron status, iron supplementation may be indicated. In one study of female swimmers, researchers found that

supplementation with 125 milligrams of ferrous sulfate per day prevented iron depletion. These swimmers maintained adequate iron stores, and did not experience the gastrointestinal side effects often seen with higher doses of iron supplementation.

Symptoms

Many individuals with iron deficiency do not show any symptoms because the body's iron stores are depleted slowly. As the anemia progresses, you may recognize some of the following symptoms:

- Fatigue and weakness
- Pale skin and mucous membranes
- Rapid heartbeat or a new heart murmur (detected in an exam by your doctor)
- Irritability
- Decreased appetite
- Dizziness or a feeling of being lightheaded
- Rarely, a person with IDA may experience pica, a craving to eat nonfood items such as paint chips, chalk, or dirt. Pica may be caused by a lack of iron in the diet.

Diagnosis

Iron-deficiency anemia is often first noticed during a routine exam. Because IDA symptoms, such as fatigue and decreased appetite, are common to many conditions, the doctor will need more information to make a diagnosis. If IDA is suspected, the doctor will probably ask questions about your family's diet. To diagnose iron deficiency, one of these blood tests will probably be done:

- **A complete blood count (CBC)** may reveal low hemoglobin levels and low hematocrit (the percentage of the blood made up of RBCs). The CBC also gives information about the size of the RBCs; those with low hemoglobin tend to be smaller and each cell contains less hemoglobin.

Note: Keep in mind that when the blood report comes in it will have been analyzed from the Clinical Perspective not the Homeostatic perspective therefore for example the iron maker might be within the normal Clinical parameters but not the Homeostatic or Optimal parameters. What does that say? It says that all blood reports should be also analyzed from the Homeostatic perspective.

The reticulocyte count measures how fast these immature RBCs are produced. In IDA, they're made too slowly in the bone marrow to reach a normal level.

- **Serum iron** directly measures the amount of iron in the blood, but may not accurately reflect how much iron is concentrated in the body's cells.
- **Serum ferritin** reflects total body iron stores. It's one of the earliest indicators of depleted iron levels, especially when used in conjunction with other tests, such as a CBC. The doctor may also do a **stool test** because IDA can be caused by gradual loss of small amounts of blood through the gastrointestinal tract. Since the blood may not be visible, a stool sample is placed on a special paper card and a drop of testing solution is applied. A color change indicates the presence of blood.

Nutritional Supplementation Considerations for Iron-Deficiency Anemia

- **Hemadyn Pro™.** **Note:** Hemadyn Pro capsules can be opened and mixed in food or drink for those who cannot swallow tablets.

- **Hemagenics®.**

Nutritional Formula Description & Rationale for Iron-Deficiency Anemia

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing

the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

The Two Most Absorbable

The two most absorbable, least irritating to the stomach, least constipating forms of iron are the iron glycinate (Hemagenics) and iron peptonate (**Hemadyn Pro**) forms. Both forms have been historically used in pregnancy and nursing because of their advantages over other sources of iron.

Hemadyn Pro™

Hemadyn Pro is composed of B-complex, vitamin C, raw porcine duodenum, stomach, red bone marrow, bovine liver, beef peptone, citrus pectin, betaine HCl, bile salts, rose hips, alfalfa (5:1 leaf extract), and iron (iron peptonate). The iron peptonate used in Hemadyn Pro is a non-ionic form of iron, which is readily assimilated and will not cause constipation, diarrhea, cramping, colic, or blackened stools.

Note: As we review these nutraceuticals keep in mind that they are GMP Certified therefore have been tested by independent laboratory's which conclude that they are of the Pharmaceutical Quality and thus have the potential of bio compatibility with the body, in proper biochemical ratio thus bioavailable to the body, do not contain any hormones, pesticides, herbicides toxic metals or other toxins. If a product does not have GMP Certified on the label then you have no guarantee that the product is bio compatibility with the body, in proper biochemical ratio thus bioavailable to the body, do not contain any hormones, pesticides, herbicides toxic metals or other toxins.

One capsule supplies:

Iron (elemental)32 mg

(as iron peptonate)200 mg

Vitamin C (as ascorbic acid).200 mg

Thiamine (B1).2 mg

Riboflavin(B2).2 mg

Niacin (from niacin & niacinamide).28 mg

Vitamin B6 (as pyridoxine 2 mg

Folate.400 mcg

Vitamin B12 (as cyanocobalamin).50 mcg

Base.50 mg. Base includes: raw porcine duodenum, stomach, red bone marrow, bovine liver, beef peptone, citrus pectin, betaine HCl, bile salts, rose hips, alfalfa (5:1 leaf extract).

Other ingredients: Rice flour, vegetable magnesium stearate, gelatin. Contains soy and may contain traces of lactose (milk), used in processing.

Hemagenics®

Nutritional Support for Red Blood Cell Formation. Hemagenics is a highly specialized hematinic formula comprised of highly absorbable iron, succinic acid, glycine, folic acid, vitamins B6 and B12, and vitamin C formulated to:

Support the formation and maintenance of healthy red blood cells. Provides iron as a mineral amino acid chelate that is designed to be non-constipating in most individuals. (U.S. Patent 5,516,925 Albion.). One tablet supplies:

Thiamin (as thiamin mononitrate).5 mg

Vitamin B6 (as pyridoxine HCl).5 mg

Folate (as folic acid and L-5 -methyltetrahydrofolate†).600 mcg

Vitamin B12 (as cyanocobalamin).350 mcg

Calcium.25 mg

Iron (as ferrous bis-glycinate) 29 mg. The most absorbable form of iron therefore if there is any other form of iron in a food supplement it will not be absorbable as ferrous form.

Phosphorus.19 mg

Copper (as copper lysine HCl).1 mg

Succinic Acid.100 mg

L-Glycine.100 mg.

Other ingredients: Microcrystalline cellulose, dicalcium phosphate, croscarmellose sodium, stearic acid (vegetable), silica, and coating (water, hypromellose, medium chain triglycerides, and hydroxypropyl cellulose). † As Metafolin® U.S. Patent Nos. 5,997,915; 6,254,904.

The relation to “equivalent” dosages between ferrous sulfate and iron bis-Glycinate (Hemagenics):

Iron sulfate/ferrous sulfate is typically 20% elemental iron (iron + sulfate + multiple water [HOH]). That means that 325 mg (a typical dose of iron sulfate—the weight of the whole compound, not just the iron) is ~65 mg elemental iron. Considering that 1000 mg of iron sulfate (being 20% elemental iron = 200 mg) per day is very typical in anemia (even severe), that iron glycinate (Hemagenics) is 4 to 7 times more bioavailable than iron salts (29x4 or 29x7), and that the body only has a limited capacity to store iron (taking too much still ends up dumping iron back to the gut), it may be considered that moderate dosing over time is better than high-dose or “loading. “So, theoretically, three 29 mg doses of iron glycinate (Hemagenics) is equivalent to the standard three-a-day 325mg doses of iron sulfate.

Note: This would be a roughly equivalent formula. The suggestion is, that 3 tablets of Hemagenics per day is more than sufficient (in absence of bleeding loss, RBC destruction, or other pathology).

Some basic points:

Hemagenics uses *FerroChel* from Albion. The documentation indicates that iron glycinate chelate is 3 to 7 times as absorbable as iron salts. Perhaps use ~4 times as a rough estimate. There are 29 mg of elemental iron in each tablet. A standard dose for iron salts in anemia is ~325 mg iron (ferrous) sulfate 3 times daily. Iron sulfate is ~20% elemental iron so that each 325 mg tablet provides 65 mg of elemental iron. “...[Researchers found] Ferrochel [iron bis-glycinate] to be absorbed at a rate that was from **4 to 7 times higher** than the iron from ferrous sulfate...”<http://www.albionan.com/human/Newsletter/1997December.pdf> “...Pineda, et al., found Ferrochel to have an apparent absorption of 70-75%, a **bioavailability that is 3.7 times that** of ferrous sulfate...” <http://www.albion-an.com/human/Newsletter/1996February.pdf> “...Elemental iron content of iron salts in ferrous sulfate is 20% (i.e., 300 mg ferrous sulfate is equivalent to 60 mg ferrous iron)...”

<http://www.umm.edu/altmed/drugs/ferrous-sulfate-053800.htm/>. “...Ferrous sulfate salt contains 20% of elemental iron, ferrous gluconate contains ~12% and ferrous fumarate contains 33%...”<http://www.usask.ca/pharmacy-nutrition/services/read.php?id=12>.

The Ketogenic Diet

When pursued correctly the Ketogenic Diet is a muscle-sparing fat-loss diet that works by forcing the body into ketosis through carbohydrate deprivation. Ketosis is a state where the body converts

fat into ketones that the brain can use for fuel when glucose (carbohydrates) are in short supply. It has proven to be the most successful of all weight loss programs but it has to be monitored daily (through measuring the urinary ketones) to make sure that the person's body is not going dangerously high in ketones.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Foods

Here's a partial list of just some of the foods that can be consumed on a ketogenic diet. We'll start with the '100% safe foods', the ones that shouldn't throw you out of ketosis due to having either no carbs, or trace amounts of carbs. Next we'll go to 'questionable' foods, such as hotdogs, where you must check the carb content on the package, because some hotdogs have only 1 gram of carbs per hotdog, some have seven. Also included is a list of higher carb content foods, that can be eaten in VERY limited quantities. Finally, a list of foods that shouldn't be eaten on a ketodiet at all.

(**Note: Foods marked with an *** are considered healthy, we highly recommend eating them as much as possible while staying under your carb limit and staying in ketosis.)

Safe Foods (No Carbs/Trace Carbs)

As long as you are not allergic the following may be considered. Beef, Steak, Hamburger, Prime Rib, Filet Mignon, Roast Beef, Chicken*, Duck, Any Fish*, Tuna*, Salmon*, Trout*, Halibut*, Lamb, Pork, Bacon, Ham, Eggs, Shrimp, Crab, Lobster, Butter, Oils (Olive Oil*, Flaxseed oil*, etc.), Mustard, Salt, Pepper, Soy Sauce, Tea, Coffee, Heavy Cream and Stevia.

Minimal Carb Foods (Limited Quantities Only, Check Carb Content!) Broccoli*, Spinach*, Lettuce*, Cabbage*, Bok Choy*, Kale*, Asparagus*, Mustard Greens*, Mushrooms*, Cucumbers*, Pickles*,

Olives*, Celery*, Green Beans*, Brussel Sprouts*, Cauliflower*, Artichokes*, Peppers* (Red, Green, Jalapeno, Habanero), Onions*, Nuts, Flaxseeds*, Cheeses, Salami, Pastrami, Hot Dogs, Sausages, Ribs (watch out for the sauce!), Buffalo Wings, Liverwurst, Oysters, Abalone, Protein Powders, Sugar Free Jell-O, Salad Dressings (some), some Wines.

Higher Carb Foods (Very Limited Quantities!)

Grapefruit*, Lemons*, Limes*, Strawberries*, Olives*, Raspberries*, Blackberries*, Kiwis*, and Half-N-Half.

Foods that are NOT appropriate.

Beer, Mixed drinks, Bread, Milk, Pasta, Grains, Cereal, Rice, Potatoes, Corn, Carrots, Peas, Candy, Cake, Cheesecake, Donuts, Fruit Juices, High Carb Fruits (Apricots, Bananas, Peaches, Nectarines, etc.), Pastries, Non-Diet Soft Drinks, Rolls, Bagels, Popcorn, Battered Foods (Fried Chicken, etc.), Gravy, Honey, Sugar, and Corn Syrup.

Note: Hard liquor, such as scotch, vodka, etc. can be consumed because they have virtually no carbs. Wine actually makes a nice ketogenic alcoholic drink, as most wines have only 1-6 grams of carbs per glass, the sweeter the wine, the more carbs. Beer is usually very high in carbs, having 10-15 grams per glass. Watch out though, when you're in ketosis your blood sugar will be very low, and the alcohol will have a more pronounced effect. Sourced from:

<http://www.keto.org/foods.htm>

Monitoring Your Ketones

If you are contemplating a low carb diet we suggest that you purchase Keto Sticks which simply and inexpensively allow you to monitor your ketones. Doing so is important as you do not want to raise your ketones to deleterious levels.

Kidney Stones

A kidney stone is a solid piece of material that forms in the kidney from substances in the urine. It may be as small as a grain of sand or as large as a pearl. Most kidney stones pass out of the body without help from a doctor. But sometimes a stone will not go away; it may get stuck in the urinary tract, block the flow of urine, and cause great pain. The following may be signs of kidney stones:

- Extreme pain in your back or side that will not go away
- Blood in your urine
- Fever and chills
- Vomiting
- Urine that smells bad or looks cloudy
- A burning feeling when you urinate. Reference: *NIH: National Institute of Diabetes and Digestive and Kidney Diseases.*

Listed below are the Risk Factors, Dietary Options and Nutritional Involvement for Kidney Stone Formation in the following categories:

- **Prevention of Kidney Stone Formation and Recurrence**
- **Overall Support for Kidney Function**
- **Explanation of the “Calcium Controversy” Regarding Kidney Stone Formation**
- **List “known” Risk Factors and Dietary Recommendations in Kidney Stone Formation**
- **Nutritional Supplementation Considerations for Kidney Stones**

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure or promise prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **Mag Citrate™.**
- **B6 Sustained Release.**
- **Chloroplex.**
- **Renagen™ DTX**
- **UltraFlora™ Spectrum**

Potential Dietary Restrictions:

- **1. Avoid sugar.**

Guszek, J. The effect of glucose intake on urine saturation with calcium oxalate, calcium phosphate, uric acid, and sodium urate. *Int Urol Nephrol.* 20(6):657-64, 1988.

- **2. Remove high oxalate foods such as coffee, rhubarb, spinach, beans, cocoa, tea.** Butz, M., et al. Dietary influences on serum and urinary oxalate in healthy subjects and oxalate stone formers. *Urol Int.* 1980;35:309-315. 32760.

- **3. Avoid cola drinks.** (Cola drink consumption may be associated with stone formation.)

Rodgers, A. Effect of cola consumption on urinary biochemical and physicochemical risk factors associated with calcium oxalate urolithiasis. *Urol Res.* 1999;27(1):77-81. (Address: A. Rodgers, Dept Chem, Univ Capetown, South Africa.) 32790.

- **4. Be conscious of sodium intake.** (High sodium intake may cause a rise in calcium excretion.)

Muldowney, F. P., et al. Importance of dietary sodium in the hypercalcuria syndrome. *Kidney Int.* 22:292-95, 1982.

•• **5. Avoid caffeine** (Increases urinary calcium excretion.) Hollingbery, P. W., et al. Effect of dietary caffeine and aspirin on urinary calcium and hydroxyproline excretion in pre- and postmenopausal women. *Fed Proc.* 44:1149, 1985.

•• **6. Restrict alcohol consumption.** (Intake may be correlated with stone formation.)

Fellstrom, B., et al. Dietary history and dietary records in renal stone patients and control. *Urol Res.* 12:58, 1984.

•• **7. Limit animal protein intake.** (High animal protein intake is associated with increased stone formation.) Rao, P. N., et al. Dietary management of urinary risk factors in renal stone formers. *Br J Urol.* 54(6):578-83, 1982.

Dietary Habits & Kidney Stone Formation

•• *Address dehydration: The primary reason for kidney stone formation is dehydration.*

•• *Consider the **FirstLine Therapy® Diet** / Mediterranean-type / DASH-style diet. According to the results of a large cohort study reported online September 2010 in the Clinical Journal of the American Society of Nephrology: following a “Dietary Approaches to Stop Hypertension” (DASH)-style diet (the FirstLine Therapy diet/Mediterranean-type diet is essentially a healthier DASH-style diet plan) may help lower kidney stone risk by increasing urinary citrate and urinary volume. “The higher oxalate content of a DASH-style diet does not lead to large increases in 24-hour urinary oxalate, a finding consistent with our previous reports of only small associations between oxalate intake and both urinary oxalate excretion and incident kidney stone risk.” Clin J Am Soc Nephrol; Published online September 16, 2010. “While the dietary habits of 392 stone formers did not differ significantly from controls, dietary advice to increase fiber and reduce sugar, refined carbohydrates, and animal protein produced a significant reduction in the urinary excretion of calcium, oxalate, and uric acid, suggesting that this is the first line of management of idiopathic stone formers.”*

•• *Rao, P. N., et al. Dietary management of urinary risk factors in renal stone formers. Br J Urol. 54(6):578-83, 1982. Calcium Supplementation & Kidney Stone Formation. “About 80% of all urinary stones contain calcium. The majority of these are composed of calcium oxalate. Contrary to previous notions, dietary calcium is seldom closely tied to the development of urinary oxalate stone formation. In fact, calcium restriction may be contraindicated in calcium stone formers.”*

•• *Butz, M., et al. Dietary influences on serum and urinary oxalate in healthy subjects and oxalate stone formers. Urol Int. 1980;35:309-315. 32760. “In men with recurrent calcium oxalate stones and hypercalcuria, restricted intake of animal protein and salt, combined with normal calcium intake, provides greater protection than the traditional low-calcium diet.*

•• *Borghesi, L., et al. Comparison of two diets for the prevention of recurrent stones in Idiopathic Hypercalcuria. N Engl J Med. 2002;346:77-84. “The lower the calcium intake, the higher the urinary oxalate excretion.”*

•• *Brockis, J. G., et al. The effects of vegetable and animal protein diets on calcium, urate, and oxalate excretion. Br J Urol. 54(6):590- 93, 1982.*

Postmenopausal Hormone Risk for Kidney Stones

Estrogen therapy was associated with risk for nephrolithiasis (kidney stone) in healthy postmenopausal women, according to the results of an analysis from the Women’s Health Initiative (WHI). “These data suggest that estrogen therapy increases the risk of nephrolithiasis in

healthy postmenopausal women,” the study authors conclude. “These findings should be considered in decision making regarding postmenopausal estrogen use. The mechanisms underlying this higher susceptibility remain to be determined” *Arch Intern Med.* 2010;170:1678-1685.

The Parathyroid Glands

One should also be aware that some people who are kidney stones formers may have issues involving their parathyroid gland as it plays roles in the metabolism of calcium and therefore one should consider requesting their physician ordering a Parathyroid Hormone Blood test.

- Werbach, M. R., M.D. *Nutritional Influences on Illness*, A Sourcebook of Clinical Research. Tarzana, CA: Third Line Press.

- Wright, J. V., M.D. *Nutrition & Healing*, 9(5). May 2002 Newsletter. Nutritional Formula Description & Supplementation Rationale.

Mag Citrate™

A chelated form of magnesium citrate that predisposes it to be highly absorbable with calcium.

Note: Magnesium helps keep calcium in solution, inhibits calcium oxalate stone formation, and the “citrate bond of magnesium” provides “citrate”-stone formers very often have “Hypocitaturia, hypomagnesiuria”—which correlates with hypercalcuria, hyperoxaluria. “ Often the urine of stone formers have a lowered magnesium/calcium ratio.” *Scientific World Journal*; 2006 Apr 6;6:2403-10

Note: That being the case included in one’s semiannual Chem Screen, CBC and Parathyroid Hormone blood test should be conducted –Magnesium being included in the electrolyte panel of the Chem Screen.

B6 Sustained Release

B6 helps keep calcium in solution and inhibits calcium oxalate stone formation and a deficiency is associated with a metabolic block in the degradation of oxalic acid resulting in increased urinary oxalic acid and stone formation.

Chloroplex

Contains a chlorophyllin complex to improve kidney detoxification function and help inhibit stone formation.

Renagen™ DTX

Renagen DTX assists in the promotion healthy kidney detoxification and protects against free radical damage with a specific blend of nutritional factors and traditionally used herbs. Renagen DTX is a specific blend of nutrients and traditional herbs to promote healthy kidney function, detoxification, and protect against free radical damage. Also provides targeted B vitamins, including B6 and L-5-methyl tetrahydrofolate—a body-ready, nature-identical form of folate—designed to support individuals with signs of renal stress.

UltraFlora™ Spectrum

UltraFlora Spectrum is designed in hopes of providing multidimensional support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of seven beneficial probiotic strains. (*Saccharomyces boulardii*, *Bifidobacterium lactis* Bi-07, *Lactobacillus plantarum* Lp-115, *Lactobacillus salivarius* Ls-33, *Lactobacillus acidophilus* NCFM®, *Streptococcus thermophilus* St-21, and *Bifidobacterium lactis* Bl-04, formulated to:

- Promote a healthy intestinal environment and immune response.
- Help relieve recurring functional bowel discomforts and intestinal irritation.

- Contains NCFM®, one of the most well-researched probiotic strains.
- Designed for reliable outcomes with a concentrated dose of *S. boulardii*.

Leaky Gut Syndrome / Inflammatory Bowel Disease (IBD)

Crohn's / Colitis / Ulcerative Colitis / Inflammatory Bowel Syndrome (IBS) / Inflammatory Bowel Disease (IBD) / Celiac Disease / Gluten Sensitivity / Intolerance/ Leaky Gut Syndrome

The mouth and digestive tract, like the skin, protect the body from “outside” threats. At the “top” end of the digestive tract is the mouth. (Poor dental health can lead to general infection and inflammation.) The gut normally contains about 70% of the body’s immune cells. The intestines have a surface area approximately equal to the size of a football field! The immune system in the gut is called gut-associated lymphoid tissue or GALT. It protects the body from germs in food. Inflammation in the gut makes it easier for germs, bacteria, bacterial fragments, and even intact or partially intact proteins, to pass out of the intestine and “leak” into the body’s circulation. This leaky gut contributes to overall (systemic) inflammation. Inflammation in the gut also contributes to poor absorption of nutrients.

Lipopolysaccharides (LPS) are molecules that are part of the coating of some bacteria normally found in the intestines. LPS produces a strong immune response. High levels of LPS in the blood are a sign of “leaky gut” syndrome.

“Immune System Compensates for ‘Leaky Gut’ in Inflammatory Bowel Disease Susceptibility” (*ScienceDaily*; Sep. 13, 2012) —

New research could clarify how inflammatory bowel diseases (IBD), conditions that include ulcerative colitis and Crohn’s disease, are triggered and develop. Scientists at Emory University School of Medicine have shown how the immune system can compensate for a “leaky gut” and prevent disease in mice that are susceptible to intestinal inflammation. These findings could explain why some individuals who are susceptible to developing IBD do or do not get the disease. “Our results suggest that when there is a chronically leaky intestine, defects in the immune system need to be present for the development of IBD,” says senior author Charles Parkos, MD, PhD, professor of pathology and laboratory medicine at Emory University School of Medicine. “

Breakdown of the Intestinal Barrier

Can occur as a result of intestinal infections or stress. The normal response involves several components of the immune system that help to heal the injury while controlling invading bacteria. When this normal response is defective and there is a leaky barrier, the risk of developing IBD is increased.” The results were published online Sept. 13, 2012 in the journal *Immunity*.

Inflammatory bowel disease (IBD) is the name of a group of disorders in which the intestines (small and large intestines or bowels) become inflamed (red and swollen). This inflammation causes symptoms such as:

- Severe or chronic pain in the abdomen
- Diarrhea — may be blood
- Unexplained weight loss
- Loss of appetite
- Bleeding from the rectum
- Joint and back pain
- Skin problems
- Fever

Crohn’s Disease

Crohn's disease causes inflammation of the digestive system. It is one of a group of diseases called inflammatory bowel disease. The disease can affect any area from the mouth to the anus. It often affects the lower part of the small intestine called the ileum. Crohn's disease seems to run in some families. It can occur in people of all age groups but is most often diagnosed in young adults.

Symptoms

Common symptoms are pain in the abdomen and diarrhea. Bleeding from the rectum, weight loss, joint and back pain, skin problems, and fever may also occur. Children with the disease may have growth problems. Other problems can include intestinal blockage and malnutrition.

Ulcerative Colitis

Ulcerative colitis is a disease that causes ulcers in the lining of the rectum and colon. It is one of a group of diseases called inflammatory bowel disease. Ulcers form where inflammation has killed the cells that usually line the colon. Ulcerative colitis can happen at any age, but it usually starts between the ages of 15 and 30. It tends to run in families. The most common symptoms are pain in the abdomen and bloody diarrhea. Other symptoms may include anemia, severe tiredness, weight loss, loss of appetite, bleeding from the rectum, sores on the skin, and joint and back pain. How is that? Because the intestinal tract (like all other tissues in the body) receives its nerve and blood supply from the brain, spinal cord through the spine it is possible that colon issues may be in part related to issues with in the spine.

Irritable Bowel Syndrome (IBS)

Irritable bowel syndrome (IBS) is a problem that affects the large intestine. It can cause abdominal cramping, bloating, and a change in bowel habits. Some people with the disorder have constipation. Some have diarrhea. Some go back and forth between constipation and diarrhea. Although IBS can cause a great deal of discomfort, it does not harm the intestines. IBS is a common disorder and happens more often in women than men. Most people diagnosed with IBS can control their symptoms with diet, stress management, and medicine.

Celiac Disease

Celiac disease is a condition in which the immune system is abnormally sensitive to gluten, a protein found in wheat, rye, and barley. Celiac disease is an autoimmune disorder. Autoimmune disorders occur when the immune system malfunctions and attacks the body's own tissues and organs. Without a strict, lifelong gluten-free diet, inflammation resulting from immune system over activity may cause a wide variety of signs and symptoms involving many parts of the body. Celiac disease can develop at any age after an individual starts eating foods containing gluten. The classic symptoms of the condition result from inflammation affecting the gastrointestinal tract. This inflammation damages the villi, which are small, fingerlike projections that line the small intestine and provide a greatly increased surface area to absorb nutrients. In celiac disease, the villi become shortened and eventually flatten out. Intestinal damage causes diarrhea and poor absorption of nutrients, which may lead to weight loss. Abdominal pain, swelling (distention), and food intolerances are common in celiac disease. Inflammation associated with celiac disease may lead to an increased risk of developing certain gastrointestinal cancers such as cancers of the small intestine or esophagus. Inflammation as well as poor nutrient absorption may lead to problems affecting many other organs and systems of the body in affected individuals.

C Diff (C. difficile)

Intestinal colitis manifested with diarrhea, fever, abdominal cramps.

Causes

Contamination with feces

Long term antibiotics

Diagnosis

Stools sample

Treatment

Antibiotic

Lactobacillus

Related Health Problems

These health problems may include iron deficiency that results in a low number of red blood cells (anemia), vitamin deficiencies, low bone mineral density (osteopenia/osteoporosis), itchy skin rashes (dermatitis herpetiformis), defects in the enamel of the teeth, chronic fatigue, joint pain, poor growth, delayed puberty, infertility, or repeated miscarriages. Neurological problems have also been associated with celiac disease; these include migraine headaches, depression, attention deficit hyperactivity disorder (ADHD), and recurrent seizures (epilepsy). Many people with celiac disease have one or more of these varied health problems but do not have gastrointestinal symptoms. This form of the condition is called neoclassic celiac disease. Researchers now believe that neoclassic celiac disease is actually more common than the classic form. Celiac disease often goes undiagnosed because many of its signs and symptoms are nonspecific, which means they may occur in many disorders. Most people who have one or more of these nonspecific health problems do not have celiac disease. On average, a diagnosis of celiac disease is not made until more than a decade after symptoms begin.

Silent Celiac Disease

Some people have silent celiac disease, in which they have no symptoms of the disorder.

However, people with silent celiac disease do have immune proteins in their blood (antibodies) that are common in celiac disease. They also have inflammatory damage to their small intestine that can be detected with a biopsy. In a small number of cases, celiac disease does not improve with a gluten-free diet and progresses to a condition called refractory sprue.

Refractory sprue

RS characterized by chronic inflammation of the gastrointestinal tract, poor absorption of nutrients, and an increased risk of developing a type of cancer of the immune cells called T-cell lymphoma.

Non-Celiac Gluten Enteropathy / Gluten Sensitivity or Intolerance

Gluten sensitivity appears to be emerging as a separate condition from celiac disease, yet no clear definition or diagnosis exists. As a result, patients with gluten sensitivity experience delayed diagnosis and continuing symptoms if they consume gluten. This emerging medical problem may involve human genetics, plant genetic modifications, gluten as a food additive, environmental toxins, hormonal influences, intestinal infections, and autoimmune diseases. The treatment is similar to that for celiac disease—a gluten-free diet. The use of a gluten-free diet or an elimination diet is encouraged in assisting people to determine whether or not they are gluten sensitive. It is time to not only recognize, but to treat and further research gluten sensitivity, as unconfirmed environmental factors continue to spread this problem further into the general population.

Reference: Brown, A. C. Gluten sensitivity: Problems of an emerging condition separate from celiac disease. *Expert Rev Gastroenterol Hepatol.* 2012;6(1):43-55.

Food Hypersensitivities

Many gastrointestinal problems are related to hypersensitivities in that when they ingest certain foods that their body interprets as biocidic (poisonous) there are intestinal reactions and if the situation persists the lining of the intestinal mucosa will become irritated, inflamed which not only causes intestinal symptoms but the antigens with those foods are inclined to pass from the intestines into the individuals systemic circulatory system where they precipitate other health problems.

Diagnosis

Other than symptoms the following diagnostic tests are appropriate;

1. Touch For Health Applied Kinesiology Muscle Response Tests involving use of specific antigens
2. IgG and IgG4 Blood tests which determine any fixed and or cyclic food sensitivities.
3. Skin Scratch test which for the most part looks for animal dander hypersensitivities and fixed food sensitivities.
4. Chem Screen and CBC.

Food Supplemental Option's

It should be noted that anyone who has digestive issues is highly prone to nutritional deficiencies therefore the proceeding recommended diagnostic tests and the following nutritional options should be considered. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Note: Consider the addition of targeted protease enzyme digestive support for gluten:

SpectraZyme® SpectraZyme Gluten Digest

SpectraZyme Gluten Digest contains oral supplementary digestive enzymes (Aspergillus niger prolyl endoprotease (AN-PEP) and dipeptidyl peptidase IV (DPP-IV) from Aspergillus niger), representing a promising adjunctive strategy for individuals avoiding dietary gluten.

Key Questions to Establish in Gut Health:

1. What foods are you putting in? (Are you chewing? Are you consuming foods you are reactive to?)
2. How's your digestion? (HCl, Gallbladder, Pancreas)
3. Is stress a factor?
4. What type of bugs live in your gut?
5. How often do you poop / transit time?
6. Do you have a Leaky Gut?

The 5-R's including:

- **Remove** (bad foods and bad bugs)
- **Replace** HCl and/or Digestive Enzymes
- **Repair** Leaky Gut
- **Re-inoculate** with Good Flora
- **Retain** Optimal Gut Function

Nutritional Supplementation Options for Leaky Gut Syndrome and Inflammatory Bowel Syndromes

Note1: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following

nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

5R GI Restoration Program

Note2: To complete the entire 30-Day 5R GI Restoration Program requires:

- **GI Sustain™**
- **UltraFlora™ Intensive Care**
- **UltraFlora™ Integrity**
- **D3 10,000 with K2™**
- **GI Sustain™** see “5R GI Restoration Program Guide” for entire program guidelines)

Note: For a richer flavor and taste experience, add frozen or fresh berries, 1/2 banana, and 1 cup of ice.

- **UltraFlora™ Integrity.**
- **UltraFlora™ Intensive Care**

D3 10,000 with K2™. (It is advisable to run a “25-(OH)D” serum vitamin D test. If the patient is significantly serum vitamin D3 compromised, increase the vitamin D3 dose.)

Note4. One should be very careful not to exceed the recommended daily dose and better yet have period Vitamin blood levels checked.

Nutritional Formula Description & Supplementation Rationale

GI Sustain™

GI Sustain is formulated to provide specialized nutritional support, including amino acids and prebiotic fiber combined with readily digestible, low-allergenic-potential macronutrients for patients with leaky gut syndrome. Featuring L-glutamine and isomalto-oligosaccharides (IMO), this formula supports intestinal mucosal integrity and promotes the growth of beneficial bacteria to address dysbiosis associated with leaky gut syndrome.

- Designed to support microbial balance.
- Promote nourishment of the colonic mucosa.
- Features low-allergy-potential rice protein concentrate supplemented with L-lysine HCl and L-threonine for an improved protein source.
- Provides rice syrup solids as a natural energy source.
- Provides a readily absorbed and metabolized lipid source.
- Provides the prebiotic IMO to selectively nourish beneficial bacteria, including lactobacillus and bifidobacteria.
- IMO is a gentle fiber that is naturally sweet but has a low-glycemic index.
- Formulated with nutrients such as zinc gluconate and L-glutamine to nutritionally support gastrointestinal mucosa integrity.

UltraFlora™ Integrity

Lactobacillus salivarius UCC118 (UltraFlora Integrity) is a strain-identified probiotic that has been specifically shown to support intestinal barrier function via preventing the oxidative stress-induced internalization of tight junction proteins. Upon adhesion to intestinal epithelial cells

(IEC), UCC118 also produces ABP-118, a bacteriocin that is effective at inactivating or killing several species of pathogenic bacteria, addresses inflammation at the gut wall, and supports the integrity and healthy function of the intestinal mucosal lining. UCC118 represents a new trend in probiotic selection, utilizing a targeted approach to select probiotics with optimal strain-specific characteristics for the intended benefits and outcomes, and with promising effects in human clinical studies.

- Miyauchi, E., O'Callaghan, J., & Butto, L. F., et al. Mechanism of protection of trans epithelial barrier function by *Lactobacillus salivarius*: Strain dependence and attenuation by bacteriocin production. *Am J Physiol Gastrointest Liver Physiol*. 2012;303:G1029-G1041.
- O'Mahony, L., McCarthy, J., & Feeney, M., et al. Immunologic response to a novel probiotic organism in patients with active Crohn's disease. *Gastroenterology* 2000;118(Issue4, Part 1), A853. Abstract presented at Digestive Disease Week and the 101st Annual Meeting of the American Gastroenterological Association, May 21-24, 2000 in San Diego, CA.

UltraFlora® Intensive Care

UltraFlora Intensive Care is an extensively researched strain of “friendly” bacteria designed to help relieve intestinal irritation and bowel discomfort, promote the integrity of the gastrointestinal barrier, and support immune health.

- Designed to relieve recurring discomforts associated with the small bowel or colon, such as abdominal or motility discomfort and other minor pains.
- Supports healthy intestinal mucosal barrier integrity and function.
- Supports a healthy immune response.
- Beneficially influences levels of certain cytokines (e.g., IL-10, IL-6), which may contribute to reducing intestinal irritation.

D3 10,000 with K2™

“Vitamin D deficiency may compromise the mucosal barrier, leading to increased susceptibility to mucosal damage and increased risk of inflammatory bowel disease.”

- Kong, G., Zhang, Z., Musch, M. W., Ning, G., Sun, J., Hart, J., Bissonnette, M., & Li, Y. C. Novel role of the vitamin D receptor in maintaining the integrity of the intestinal mucosal barrier. *Am J Physiol Gastrointest Liver Physiol*: G208-G216, 2008. Investigators led by Ashwin Ananthakrishnan, MD, from the Division of Gastroenterology, Massachusetts General Hospital in Boston, found that *vitamin D-sufficient women were 62% less likely to be diagnosed with Crohn's Disease* during a 22-year period compared with those deemed deficient.
- Ananthakrishnan, A. N., et al. Higher predicted vitamin D status is associated With Reduced Risk for Crohn's Disease *Gastroenterology*. 2012;142:482-489.

Note: It may be advisable to run a serum vitamin D in conjunction with their semiannual

Chem Screen and CBC blood tests. Regarding the serum test for vitamin D, the best serum analysis is the “25-(OH)D.” The safety range of the “25-(OH)D” is 20 to 150 ng/ml and the ideal Clinical range is 40 to 100 ng/ml, with possible intoxication at >150 ng/ml. (But, if after vitamin D3 supplementation, symptom improvement is “non-responsive,” consider checking the vitamin D hormone (“1,25(OH)2D”) for actual tissue saturation in ratio to the “25-(OH)D” level.) But if a vitamin D test is performed one serves them well if they analyze the results from both a Clinical as well as Homeostatic perspectives.

POSSIBLE BENEFITS OF RESOLUTION-BASED NUTRITION

For decades, blocking initiation-phase pro-inflammatory mediators (e.g., prostaglandins) or enzymes (e.g., COX-2 enzyme) by pharmacological agents such as nonsteroidal anti-inflammatory drugs (NSAIDs), has been the go-to therapy for many acute and chronic inflammatory conditions.

However, **anti-inflammation is not the same as pro-resolution**. Because initiation phase activities are required to “jump start” resolution, traditional COX-2 and lipoxygenase inhibitors may delay resolution activities and undermine the body’s attempt to return to homeostasis and tissue healing. Unresolved inflammation and unhealed tissue can lead to fibrosis that can impair organ function. Thus, an important key to controlling/resolving inflammation and subsequently preventing chronic inflammatory conditions lies in SPMs and their pro-resolving properties that switch an inflammatory response toward resolution and homeostasis. That SPMs are enzymatically produced from long-chain PUFA (especially EPA and DHA) in tissue exudates indicates the indispensable role of nutrition in regulating inflammation and promoting resolution.

References

- Majno, G., & Joris, I. (2004). *Cells, tissues, and disease: Principles of general pathology*. Oxford University Press: USA.
- Giugliano, D., Ceriello, A., & Esposito, K. *The effects of diet on inflammation: Emphasis on the metabolic syndrome*. *J Am Coll Cardiol*. 2006;48:677-685.
- Recchiuti, A. *Immunoresolving lipid mediators and resolution of Inflammation in aging*. *J Gerontol Geriat Res*. 2014;3:151.
- Nathan, C., & Ding, A. *Nonresolving inflammation*. *Cell*. 2010;140:871-882.
- Tabas, I., & Glass, C. K. *Anti-inflammatory therapy in chronic disease: Challenges and opportunities*. *Science*. 2013;339:166-172.
- Libby, P. *Atherosclerosis: The new view*. *Sci Am*. 2002;286:46-56.
- Mushtaq, G., Khan, J. A., Kumosani, T. A., & Kamal, M. A. *Alzheimer’s disease and type 2 diabetes via chronic inflammatory mechanisms*. *Saudi J Biol Sci*. 2015;22:4-13.
- Fuentes, E., Fuentes, F., Vilahur, G., Badimon, L., & Palomo, I. *Mechanisms of chronic state of inflammation as mediators that obese adipose tissue and metabolic syndrome*. *Mediators Inflamm*. 2013;2013:136584.
- Parmeggiani, F., Romano, M. R., & Costagliola, C., et al. *Mechanism of inflammation in age-related macular degeneration*. *Mediators Inflamm*. 2012;2012:546786.
- Franceschi, C. *Inflammaging as a major characteristic of old people: Can it be prevented or cured?* *Nutr Rev*. 2007;65:S173-176.
- Lawrence, T., Willoughby, D. A., & Gilroy, D. W. *Anti-inflammatory lipid mediators and insights into the resolution of inflammation*. *Nat Rev Immunol*. 2002;2:787-795.
- Samuelsson, B., Dahlen, S. E., Lindgren, J. A., Rouzer, C. A., & Serhan, C. N. *Leukotrienes and lipoxins: Structures, biosynthesis, and biological effects*. *Science*. 1987;237:1171-1176.
- Spite, M., Claria, J., & Serhan, C. N. *Resolvins, specialized proresolving lipid mediators, and their potential roles in metabolic diseases*. *Cell Metab*. 2014;19:21-36.
- Serhan, C. N. *Pro-resolving lipid mediators are leads for resolution physiology*. *Nature*. 2014;510:92-101.
- Serhan, C. N., Brain, S. D., & Buckley, C. D., et al. *Resolution of inflammation: State of the art, definitions and terms*. *Faseb J*. 2007;21:325-332.
- Serhan, C. N. *A search for endogenous mechanisms of anti-inflammation uncovers novel chemical mediators: Missing s to resolution*. *Histochem Cell Biol*. 2004;122:305-321.
- Maddox, J. F., Hachicha, M., & Takano, T., et al. *Lipoxin A4 stable analogs are potent mimetics that stimulate human monocytes and THP-1 cells via a G protein-ed lipoxin A4 receptor*. *J Biol Chem*. 1997;272:6972-6978.

- Ariel, A., Fredman, G., & Sun, Y. P., et al. Apoptotic neutrophils and T cells sequester chemokines during immune response resolution through modulation of CCR5 expression. *Nat Immunol.* 2006;7:1209-1216.
- Schwab, J. M., Chiang, N., Arita, M., & Serhan, C. N. Resolvin E1 and protectin D1 activate inflammation-resolution programmes. *Nature.* 2007;447:869-874.
- Chiang, N., Fredman, G., & Backhed, F., et al. Infection regulates pro-resolving mediators that lower antibiotic requirements. *Nature.* 2012;484:524-528.
- Serhan, C. N., & Savill, J. Resolution of inflammation: The beginning programs the end. *Nat Immunol.* 2005;6:1191-1197.
- Levy, B. D., Clish, C. B., Schmidt, B., Gronert, K., & Serhan, C. N. Lipid mediator class switching during acute inflammation: Signals in resolution. *Nat Immunol.* 2001;2:612-619.
- Hong, S., Gronert, K., Devchand, P. R., Moussignac, R. L., & Serhan, C. N. Novel docosatrienes and 17S-resolvins generated from docosahexaenoic acid in murine brain, human blood, and glial cells. Autacoids in anti-inflammation. *J Biol Chem.* 2003;278:14677-14687.
- Serhan, C. N., Clish, C. B., & Brannon, J., et al. Novel functional sets of lipid-derived mediators with anti-inflammatory actions generated from omega-3 fatty acids via cyclooxygenase 2-nonsteroidal anti-inflammatory drugs and transcellular processing. *J Exp Med.* 2000;192:1197-1204.
- Serhan, C. N., & Petasis, N. A. Resolvins and protectins in inflammation resolution. *Chem Rev.* 2011;111:5922-5943.
- Serhan, C. N. Lipoxins and aspirin-triggered 15-epi-lipoxins are the first lipid mediators of endogenous anti-inflammation and resolution. *Prostaglandins Leukot Essent Fatty Acids.* 2005;73:141-612.
- Serhan, C. N. Novel lipid mediators and resolution mechanisms in acute inflammation: To resolve or not? *Am J Pathol.* 2010;177:1576-1591.
- Serhan, C. N., & Chiang, N. Resolution phase lipid mediators of inflammation: Agonists of resolution. *Curr Opin Pharmacol.* 2013;13:632-640.
- Navarro-Xavier, R. A., Newson, J., & Silveira, V. L., et al. A new strategy for the identification of novel molecules with targeted proresolution of inflammation properties. *J Immunol.* 2010;184:1516-1525.
- Chan, M. M., & Moore, A. R. Resolution of inflammation in murine autoimmune arthritis is disrupted by cyclooxygenase-2 inhibition and restored by prostaglandin E2-mediated lipoxin A4 production. *J Immunol.* 2010;184:6418-6426.

Liver / Gallbladder

Hepatopathy: any disease of the liver.

Hepatotoxin: a toxin that destroys liver cells.

Cholestasis: stoppage or suppression of bile flow, due to factors within (intrahepatic cholestasis) or outside the liver (extrahepatic cholestasis).

Cirrhosis: a liver disease characterized pathologically by the loss of the normal microscopic lobular architecture and regenerative replacement of necrotic parenchymal tissue with fibrous bands of connective tissue which eventually constrict and partition the organ into irregular nodules. The term is sometimes used to refer to chronic interstitial inflammation of any organ. Cirrhosis of the liver is actually a group of **chronic diseases of the liver. The disease has a** lengthy latent period, usually followed by the sudden appearance of abdominal pain and swelling, hematomyelias, dependent edema, or jaundice. In advanced states, ascites, pronounced jaundice,

portal hypertension, and central nervous system disorders, which may end in hepatic coma, become prominent.

Symptoms

The signs and symptoms of hepatic cirrhosis are manifestations of interference with the major functions of the liver; that is: (1) the storage and release of blood to maintain adequate circulating volume; (2) the metabolism of nutrients and the detoxification of poisons absorbed from the intestines; (3) the regulation of fluid and electrolyte balance; and (4) production of clotting factors. Symptoms include: intolerance to greasy foods; headaches after eating; light colored stool; foul smelling stool; less than one bowel movement daily; constipation; hard stool; sour taste in mouth; grey colored skin; yellow in whites of eyes; bad breath; body odor; fatigue and sleepiness after eating; pain in right side under rib cage; painful to pass stool; retain water; big toe painful; pain radiates along outside of leg; dry skin/hair; blood in stool; have had jaundice or hepatitis; high blood cholesterol and low HDL cholesterol; cholesterol level above 200; triglyceride level above 115.

Diagnostic Considerations

Food allergy, exercise, hypothyroidism, hypochlorhydria, bowel detoxification, urinary Indican test, Candida albicans. Therefore a Blood profile, CBC, IgG, IgG4 and Applied Kinesiology Muscle Response Testing, Urinary Indican, Candida Albicans Tests are appropriate diagnostic options.

Nutrients Involved: Choline, inositol, vitamin B6, folic acid, vitamin B12, magnesium, taurine, vitamin C

Nutritional Supplementation Considerations:

•• Lipo-Gen.

Comprehensive lipotropic formula.

•• Liver Care. Ayurvedic liver formula.

Possible Symptoms Related to Gallbladder Problems

Your healthcare professional may recommend a gallbladder flush if you have any of the following symptoms but before embarked upon the person's medical provider should be consulted:

Pain: - Under lower rib cage, - In front of your shoulder and/o behind back of knee

Stools: - yellow, green, or pale, - Fat in stools - stools float. Swelling around the knee and below to feet

Temporal headaches,

Feet sweat Eye pain

Leg cramps

Belching or bloated after fatty meals

Restless Leg Syndrome (RLS) Constipation

Insomnia Can't sleep from 11 PM to 1 AM. - Awake up during this time. - Sleep restlessly during this time

Diarrhea Nausea after meals

Options For Nutritional Supplementation

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

•• **Lipo-Gen™** contains select amino acids, vitamins, and herbs to support healthy liver and gallbladder function.

•• **Liver Care®**

Liver Care is a specially formulated proprietary herbal formula for healthy liver support. Liver Care restores the functional efficiency of the liver by protecting the hepatic parenchyma and promoting hepatocellular regeneration.

•• **AdvaClear®** is formulated to provide support for balanced activity of the body's detoxification processes.

•• **UltraFlora IB™** Ultra Flora IB is an enhanced potency probiotic formula designed to help relieve bowel irritation and related functional discomforts by promoting a healthy balance of intestinal microflora.

Note: After completing the gallbladder flush, consider continuing the supplement regimen for two weeks or until bottles are empty.

***Note:** If you have yeast overgrowth DO NOT use apples or juices, instead consider taking **Fibroplex®**

If feeling well consider with normal diet, except eliminate all oils and fat from your diet (no butter, meats [except fat free meats], cooking oils, nuts, or avocado). Avoid chamomile tea (stimulates bile secretion from liver; could bring on an attack in susceptible people).

Note: Do not attempt to flush an inflamed Gallbladder.

Liver Disease — Cirrhosis /Nonalcoholic Steatohepatitis (NASH) /Nonalcoholic Fatty Liver Disease / Fatty Liver Disease/Steatohepatitis (NASH).

Diagnosis

NASH is usually first suspected in a person who is found to have elevations in liver tests that are included in routine blood test panels, such as alanine aminotransferase (ALT) or aspartate aminotransferase (AST). When further evaluation shows no apparent reason for liver disease (such as medications, viral hepatitis, or excessive use of alcohol) and when x rays or imaging studies of the liver show fat, NASH is suspected. The only means of proving a diagnosis of NASH and separating it from simple fatty liver is a liver biopsy. For a liver biopsy, a needle is inserted through the skin to remove a small piece of the liver. NASH is diagnosed when examination of the tissue with a microscope shows fat along with inflammation and damage to liver cells. If the tissue shows fat without inflammation and damage, simple fatty liver or NAFLD is diagnosed. An important piece of information learned from the biopsy is whether scar tissue has developed in the liver.

Symptoms

NASH is usually a silent disease with few or no symptoms. Patients generally feel well in the early stages and only begin to have symptoms—such as fatigue, weight loss, and weakness—once the disease is more advanced or cirrhosis develops. The progression of NASH can take years, even decades. The process can stop and, in some cases, reverse on its own without specific therapy. Or NASH can slowly worsen, causing scarring or “fibrosis” to appear and accumulate in the liver. As fibrosis worsens, cirrhosis develops; the liver becomes seriously scarred, hardened, and unable to function normally. Not every person with NASH develops cirrhosis, but once serious scarring or cirrhosis is present, few treatments can halt the progression. A person with cirrhosis experiences fluid retention, muscle wasting, bleeding from the intestines, and liver failure. Liver transplantation is the only treatment for advanced cirrhosis with liver failure, and transplantation is

increasingly performed in people with NASH. NASH ranks as one of the major causes of cirrhosis in America, behind hepatitis C and alcoholic liver disease.

Causes

Although NASH has become more common, its underlying cause is still not clear. It most often occurs in persons who are middle-aged and overweight or obese. Many patients with NASH have elevated blood lipids, such as cholesterol and triglycerides, and many have diabetes or prediabetes, but not every obese person or every patient with diabetes has NASH. Furthermore, some patients with NASH are not obese, do not have diabetes, and have normal blood cholesterol and lipids. NASH can occur without any apparent risk factor and can even occur in children. Thus, NASH is not simply obesity that affects the liver. While the underlying reason for the liver injury that causes NASH is not known, several factors are possible candidates:

- Insulin resistance
- Release of toxic inflammatory proteins by fat cells (cytokines)
- Oxidative stress (deterioration of cells) inside liver cells.

Treatment

The most important recommendations given to persons with this disease are to:

- Reduce their weight (if obese or overweight)
- Follow a balanced and healthy diet
- Increase physical activity
- Avoid alcohol
- Avoid unnecessary medications

Options For Nutritional Supplementation for Liver Disease — Cirrhosis / Nonalcoholic Steatohepatitis (NASH) / Nonalcoholic Fatty Liver Disease / Fatty Liver Disease

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s).

Interventional Chiropractic Care

Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- **LiverCare®.**
- **Lipogen™.**
- **D3 5000™ based on Vitamin D blood analysis.**
- Appropriate **Wellness Essentials®** Formula
- **E Complex-1:1™.**

Dietary Considerations

Anti-Inflammatory Diet

- **Coffee —** Moderate consumption of coffee may be a useful, benign adjunct in the treatment of NASH/Liver Disease progression. “Investigators correlated coffee (caffeine) consumption with the severity of nonalcoholic fatty liver disease (NAFLD).[1] As Malloy and colleagues point out, an

association between coffee consumption and a reduced risk for liver disease progression was established years ago.[2-5] Coffee intake has been shown to correlate with lower liver enzyme levels and a reduced risk for hospitalizations and mortality in patients with cirrhosis. A recent example: Coffee consumption was linked to lower rates of clinical and pathologic progression of liver fibrosis in patients with chronic hepatitis C infection.[6]

References

1. Molloy, J. W., Calcagno, C. J., Williams, C. D., Jones, F. J., Torres, D. W., & Harrison, S. A. Association of coffee and caffeine consumption with fatty liver disease, nonalcoholic steatohepatitis, and degree of hepatic fibrosis. *Hepatology*. 2012;55:429-436.
1. Casiglia, E., Spolaore, P., Ginocchio, G., & Ambrosio, G. Unexpected effects of coffee consumption on liver enzymes. *Eur J Epidemiol*. 1993;9:293-297.
1. Corrao, G., Zambon, A., Bagnardi, V., D'Amicis, A., & Klastky, A. Coffee, caffeine, and the risk of liver cirrhosis. *Ann Epidemiol*. 2001;11:458-465.
1. Ruhl, E., & Everhart, J. Coffee and caffeine consumption reduce the risk of elevated serum alanine aminotransferase activity in the United States. *Gastroenterology*. 2005;128:24-32.
1. Modi, A., Feldman, J., & Park, Y., et al.. Increased coffee consumption is associated with reduced hepatic fibrosis. *Hepatology*. 2010;51:201-209.
1. Freedman, N., Everhart, J., & Lindsay, K., et al. Coffee intake is associated with lower rates of liver disease progression in chronic hepatitis C. *Hepatology*. 2009;50:1360-1369.

Nutritional Formula Description & Supplementation Rationale

LiverCare®

LiverCare is clinically proven to support healthy detoxification and normal liver cell regeneration. LiverCare helps maintain healthy liver enzyme counts within the normal levels while promoting protein metabolism and nutrient digestion. LiverCare is a highly specialized Ayurvedic liver formula, recommended for cirrhosis, nonalcoholic steatohepatitis (NASH) or nonalcoholic fatty liver disease (NAFLD), hepatitis, fatty liver, and elevated liver enzymes.

Lipogen™

Lipo-Gen is a highly specialized formula that features a broad spectrum and unique blend of lipotropic nutrients combined with select amino acids, vitamins, and herbs to support healthy liver and gallbladder function. Provides nutrients involved in fat metabolism, including inositol, choline, and taurine. Delivers methyl donors, folic acid, vitamins B6 and B12, and select herbs that are traditionally used to support bile flow and healthy liver function.

D3 5000™

D3 5000 features 5000 IU of vitamin D3—the most bioavailable form of vitamin D. “Low 25(OH) vitamin D levels are associated with the presence of NAFLD independently from metabolic syndrome, diabetes and insulin-resistance profile.”

•• Barchette, I., Angelico, F., Del Ben, M., Baroni, M. G., Pozzilli, P., Morini, S., & Cavallo, M. G. Strong association between nonalcoholic fatty liver disease (NAFLD) and low 25(OH) vitamin D levels in an adult population with normal serum liver enzymes.

BMC Med. 2011 Jul 12;9:85. doi: 10.1186/1741-7015-9-85. “Low vitamin D levels and bone disease are well-recognized complications of ‘cholestatic’ liver disease, which decreases the production or flow of bile. More recently, studies have confirmed low vitamin D levels in noncholestatic liver disease.” •• Sathleesh, N. Vitamin D deficiency and liver disease.

Gastroenterol Hepatol (N Y). 2010 August; 6(8): 491–493.

Note: Because vitamins D, E, and K are fat soluble vitamins over ingestion of them can predispose people to toxic reactions therefore one should consider the following:

1. Keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

2. In addition to no less than semiannual having a Bloor Profile and CBC blood tests one should ask that the tests include vitamin D.

Appropriate Wellness Essentials® Formula

Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. *“Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”*

E Complex-1:1™

“Vitamin E is beneficial in children with NASH (nonalcoholic steatohepatitis) and Vitamin E (800 IU/day) was beneficial in adults with NASH. Liver enzyme levels improved in 43% of patients in the vitamin E treatment group compared with 19% in the placebo treated group. The rationale for the administration of agents with strong antioxidant activity to patients with NASH is a good one, given the presumed pathophysiology of disease progression in patients with fatty liver disease.”

References

- Lavinell, J. E. Treatment of non-alcoholic fatty liver disease in children. Program and abstracts of The Liver Meeting 2010: American Association for the Study of Liver Diseases (AASLD) 61st Annual Meeting; October 29-November 2, 2010; Boston, MA. Abstract 110.
- Sanyal, A. J., Chalasani, N., & Kowdley, K. V., et al. Pioglitazone, vitamin E, or placebo for nonalcoholic steatohepatitis. *N Engl J Med.* 2010;362:1675-1685. Abstract.
- Neuschwander-Tetri, B. A. Hepatic lipotoxicity and the pathogenesis of nonalcoholic steatohepatitis: The central role of nontriglyceride fatty acid metabolites. *Hepatology.* 2010;52:774-788. Abstract.
- Miller, E. R. III, Pastor-Barriuso, R., Dalal, D., Riemersma, R. A., Appel, L. J., & Guallar, E. Meta-analysis: High-dosage vitamin E supplementation may increase all-cause mortality. *Ann Intern Med.* 2005;142:37-46. Pub 2004 Nov 10. Liver Disease — Cirrhosis/Nonalcoholic Steatohepatitis (NASH) 337

Low Back Pain / Disc Injury / Degenerative Disc Disease /Intervertebral Disc Disease

If you have lower back pain, you are not alone. About 80 percent of adults experience low back pain at some point in their lifetimes. It is the most common cause of job-related disability and a leading contributor to missed work days. In a large survey, more than a quarter of adults reported experiencing low back pain during the past three months. Men and women are equally affected by low back pain, which can range in intensity from a dull, constant ache to a sudden, sharp sensation that leaves the person incapacitated. Pain can begin abruptly as a result of an accident or by lifting something heavy, or it can develop over time due to age-related changes of the spine. Sedentary lifestyles also can set the stage for low back pain, especially when a weekday routine of getting too little exercise is punctuated by strenuous weekend workouts. Most low back pain is acute, or

short term, and lasts a few days to a few weeks. It tends to resolve on its own with self-care and there is no residual loss of function. The majority of acute low back pain is mechanical in nature, meaning that there is a disruption in the way the components of the back (the spine, muscle, intervertebral discs, and nerves) fit together and move.

- **Subacute** low back pain is defined as pain that lasts between 4 and 12 weeks.

- **Chronic** back pain is defined as pain that persists for 12 weeks or longer, even after an initial injury or underlying cause of acute low back pain has been treated. About 20 percent of people affected by acute low back pain develop chronic low back pain with persistent symptoms at one year. In some cases, treatment successfully relieves chronic low back pain, but in other cases pain persists despite medical and surgical treatment. The magnitude of the burden from low back pain has grown worse in recent years. In 1990, a study ranking the most burdensome conditions in the U.S. in terms of mortality or poor health as a result of disease put low back pain in sixth place; in 2010, low back pain jumped to third place, with only ischemic heart disease and chronic obstructive pulmonary disease ranking higher.

What structures make up the back? The lower back, where most back pain occurs, includes the five vertebrae (referred to as L1-L5) in the lumbar region, which supports much of the weight of the upper body. The spaces between the vertebrae are maintained by round, rubbery pads called intervertebral discs that act like shock absorbers throughout the spinal column to cushion the bones as the body moves. Bands of tissue known as ligaments hold the vertebrae in place, and tendons attach the muscles to the spinal column. Thirty-one pairs of nerves are rooted to the spinal cord and they control body movements and transmit signals from the body to the brain.

What causes lower back pain? The vast majority of low back pain is mechanical in nature. In many cases, low back pain is associated with spinal curvatures, injury (sprains/strains), occupations, heredity, spinal subluxations, pelvic imbalance related to subluxations in the pelvis, short leg or spondylosis.

What is Spondylosis? It is a term that refers to the general degeneration of the spine associated with normal wear and tear that occurs in the joints, discs, and bones of the spine as people get older. Some examples of mechanical causes of low back pain include that is commonly related to one or more of the previous causative issues mentioned.

Sprains and strains account for most acute back pain. Sprains are caused by overstretching or tearing ligaments, and strains are tears in tendon or muscle. Both can occur from twisting or lifting something improperly, lifting something too heavy, or overstretching. Such movements may also trigger spasms in back muscles, which can also be painful.

Intervertebral disc degeneration is one of the most common mechanical causes of low back pain, and it occurs when the usually rubbery discs lose integrity as a normal process of aging. In a healthy back, intervertebral discs provide height and allow bending, flexion, and torsion of the lower back. As the discs deteriorate, they lose their cushioning ability.

Herniated or ruptured discs can occur when the intervertebral discs become compressed and bulge outward (herniation) or rupture, causing low back pain.

Radiculopathy is a condition caused by compression, inflammation and/or injury to a spinal nerve root. Pressure on the nerve root results in pain, numbness, or a tingling sensation that travels or radiates to other areas of the body that are served by that nerve. Radiculopathy may occur when spinal stenosis or a herniated or ruptured disc compresses the nerve root.

Sciatica is a form of radiculopathy caused by compression of the sciatic nerve, the largest nerve in the human body that travels through the buttocks and extends down the back of the leg. This compression causes shock-like or burning low back pain combined with pain through the buttocks and down one leg, occasionally reaching the foot. In the most extreme cases, when the nerve is pinched between the disc and the adjacent bone, the symptoms may involve not only pain, but numbness and muscle weakness in the leg because of interrupted nerve signaling. The condition may also be caused by a tumor or cyst that presses on the sciatic nerve or its roots.

Spondylolisthesis is a condition in which a vertebra of the lower spine slips out of place, pinching the nerves exiting the spinal column.

A traumatic injury, such as from playing sports, car accidents, or a fall can injure tendons, ligaments, or muscle resulting in low back pain. Traumatic injury may also cause the spine to become overly compressed, which in turn can cause an intervertebral disc to rupture or herniate, exerting pressure on any of the nerves rooted to the spinal cord. When spinal nerves become compressed and irritated, back pain and sciatica may result.

Spinal stenosis is a narrowing of the spinal column that puts pressure on the spinal cord and nerves that can cause pain or numbness with walking and over time leads to leg weakness and sensory loss.

Skeletal irregularities include scoliosis, a curvature of the spine, subluxations, in the lumbar spine and/or sacroiliac joints, a short leg, age, heredity (congenital anomalies) of the spine.

Interventional Chiropractic Care

Certainly evaluation by a Doctor of Chiropractic and might include spinal X-rays. This is especially so in that there may be not only the possible existence of spinal curvature, spinal disc issues, pelvic malalignment, leg length deficiency's. And muscle ligamentous issues that interventional chiropractic care could solve.

Nutritional Supplementation Options for Low Back Pain / Disc Injury / Degenerative Disc Disease / Intervertebral Disc Disease.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), nor imply diagnosis, treatment, cure or prevent spine or spinal disc problems. Similarly a Doctor of Chiropractic that includes whole person health and wellness care and Touch For Health Applied Kinesology Muscle Response Test will have expertise in giving counsel.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

For a one-product approach for mild symptoms:

- **Wellness Essentials® Active.**

Moderate to Severe

- **Chondro Jointaide.**

- **Kaprex®**

If outer annulus is compromised consider adding:

- **Cal-Apatite® Bone Builder® Forte.**

- **MyoCalm®.**

Dietary Considerations••

Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale

For a one-product approach for mild Low Back Pain / **Wellness Essentials® Active**

Wellness Essentials Active is formulated to target your unique nutritional needs to help you stay active, vital, and maintain overall health. In one packet, you receive PhytoMulti™, t. Each once-daily packet provides:

- Multifaceted health support: **PhytoMulti™** (1 tablet) is the “smart multi” with essential nutrients and a proprietary blend of 13 concentrated extracts and phytonutrients to help protect cells and maintain DNA stability—activating health potential like no other supplement.
- Joint relief: **Kaprex®** (1 tablet) provides a safer option for effective joint relief with a proprietary combination of selected plant components.
- Joint health support: **ChondroCare®** (3 tablets) is a comprehensive formula designed to provide broad connective tissue support with glucosamine, chondroitin, methylsulfonylmethane (MSM), and other nutrients.
- Healthy cartilage and disc support: **Glucosamine Sulfate 750™** (1 tablet) helps support healthy joints and other connective tissues by providing additional glucosamine, a naturally occurring compound in all connective tissues.

greater purity.

Moderate to Severe

- Vitamin C (as manganese ascorbate)
- Manganese (as manganese ascorbate)
- D-Glucosamine HCl.
- Chondroitin Sulfate
- Green Lipped Mussel (Perna canaliculus) Powder
- MSM (methylsulfonylmethane)
- Ginger (Zingiber officinale) Root Extract Powder
[standardized to 5% gingerols and 6-shogaols]
- Turmeric (Curcuma longa) Root Extract
[standardized to 95% curcuminoids]
- Boswellia (Boswellia serrata) Gum Extract [standardized to 30% acetyl-11-keto-beta boswellic acid (AKBA).
- Hyaluronic Acid (low molecular weight)
- Black Pepper (Piper nigrum L) Fruit
Extract [standardized to 95% piperine].

Kaprex®

Kaprex is formulated to provide a safer option for effective inflammation relief. This proprietary combination of selected plant components influences kinase signaling and the formation of certain substances that are associated with minor pain/inflammation. Clinical testing suggests that Kaprex

may offer a high degree of predicted cardiovascular, gastric, renal, and liver safety. If outer annulus is compromised, add:

Cal Apatite® Bone Builder® Forte

Cal Apatite Bone Builder **Forte** provides advanced, bioactive support for healthy bone mineralization with microcrystalline hydroxyapatite concentrate (MCHC)—a calcium-rich, bone-derived supplement that provides a broad spectrum of macro- and trace minerals; Type 1 collagen protein—the intact portion of bone; and bioactive bone growth factors.

Forte features an exclusive, freeze-dried MCHC that ensures higher levels of intact bone growth factors than other MCHC formulas. This unique formula also provides optimized levels of vitamin D for enhanced bone nourishment.

MyoCalm®

MyoCalm is a time-tested, specialized formula that provides bioavailable forms of magnesium and calcium blended with select herbs that support healthy muscle function.

- Supplies important minerals involved in muscular contraction and relaxation responses.
- May help relieve minor muscle pain associated with stress or physical exertion, and may prevent nocturnal leg muscle cramps.
- Features extracts of passionflower and valerian for added relaxation support.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

- 1. Go to www.nutri-dyn.com**
- 2. Click on Create Account**
- 3. Click on Patients**
- 4. Complete the short form and type in the following Account Number 100160**
- 5. Click submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Lung Infections (Bronchitis / Pneumonia)

Breathing is a complex process. If injury, disease, or other factors affect any part of the process, you may have trouble breathing. For example, the fine hairs (cilia) that line your upper airways may not trap all of the germs you breathe in. These germs can cause an infection in your bronchial tubes (bronchitis) or deep in your lungs (pneumonia). These infections cause a buildup of mucus or fluid that narrows the airways and limits airflow in and out of your lungs.

Nutritional Supplementation Options' for Lung Infections (Bronchitis / Pneumonia) but one should not embark on any nutritional approaches without seeking the intervention of a medical doctor. Food supplements can offer viable alternatives but if there is an infection it is best treated with the appropriate prescribed medication in possibly collaboration with appropriate food supplements.

- **Candibactin-AR®.**
- **NAC-600.**
- **Pneumo-Carotene™.**
- **D3 5000** – can be increased higher if indicated by serum analysis.
- Appropriate **Wellness Essentials®** Formula

Nutritional Formula Description & Supplementation Rationale

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

Candibactin-AR® is a blend of concentrated essential oils and herbal extracts from the aromatic mint family in a formula designed to support intestinal microbial balance and proper digestion with the goal of:

- Helping encouraging a healthy environment in the intestinal and respiratory tracts, supports healthy digestive function, and may provide indirect support for intestinal mucosal integrity.
- Designed to harmonize digestive and respiratory function, which traditional herbalists believe is essential for strong immune function.
- Unique softgel encapsulation technology allows the essential oils to be blended with dry leaf extracts of sage and lemon balm—herbs that complement and stabilize the fragile essential oils. Orally, **thyme** seems to help improve symptoms associated with bronchitis including coughing and fever, and increases production of sputum.

Orally, **oregano** is used for respiratory tract infections including influenza, common cold virus, croup, and others. It is also used for respiratory conditions such as cough, asthma, and bronchitis.

Age Leaf (Salvia officinalis) provides support for healthy lung function. Epidemiological research suggests that people who regularly consume sage have a 54% lower risk of developing lung cancer compared to those who do not use sage as a spice.

Lemon Balm (Melissa officinalis) is used orally for chronic bronchial mucous membrane inflammation. Lemon balm seems to have sedative, antioxidant, and antiviral effects.

References

- Ernst, E., Marz, R., & Sieder, C. A controlled multi-center study of herbal versus synthetic secretolytic drugs for acute bronchitis. *Phytotherapy*. 1997;4:287-93.
- Dorman, H. J., & Deans, S. G. Antimicrobial agents from plants: Antibacterial activity of plant volatile oils. *J Appl Microbiol*. 2000;88:308-16.
- Gruenwald, J., Brendler, T., & Jaenicke, C. (1998). PDR for herbal medicines, (1st ed.). Montvale, NJ: Medical Economics Company, Inc.
- Fortes, C., Forastiere, F., Farchi, S., Mallone, S., Trequattrinni, T., Anatra, F., Schmid, G., & Perucci, C. A. The protective effect of the Mediterranean diet on lung cancer. *Nutr Cancer*. 2003;46(1):30-37.

- Santos-Gomes, P. C. & Fernandes-Ferreira, M. Essential oils produced by in vitro shoots of sage (*Salvia officinalis* L.). *J Agric. Food Chem.* 4-9-2003;51(8):2260-2266.
- World Health Organization. (1997). Monographs on the medicinal uses of plant drugs. Exeter, UK: European Scientific Co-op Phytother.

NAC-600

N-acetyl cysteine (NAC) is a form of the amino acid cysteine and a very efficient precursor of the potent antioxidant glutathione, a primary antioxidant throughout the entire body. Glutathione plays an important role in protecting the body against oxidative stress and detoxifying harmful compounds. Preliminary research suggests glutathione may also help protect mitochondria—the principle source of cellular energy—from damaging pro-oxidant influences. N-acetyl cysteine (NAC) is used as a mucolytic agent in acute and chronic lung disorders such as pneumonia, bronchitis, emphysema, cystic fibrosis, and others. The positive effects of NAC have been published in conditions such as:

- Acute Respiratory Distress Syndrome
- Chronic Bronchitis
- Chronic Obstructive Pulmonary Disease (COPD)
- Allergic Rhinitis
- Fibrosing Alveolitis
- Lung Cancer
- In animal models, NAC has shown to attenuate diaphragm fatigue, possibly due to its ability to scavenge free radicals. Evidence indicates NAC might positively impact some aspects of human diaphragm function as well.

Reference

- Key, G. S. Clinical applications of N-acetylcysteine. *Altern Med Rev.* 1998 Apr;3(2):114-27.

Pneumo-Carotene™

Pneumo-Carotene is a scientifically blended formulation that features a broad spectrum of antioxidant nutrients that protect and support lung tissue health.

- Provides balanced antioxidant protection with nutrients such as vitamins C and E and Caroxan™, a proprietary blend of beta-carotene and Betatene® mixed carotenoids.
- Supplies pure, raw bovine lung concentrate (processed below 37oC) that is guaranteed raw so the natural constituents remain intact.

Each tablet supplies:

- **Vitamin A** [9% (1,500 IU) as retinyl palmitate and 90% (15,000 IU) as beta-carotene.16,500 IU
- **Vitamin C** (as ascorbic acid 200 mg
- **Vitamin E** (as d-alpha tocopherol succinate.20 IU
- **Folic Acid.** 200 mcg
- **Selenium** (as selenium aspartate.10 mcg
- **Quercetin.**25 mg
- **Raw Lung Concentrate** (bovine.200 mg

D3 5000

Vitamin D in the most bioavailable form. Vitamin D and Respiratory Infections One randomized controlled trial suggested that vitamin D supplementation reduced acute respiratory tract infections in children during the long, cold, and dark Mongolian winter. Another randomized controlled trial showed that vitamin D reduced symptoms and antibiotic use in a group of patients with an increased frequency of respiratory infections. In infants, cord-blood levels of 25-hydroxyvitamin

D (25[OH]D) are inversely associated with the risk for respiratory tract infection and childhood wheezing. In patients with increased frequency of respiratory tract infections, supplementation with 4000 IU vitamin D3 for 1 year reduced symptoms and antibiotic use, according to findings of a randomized controlled trial published in the BMJ but it is recommended that the person's vitamin D blood levels be monitored regularly.

Références

- Camargo, C. A., Jr, Ganmaa, D., & Frazier, A. L., et al. Randomized trial of vitamin D supplementation and risk of acute respiratory infection in Mongolia. *Pediatrics*. 2012;130:e561-567.
- Bergman, P., Norlin, A. C., & Hansen, S., et al. Vitamin D3 supplementation in patients with frequent respiratory tract infections: A randomized and double-blind intervention study. *BMJ Open*. 2012;13;2:e001663.
- Murdoch, D.R., Slow, S., & Chambers, S. T., et al. Effect of vitamin D3 supplementation on upper respiratory tract infections in healthy adults: The VIDARIS randomized controlled trial. *JAMA*. 2012;308:1333-1339.
- Barclay, L. Cord-blood 25(OH) vitamin D levels inversely related to risk for respiratory infection. *Pediatrics*. Published online December 27, 2010.

Appropriate Wellness Essentials® Formula

Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition.

Lyme Disease

Lyme disease is the most common tick-borne illness in North America and Europe. It is caused by the bacterium *Borrelia burgdorferi* (*B. burgdorferi*). Deer ticks, which feed on the blood of animals and humans, can harbor the bacteria and spread it when feeding. You're more likely to get Lyme disease if you live or spend time in grassy and heavily wooded areas where ticks carrying the disease thrive. It's important to take common-sense precautions in areas where Lyme disease is prevalent. Treatment with appropriate antibiotics in the early stages of the disease may facilitate a complete recovery. In later stages, response to treatment may be slower, but the majority of people with Lyme disease recover completely with appropriate treatment.

Signs and Symptoms

The signs and symptoms of Lyme disease vary and usually affect more than one system. The skin, joints, and nervous system are affected most often.

Early Signs and Symptoms These signs and symptoms may occur within a month after you've been infected:

- **Rash.** A small red bump may appear at the site of the tick bite. This small bump is normal after a tick bite and doesn't indicate Lyme disease. However, over the next few days, the redness may expand forming a rash in a bull's-eye pattern, with a red outer ring surrounding a clear area. The rash, called erythema migrans, is one of the hallmarks of Lyme disease. Some people develop this rash at more than one place on their bodies.
- **Flu-like symptoms.** Fever, chills, fatigue, body aches, and a headache may accompany the rash.

Later Signs and Symptoms

In some people the rash may spread to other parts of the body and, several weeks to months after they've been infected, may experience:

- **Joint pain.** May develop bouts of severe joint pain and swelling. Knees are especially likely to be affected, but the pain can shift from one joint to another.
- **Neurological problems.** Weeks, months, or even years after catching Lyme disease, some people may experience inflammation of the membranes surrounding the brain (meningitis), temporary paralysis of one side of the face (Bell's palsy), numbness or weakness in the limbs, and impaired muscle movement.

Less Common Signs and Symptoms

Several weeks after infection, some people develop:

- **Heart problems,** such as an irregular heartbeat. Heart problems rarely last more than a few days or weeks.
- **Eye inflammation**
- **Liver inflammation** (hepatitis)
- **Severe fatigue**

See a doctor if you've been bitten by a tick and experience symptoms. Only a minority of deer tick bites lead to Lyme disease. The longer the tick remains attached to the skin, the greater the risk of getting the disease. If you think you've been bitten and experience signs and symptoms of Lyme disease—particularly if you live in an area where Lyme disease is prevalent—contact your doctor immediately. Treatment for Lyme disease is most effective if begun early. See your doctor even if symptoms disappear. It is important to consult your doctor even if signs and symptoms disappear because the absence of symptoms doesn't mean the disease is gone. Left untreated, Lyme disease can spread to other parts of your body from several months to years after infection, causing arthritis and nervous system problems. Ticks can also transmit other illnesses, such as babesiosis and Colorado tick fever.

Causes

To contract Lyme disease, an infected deer tick must bite you. The bacteria enter your skin through the bite and eventually make their way into your bloodstream. In most cases, to transmit Lyme disease, a deer tick must be attached for 36 to 48 hours. If you find an attached tick that looks swollen, it may have fed long enough to transmit bacteria. Removing the tick as soon as possible may prevent infection. In the United States, Lyme disease is caused by the bacterium *B. burgdorferi*, which is carried primarily by deer ticks. The ticks are brown and when young, they're often no bigger than the head of a pin, which can make them nearly impossible to spot.

Risk factors

Spending time in wooded or grassy areas.

In the United States, deer ticks are most prevalent in the Northeast and Midwest regions, which have heavily wooded areas where deer ticks thrive. Children who spend a lot of time outdoors in these regions are especially at risk. Adults with outdoor occupations are also at increased risk. In the first two stages of life, deer ticks in the United States feed on mice and other rodents, which are a prime reservoir for Lyme disease bacteria. Adult deer ticks feed primarily on white-tailed deer. Where you live or vacation can affect your chances of getting Lyme disease, as well as your profession and the type of outdoor activities you enjoy. The most common risk factors for Lyme disease include:

- **Having exposed skin.** Ticks attach easily to bare flesh. If you're in an area where ticks are common, protect yourself and your children by wearing long sleeves and long pants. Don't allow your pets to wander in tall weeds and grasses.

- **Not removing ticks promptly or properly.** Bacteria from a tick bite can enter your bloodstream only if the tick stays attached to your skin for 36 to 48 hours or longer. If you remove a tick within two days, your risk of acquiring Lyme disease is low.

Complications

Left untreated, Lyme disease can cause:

- Chronic joint inflammation (Lyme arthritis), particularly of the knee
- Neurological symptoms, such as facial palsy and neuropathy
- Cognitive defects, such as impaired memory
- Heart rhythm irregularities

Tests and Diagnosis

If you don't have the characteristic Lyme disease rash, your doctor may ask detailed questions about your medical history, including whether you've been outdoors in the summer where Lyme disease is common, and do a physical exam. Lab tests to identify antibodies to the bacteria may be used to help confirm the diagnosis. These tests are most reliable a few weeks after an infection, after your body has time to develop antibodies. The various signs and symptoms of Lyme disease are nonspecific and are often found in other conditions, so diagnosis can be difficult. What's more, the ticks that transmit Lyme disease can in some cases spread other diseases at the same time.

Common Tests for Lyme disease include:

- **Enzyme-linked immunosorbent assay (ELISA) test**

The test used most often to detect Lyme disease, ELISA detects antibodies to *B. burgdorferi*. But because it can sometimes provide false-positive results, it is not used as the sole basis for diagnosis. This test may not be positive during the early stage of Lyme disease, but the rash is distinctive enough to make the diagnosis without further testing in people who live in areas infested with ticks that transmit Lyme disease.

- **Western blot test**

If the ELISA test is positive, another test—the Western blot—is usually done to confirm the diagnosis. In this two-step approach, the Western blot detects antibodies to several proteins of *B. burgdorferi*.

- **Polymerase chain reaction (PCR)**

This test helps detect bacterial DNA in fluid drawn from an infected joint. It's not as effective at detecting infection of blood or urine. It is used for people who may have chronic Lyme arthritis. It may also be used to detect persistent infection in the cerebrospinal fluid of people who have nervous system symptoms.

Treatments and Drugs

- **Antibiotics.** Antibiotics are used to treat Lyme disease. In general, recovery will be quicker and more complete the sooner treatment begins.

- **Oral antibiotics.** These are the standard treatment for early-stage Lyme disease. They usually include doxycycline for adults and children 8 and older, or amoxicillin or cefuroxime for adults, younger children, and pregnant or breast-feeding women.

A 14- to 21-day course of antibiotics is usually recommended, but some studies suggest that courses lasting 10 to 14 days are equally effective.

- **Intravenous antibiotics.** If the disease involves the central nervous system, your doctor may recommend treatment with an intravenous antibiotic for 14 to 28 days. This is effective in eliminating infection, although it may take some time to recover from your symptoms. Intravenous antibiotics can cause various side effects, including a lower white blood cell count, mild to severe diarrhea, or colonization or infection with other antibiotic resistant organisms unrelated to Lyme.

Note: If the patient is on an antibiotic protocol for Lyme disease, it is advisable to take a probiotic during and after the antibiotic therapy. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention. Consider:

- **UltraFlora™ Acute Care.** UltraFlora Acute Care features concentrated probiotic factors that are ideal for patients to support a healthy balance of intestinal microflora and healthy intestinal function. After antibiotic treatment, a small number of people still experience some symptoms, such as muscle aches and fatigue. The cause of these continuing symptoms is unknown, and treating with more antibiotics doesn't help. Some experts believe that certain people who get Lyme disease are predisposed to develop an autoimmune response that contributes to their symptoms. More research is needed.

- **Bismacine**

The Food and Drug Administration warns against the use of bismacine, an injectable compound prescribed by some alternative medicine practitioners to treat Lyme disease. Bismacine, also known as chromacine, contains high levels of the metal bismuth. Although bismuth is safely used in some oral medications for stomach ulcers, it's not approved for use in injectable form or as a treatment for Lyme disease. Bismacine can cause bismuth poisoning, which may lead to heart and kidney failure.

Co-administration of Probiotics with Antibiotics

Probiotics, such as *Lactobacillus spp.*, *Bifidobacterium spp.* and *Saccharomyces boulardii* are living microorganisms that confer health benefits on the host. They are taken with food or as capsules/tablets and powder. Probiotics improve antibiotic therapy as they reduce microbial adhesion and growth by bacteriocins or other inhibitory compounds, possess immunomodulatory properties, and improve intestinal barrier integrity. In patients treated with antibiotics, probiotics promote the recovery of commensal microbiota and increase treatment tolerability. Probiotics are a valuable adjunct to antibiotic therapy. *Expert Rev Anti Infect Ther.* 2012;10(4):407-409. © 2012 Expert Reviews Ltd

Prevention

- **Wear long pants and long sleeves.** When walking in wooded or grassy areas, wear shoes, long pants tucked into your socks, a long-sleeved shirt, a hat, and gloves. Try to stick to trails and avoid walking through low bushes and long grass. Keep your dog on a leash. The best way to prevent Lyme disease is to avoid areas where deer ticks live, especially wooded, bushy areas with long grass.

- **Use insect repellents.** Apply an insect repellent with a 20 percent or higher concentration of DEET to your skin. Parents should apply to their children, avoiding their hands, eyes, and mouth. Keep in mind that chemical repellents can be toxic, so follow directions carefully. Apply products with permethrin to clothing or buy pretreated clothing.

- **Do your best to tick-proof your yard.** Clear brush and leaves where ticks live. Keep woodpiles in sunny areas.

- **Check yourself, your children, and your pets for ticks.** Be especially vigilant after spending time in wooded or grassy areas. Deer ticks are often no bigger than the head of a pin, so you may not discover them unless you search carefully. It's helpful to shower as soon as you come indoors.

Ticks often remain on your skin for hours before attaching themselves. Showering and using a washcloth may be enough to remove any unattached ticks.

- **Don't assume you're immune.** Even if you've had Lyme disease before, you can get it again.
- **Remove a tick as soon as possible with tweezers.** Gently grasp the tick near its head or mouth. Don't squeeze or crush the tick, but pull carefully and steadily. Once you've removed the entire tick, dispose of it and apply antiseptic to the bite area.

Nutritional Supplementation Options for Lyme Disease

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors, make a diagnosis treatment, imply cure or prevention(s).

Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

There are several major tenets to be addressed in Lyme Disease:

1. Reducing inflammation in the body
2. Supporting the immune system and addressing biofilms and / or co-infections
3. Preventing candida and supporting healthy digestive function
4. Supporting detoxification

- **Liposomal Biocidin® LSF.**

- **UltraInflamX® Plus 360.**

- **D3 5000™** need should be documented by the serum vitamin D test.

- **ImmuCore™.**

- **Andrographis Plus®.**

- **Cat's Claw (Uña de Gato).**

- Appropriate **Wellness Essentials®** formula.

Dietary Considerations

- Anti-Inflammatory Diet Program

Nutritional Formula Description & Supplementation Rationale

Liposomal Biocidin® LSF

Liposomes are microscopic single to multi-layer spheres made of phospholipids, the basic building blocks of cell membranes. Liposomes demonstrate the ability to cross the blood-brain barrier, deposit their cargo intracellularly, and enhance lymphatic circulation of therapeutic compounds.

(Liposomal delivery of the broad-spectrum Biocidin combination as specialized nutritional support.) Lyme disease is on the rise, and in chronic Lyme disease and other neurological conditions, treatment is often more challenging, as pathogens can hide in the central nervous system or other fatty tissues, and may be part of a biofilm matrix. In Lyme, not only are the *Borrelia burgdorferi* spirochetes present, other co-infections such as *Babesia* are common.

University research continues with Biocidin in addressing biofilm encapsulated infections, and a preliminary study in Finland shows a reduction in Lyme biofilms.

UltraInflamX® Plus 360

UltraInflamX Plus 360 is formulated to provide multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation.

D3 5000™

D3 5000 features 5000 IU of vitamin D3—the most bioavailable form of vitamin D. Vitamin D Deficiency is associated with impaired immune response.

ImmuCore™

ImmuCore is designed to provide a multiple-mechanistic approach to support healthy immune system function through enhancing activities of macrophages, natural killer cells, and T cell subsets.

Andrographis Plus®

Andrographis Plus is “Aggressive Herbal Immune Support” that provides a proprietary blend of Ayurvedic and Asian herbs designed to promote healthy immune function.

Cat’s Claw (Uña de Gato)

Cat’s claw is classically used orally for viral and bacterial infections. The major alkaloid of cat’s claw is rhynchophylline. Cat’s claw stimulates production of colony-stimulating factors, interleukin-1 (IL-1) and IL-6, and increases myelopoiesis in animal models. Cat’s claw increases several white blood cells, including B and T lymphocytes, natural killer (NK) cells, and granulocytes. There is also interest in cat’s claw for cancer and viral infections because some of its constituents seem to have antioxidant, immunostimulant, and antiviral/antibacterial effects. These constituents include quinovic acid alkaloids and the alkaloids pteropodine and isopteropodine. Extracts of cat’s claw also might have antimutagenic activity.

Appropriate Wellness Essentials® formula

Wellness Essentials is a combination of Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

Macular Degeneration

Macular degeneration is a painless, degenerative eye disease that affects more than 10 million Americans. It is the leading cause of legal blindness in persons over the age of 55 in the United States. While complete blindness does not occur in most people with the disorder, macular degeneration often interferes with reading, driving, or performing other daily activities. There are two forms of macular degeneration:

- **Dry macular degeneration** affects about 90% of those with the disease and causes gradual loss of central vision, initially only in one eye.
- **Wet macular degeneration**, which accounts for 90% of all severe vision loss from the disease, involves a very sudden loss of central vision.

Signs & Symptoms

Macular degeneration is accompanied by the following signs and symptoms:

- Slightly blurred vision
- **Dry type:** a blurred spot in the central field of vision, which may become larger and darker

•• **Wet type:** straight lines that appear wavy and the rapid loss of central vision; sometimes, wet macular degeneration starts with a sudden blind spot

What Causes It?

Dry macular degeneration occurs from the breakdown of the light sensitive cells in the center of the retina, called the macula. Wet macular degeneration occurs when new blood vessels behind the retina grow toward the macula and leak blood and fluid.

Who's Most At Risk?

People with the following conditions or characteristics are at risk for developing macular degeneration:

- Age – the risk increases with age
- Cigarette smoking
- Family history of macular degeneration
- Cardiovascular disease
- Elevated levels of cholesterol
- Light eye color
- Excessive exposure to sunlight
- Fréquent aspirine use de Jong, P., et al. Frequent aspirin use ed with early and wet late AMD (Age-Related Macular Degeneration). *Ophthalmology*. 2012;119:112-118.

Nutrition

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Antioxidants that protect your retina—such as carotenoids, selenium, zinc, and vitamins C and E—may either delay the progression of macular degeneration if you already have the eye condition (meaning that your vision won't get worse as quickly) or prevent the development of this serious eye disorder. Two particular carotenoids, lutein and zeaxanthin, may be particularly beneficial. Antioxidants can be obtained from foods or supplements. Eating a diet high in vitamins C and E and carotenoids is likely all that you need to lower your chances of developing macular degeneration in the first place. (In other words, supplements are probably not necessary for prevention.) Vegetables rich in carotene include orange and yellow squash and dark, leafy greens such as kale, collards, spinach, and watercress.

Nutritional Supplementation Considerations

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- Appropriate **Wellness Essentials®** Formula — 1 packet daily with food.
- **D3 5000** if indicated by serum analysis.
- **Eye Pro-M.**

In severe macular degeneration, consider adding:

•• **Lutein.**

Dietary Considerations

•• *FirstLine Therapy*® Diet / Mediterranean Diet (See “Fighting Vision Loss with Food - The Impact of Vision Loss” below.)

Nutritional Formula Description & Supplementation Rationale

Appropriate Wellness Essentials® Formula

Key Vitamins & Minerals, Essential Fatty Acids, PLUS Patient Specific Nutrition. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

“Regular consumption of omega-3 fatty acids is associated with a significantly reduced risk for the development of age-related macular degeneration.” March 14, 2011 in the *Archives of Ophthalmology*

D3 5000

Higher vitamin D blood levels appear to be associated with a decreased risk for the development of early age-related macular degeneration (AMD). April, 2011 issue of the *Archives of Ophthalmology* Eye Pro-M. Nutritional Support for Macular Health. Several research studies show that the antioxidant properties of vitamins C and E may protect against the development and progression of advanced macular degeneration (AMD). Three published studies demonstrated the efficacy of adding vitamin A for slowing decline in visual acuity. Of the 600 carotenoids in nature, lutein and zeaxanthin are the only two found in high quantities in the retina (macula) of the eye. Early evidence also suggests that lutein and zeaxanthin, which are also antioxidants, may also be protective against AMD. Given the positive association between nutrition and macular degeneration, it seems prudent for people to increase the amount of certain antioxidants in their daily diet.

Lutein

Lutein, a yellow pigment carotenoid is found mainly in the macula of the eye, where it is strongly implicated in maintaining eye health. The macula is a spot in the back of the retina which is responsible for sharpness of vision. Lutein has been shown to reduce the risk of age-related macular degeneration and age-related cataracts, also as a carotenoid it functions as an antioxidant which inhibits oxidation of lipids.

Zeaxanthin

Like lutein, zeaxanthin is contained within the retina. Whereas lutein predominates in the peripheral retina, zeaxanthin is the dominant component in the central macula. Zeaxanthin may be a better photoprotector than lutein, but its protective role might have been obscured because investigations usually studied both carotenoids together.[10] The major dietary sources of zeaxanthin are corn, spinach, collard greens, lettuce, and tangerines. A recent study showed that the effect on macular pigment level did not differ whether lutein and zeaxanthin intake came from plant sources or dietary supplements.[11]

Fighting Vision Loss with Food — The Impact of Vision Loss

Vision loss on a grand scale would have a far-reaching impact on society. Yet, if we continue in the direction we are headed now, we could be facing a future in which a large segment of the

population suffers vision loss from diseases such as age-related macular degeneration (AMD), cataracts, glaucoma, and diabetic retinopathy. Vision loss, in turn, is a key reason for loss of independence in the elderly. Certainly, improved methods of diagnosing and treating age-related eye disease can obviate some of the vision loss that would otherwise cripple millions of older adults. Prevention, however, is not only cheaper but likely to be far more effective in averting such a tragedy.

Prevention Is the Key

How can healthcare providers motivate patients to take steps to prevent age-related eye disease? A recent survey[1] found that baby boomers (born between 1945 and 1964) fear vision loss almost as much as they fear heart disease or cancer. Still, almost half do not receive an annual eye exam, and few are knowledgeable about how dietary factors influence eye health.[2] Furthermore, supplement use to promote eye health is low, even in patients already diagnosed with age-related eye disease.[2] Eye care providers, primary care providers, and specialists in diabetes can point to a burgeoning body of research to convince their patients to increase their dietary intake of key nutrients.

AREDS & AREDS2

The Age-Related Eye Disease Study (AREDS), sponsored by the National Eye Institute, was a landmark study[3] that established AMD as a “nutrition-responsive disorder.” This large randomized controlled trial showed a 25% reduction in risk for progression to advanced AMD in high-risk patients who took a combination of antioxidant vitamins (vitamins C and E), beta-carotene, zinc, and copper. AREDS2 is now underway to establish the benefits of xanthophylls and omega-3 fatty acids, and initial results are expected in 2013. Supplement manufacturers aren’t waiting, however. Formulations of AREDS2 have already joined AREDS supplements on the drugstore shelves.

Zinc

Zinc is an effective antioxidant and anti-inflammatory mineral, and it was included in the AREDS study.[3] Participants were randomly assigned to receive oral supplements of high-dose antioxidants, zinc, antioxidants plus zinc, or placebo. The only statistically significant reduction in rates of at least moderate visual acuity loss occurred in persons assigned to receive antioxidants plus zinc. Patients with AMD or cataract had lower survival, but survival was higher in patients taking zinc.[12] High doses of zinc can lead to copper deficiency anemia, so copper has been added to AREDS formula supplements. Good dietary sources of zinc include oysters, crab, toasted wheat germ, veal liver, low-fat roast beef, mutton, pumpkin seeds, dark chocolate, and peanuts.

Omega-3 Fatty Acids

An important functional role for the essential fatty acid docosahexaenoic acid (DHA) is suggested by its high concentration in the retina. Prospective data from a large cohort of female health professionals without AMD at baseline indicate that regular consumption of omega-3 fatty acids and fish is associated with a significantly lower risk for AMD and may be of benefit in primary prevention of AMD.[13] The AREDS2 study is evaluating the effect of omega-3 fatty acids on progression to advanced AMD. Dietary omega-3 fatty acids have also been shown to control the symptoms of dry eye syndrome.[14] Omega fatty acids can be acquired through higher consumption of fatty fish (salmon, tuna, mackerel, sardines) or through omega-3 fatty acid supplements in the form of oil or capsules.

Vitamin E

It has been suggested that vitamin E, like other antioxidants, might have a role in preventing, slowing progression of, or improving macular degeneration. However, the evidence is inconclusive. Studies have not shown a benefit of vitamin E supplementation in reducing the development or progression of either AMD[15] or cataracts.[16] However, a combination of vitamin E and other nutrients (a 400 IU/day intake of vitamin E plus beta-carotene, vitamin C, and zinc) slows the progression of advanced AMD. Vitamin E is more difficult to obtain from food sources alone because it is found in very small quantities in foods. Dietary sources of vitamin E include fortified cereals, wheat germ, sunflower seeds, and vegetable oils.

Vitamin C

Vitamin C (500 mg) was also included in the AREDS formulation that reduced the risk for progression to advanced AMD. An antioxidant found in fruits and vegetables, vitamin C may have a role in lowering risk for cataracts and, when taken in combination with other essential nutrients, can slow the progression of AMD and visual acuity loss. Independent effects of vitamin C on eye health are inconclusive. In a large-scale, randomized trial of physicians, daily use of 500 mg of vitamin C for 8 years had no appreciable beneficial or harmful effect on risk for incident diagnosis of AMD.[17]

Flavonoids

Natural flavonoids are believed to have a role in the prevention of cataracts. Flavonoids efficiently influence the multiple key molecular mechanisms involved in cataract formation and lens opacification, including oxidative stress, lens calpain proteases, epithelial cell signaling, nonenzymatic glycation, and the polyol pathway.[18] The flavonol quercetin is the most widely consumed flavonoid in the human diet, found in apples, tea, onions, nuts, and berries.

Beta-carotene

Beta-carotene is a carotenoid that is active in the prevention of free radical formation. To determine the effects of a carotenoid on the development of AMD, beta-carotene was included in the original AREDS formula because lutein and zeaxanthin were not yet commercially available. However, beta-carotene is not present in the retina, so any beneficial effects of the combination of nutrients are unlikely to be related to beta-carotene. In a large population of healthy men, beta carotene supplementation had no beneficial or harmful effect on the incidence of AMD.[19]

References

1. *Ocular Nutrition Society. Baby boomers value vision more than any other sense but lack focus on eye health. October 24, 2011. <http://www.ocularnutritionssociety.org/boomers> Accessed October 14, 2012.*
2. *Hochstetler, B. S., Scott, I. U., Kunselman, A. R., Thompson, K., & Zerfoss, E. Adherence to recommendations of the age-related eye disease study in patients with age-related macular degeneration. Retina. 2012;30:1166-1170.*
3. *Age-Related Eye Disease Study Research group (AREDS Report No. 8): A randomized, placebo controlled, clinical trial of high-dose supplemented with vitamins C and E, beta-carotene, for age-related macular degeneration and vision loss. Arch Ophthalmol. 2001;119:1417-1436.*
4. *Bernstein, P. S., Zhao, D. Y., Wintch, S. W., Emakov, I. V., McClane, R. W., & Gellermann, W. Resonance Raman measurement of macular carotenoids in normal subjects and in age-related macular degeneration patients. Ophthalmology. 2002;109:1780-1787.*
5. *Kijlstra, A., Tian, Y., Kelly, E. R., & Berendschot, T. T. Lutein: More than just a filter for blue light. Prog Retin Eye Res. 2012;31:303-315.*
6. *Chakravarthy, U., Beatty, S., & Stevenson, M. CARMA study group. Functional and morphological outcomes in the CARMA clinical trial. Program and abstracts of the Association*

for Research in Vision and Ophthalmology 2009 Annual Meeting; May 3-9, 2009; Ft. Lauderdale, Florida. Abstract 1257.

7. Chiu, C. J., & Taylor, A. Nutritional antioxidants and age-related cataract and maculopathy. *Exp Eye Res.* 2007;84:229-245.

8. Christen, W. G., Liu, S., Glynn, R. J., Gaziano, J. M., & Buring, J. E. Dietary carotenoids, vitamins C and E, and risk of cataract in women: A prospective study. *Arch Ophthalmol.* 2008;126:102-109.

9. Perry, A., Rasmussen, H., & Johnson, E. J. Xanthophyll (lutein, zeaxanthin) content in fruits, vegetables, and corn and egg products. *J Food Compos Anal.* 2009;22:9-15.

10. Gale, C. R., Hall, N. F., Phillips, D. I., & Martyn, C. N. Lutein and zeaxanthin status and risk of age-related macular degeneration. *Invest Ophthalmol Vis Sci.* 2003;44:2461-2465.

11. Graydon, R., Hogg, R. E., Chakravarthy, U., Young, I. S., & Woodside, J. V. The effect of lutein- and zeaxanthin-rich foods v. supplements on macular pigment level and serological markers of endothelial activation, inflammation, and oxidation: Pilot studies in healthy volunteers. *Br J Nutr.* 2012;108:334-342.

12. Age-Related Eye Disease Study Research. AREDS Report No. 13: Association of mortality with ocular disorders and an intervention of high dose anti-oxidants and zinc in the age-related eye disease study. *Arch Ophthalmol.* 2004;122:716-726.

13. Christen, W. G., Schaumberg, D. A., Glynn, R. J., & Buring, J. E. Dietary omega-3 fatty acid and fish intake and incident age-related macular degeneration in women. *Arch Ophthalmol.* 2011;129:921-929.

14. Brignole-Baudouin, F., Baudouin, C., & Aragona, P., et al. A multicentre, double-masked, randomized, controlled trial assessing the effect of oral supplementation of omega-3 and omega-6 fatty acids on a conjunctival inflammatory marker in dry eye patients. *Acta Ophthalmol.* 2011;89:e591-597.

15. Taylor, H. R., Tikellis, G., Robman, L. D., McCarty, C. A., & McNeil, J. J. Vitamin E supplementation and macular degeneration: Randomized controlled trial. *BMJ.* 2002;325:11.

16. McNeil, J. J., Robman, L., Tikellis, G., Sinclair, M. I., McCarty, C. A., & Taylor, H. R. Vitamin E supplementation and cataract: Randomized controlled trial. *Ophthalmology.* 2004;111:75-84.

17. Christen, W. G., Glynn, R. J., & Sesso, H. D., et al. Vitamins E and C and medical record-confirmed age-related macular degeneration in a randomized trial of male physicians. *Ophthalmology.* 2012;119:1642-1649.

18. Stefek, M. Natural flavonoids as potential multifunctional agents in prevention of diabetic cataract. *Interdiscip Toxicol.* 2011;4:69-77.

19. Christen, W. G., Manson, J. E., & Glynn, R. J., et al. Beta carotene supplementation and age-related maculopathy in a randomized trial of US physicians. *Arch Ophthalmol.* 2007;125:333-339.

Mitral Valve Prolapse (MVP)

Mitral Valve

The left atrioventricular valve (Mitral valve), the valve between the left atrium and the left ventricle of the heart; it is composed of two cusps, anterior and posterior. Also called the bicuspid valve.

Mitral Valve Prolapse (MVP) is a condition in which some portion of the mitral valve is pushed back too far during ventricular contraction. For reasons are not fully understood (there is no evident disease process), there is redundant tissue on one or both leaflets of the valve. The

prolapsed portion of the valve causes a clicking sound at the end of ventricular contraction. This sound is followed by a systolic murmur as blood is regurgitated back through the mitral valve and into the left atrium. The condition is, therefore, also known as the clickmurmur syndrome.

Echocardiography

Echocardiography can demonstrate the mitral valve as it prolapses into the left atrium. Another name for MVP is Barlow's syndrome, after the physician who in 1968 first associated the phenomenon with some potentially serious complications, such as infective endocarditis, transient ischemic attack, and arrhythmia. However, in the vast majority of persons in whom MVP can be detected by auscultation, there are no other symptoms and the condition is so benign as to require no treatment. MVP is found in persons of all ages and is fairly common. The few who have problems usually experience some chest pain, dyspnea (shortness of breath), palpitations, and fatigue.

Syncope (temporary loss of consciousness) and anxiety also occur, though less commonly. Many patients become less anxious when they understand the difference between MVP and coronary heart disease. Electrocardiographic studies may show some premature ventricular contractions (PVCs) but unlike those in coronary heart disease, the PVCs are not harmful nor do they indicate injury to the heart muscle. Long-term effects of MVP have not been thoroughly documented owing to the relatively short time that it has been recognized as a disease entity. There are sufficient data to show that almost all persons with MVP can lead normal and full lives.

Review Article - Magnesium deficiency

As we look at some nutritional information regarding MVP keep in mind that MVP has an organic basis therefore as potentially positive as this information might be one with MVP should never ignore the medical doctor's advice nor stop taking any prescribed medications. And if a person is contemplating taking any nutritional supplement they likewise should first consult with their medical doctor.

The histopathology, somatic morphology, and genetics of MVP

The histopathology, somatic morphology, and genetics of MVP support the leading theory that it results from a hereditary disorder of connective tissue. Latent tetany due to chronic magnesium deficit occurs in over 85% of cases, and MVP complicates 26% of cases of latent tetany.

Magnesium deficiency hinders the mechanism by which fibroblasts degrade defective collagen, increases circulating catecholamine's, predispose to arrhythmias, thromboembolic phenomena and dysregulation of the immune and autonomic nervous system; magnesium therapy relieves MVP symptoms. Galland, L. D., et al. Magnesium deficiency in the pathogenesis of mitral valve prolapse. *Magnesium*. 5(3-4):165-74, 1986.

Magnesium Monitoring. Because of the importance of magnesium monitoring of it should be included in their Chem Screen and CBC blood tests should be

Experimental Study

400 children with MVP aged 8-16 received CoQ-10 0.6-3.4 mg/kg/day. CoQ-10 was found to be definitely effective for symptomatic MVP and improved stress-induced cardiac dysfunction if the appropriate dose was given. No side effects were noted. When the supplement was withdrawn, symptoms returned. Rapid normalization could be usually achieved in 1 week on doses of 3.0-3.4 mg/kg/day, with gradual decreases to a patient-dependent stabilization dose. Oda, T. Effect of coenzyme Q10 on stress-induced cardiac dysfunction in paediatric patients with mitral valve prolapse: A study by stress echocardiography. *Drugs Exp Clin Res*. 11(8):557-76, 1985.

Nutritional Supplementation Considerations for Mitral Valve Prolapse (MVP)

Note: As we review the following information we do not do so with any intent to discourage you from following your medical doctor's recommendations. Secondly if you are contemplating involving yourself in any of the following natural food supplement options make sure that you first discuss them with your medical doctor. They are not intended to replace any prescribed medications.

•• **Mag Glycinate.**

•• **CoQ10 Ubiquinol 100.**

Dietary Considerations

FirstLine Therapy® Diet, a modified Mediterranean-style, low glycemic load diet

Drink Fluids: water, water, water. Try at least 2 quarts per day. Make sure your water source is pure. Lead, mercury, and other toxic substances have been ed with many health issues.

Diet in General: It is helpful to avoid high fat foods and sugar. Complex Carbohydrates are essential for high energy. Convenience foods are a problem because they normally will not meet the nutrition requirements and contain large amounts of additives and salt. Fruits and veggies are really best. Use raw foods in salads on a regular basis or use them for munchies. Don't skip breakfast! Establish a regular eating schedule. This will help you avoid the ups and downs of energy levels. Supplementing is a good way to support healthy nutrition. Your body requires a good balance of a wide variety of nutrients, as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.

Alcohol and caffeine should be seriously avoided. The autonomic nervous system of a person with MVP is considered extremely sensitive to these things. Caffeine is a major issue. It will give you a sudden boost of adrenalin and then a sharp drop. It is addicting and many people will get headaches when attempting to withdraw. Remove from the diet gradually. Eliminating caffeine could mean an increase of energy and a stabilizing effect on the autonomic nervous system. Soft drinks, chocolate, coffee, tea, wine, liquors, even some medications have been known to increase symptoms.

Sugar is not recommended for people with MVP. The response to sudden increase in blood sugar causes an increase in insulin and then a sudden drop—lower than before the sugar intake. This is called a “Roller Coaster” type effect. If you are addicted to sugar and don't get it, it may result in a sense of feeling bad with irritability and loss of sleep. Remember that natural sweeteners like honey have the same effect as sugar. Try to work through withdrawal, and in a couple of weeks energy levels will increase. If you must have sugar, keep intake to very small amounts and only on rare occasion. Stevia may be of interest to you since it is a sweet herbal supplement found in powder and liquid that mixes well with foods, drinks, and baked goods.

Fats: Some women with MVP might have tenderness and swelling in breasts right before menstrual periods. Reduce dietary fat and caffeine. This has been reported by Lyn Frederickson, M.S.N. to assist greatly with the symptoms. Use of cold-pressed virgin olive oil is preferable. It makes a nice spread with garlic or on salads. Try mixing half butter and half olive oil. Avoid heating oils as this destroys vitamin E.

Sodium is necessary for proper bodily functions. Not getting enough salt seems to be a rare problem. Dr. Balch, M.D. is one of the authors of Prescriptions for Nutritional Healing. This book states that we need less than 500 milligrams of sodium a day to stay healthy. Excessive intake can cause fluid to be retained and may aggravate many medical disorders. Processed foods often contain excessive amounts of sodium. The key is read the label of things your contemplating

purchasing. There in fact are many manufactures of foods that are low in sodium and still taste good.

Nutritional Formula Description & Supplementation Rationale

The Encyclopedia of Natural Medicine says that research shows 85% of patients with this ailment have chronic magnesium deficiency and that supplementation is helpful for improvements in heart function. It also states that research with CoQ10 in treating this and other heart disease is even more impressive.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

CoQ10 Ubiquinol 100

Stabilized, highly absorbable coenzyme Q10 in the ubiquinol form for enhanced delivery and maximum absorption. CoQ10 was found to be effective for symptomatic MVP and improve stress-induced cardiac dysfunction.

Mag Glycinate

Mag Glycinate, available exclusively from Metagenics, is a fully reacted amino acid chelate produced by a unique, patented process that is designed to enhance absorption and intestinal tolerance of magnesium. Magnesium appears to play an important role in the pathogenesis of mitral valve prolapse.

Mouth / Lip Conditions — Angular Stomatitis and Cheilosis

Angular Stomatitis is characterized by redness, cracking, and flaking at corners of mouth.

Significant if bilateral only. (Rule out poor dentures, syphilis, herpes.)

Cheilosis is a condition of the lips characterized by chapping, fissuring (and sometimes a burning sensation), inflammation of the mucus membranes of the lips, and the loss of the clear differentiation between the mucocutaneous border of the lips.

Nutritional Supplementation Considerations for Mouth / Lip Conditions —

Angular Stomatitis and Cheilosis

- **Glycogenics®.**
- **Lipotain®.** . If iron deficiency is indicated by serum testing, add:
- **Hemagenics®.**

Dietary Considerations

- *FirstLine Therapy®* Diet / Mediterranean-type diet

Nutritional Formula Description & Supplementation Rationale

Glycogenics®

Glycogenics is an advanced balanced B-complex formula that features a blend of B vitamins and complementary nutrients.

- Promotes healthy homocysteine metabolism, energy levels, and a healthy stress response.
- Supports normal growth and development.

Lipotain®

Lipotain provides a sustained-release form of niacin that is effective without the uncomfortable side effects associated with conventional niacin, such as flushing.

- Designed to deliver two scientifically supported nutritional factors for promoting healthy blood lipid levels.
- Provides a sustained-release form of niacin that is effective without the uncomfortable side effects associated with conventional niacin, such as flushing.

Hemagenics®

Hemagenics is a highly specialized hematinic formula comprised of highly absorbable iron, succinic acid, glycine, folic acid, and vitamins B6 and B12.

- Supports the formation and maintenance of healthy red blood cells.
- Provides iron as a mineral amino acid chelate that is designed to be non-constipating in most individuals.

Multiple Sclerosis (MS)

Nearly 350,000 Americans are affected by one of medicine's most misunderstood diseases, multiple sclerosis. Although there is no known cure, alternative medicine has recognized a number of contributing factors. Often, the early detection and identification of underlying causes combined with strict dietary and lifestyle guidelines can stabilize or reverse the symptoms.

Effects The Central Nervous System. Multiple sclerosis (MS) affects the central nervous system and usually occurs in early adult life. Normally, nerve fibers are surrounded by a layer of insulation called myelin. MS results when the nerve fibers of the central nervous system develop multiple patches of demyelination (removal of the myelin sheath) that is imparted in part related to human biocrobism that live in the intestines and in effect are bacteriocidal that are destined to stimulate antibody's produce exotoxins (Leukocytes).

Strips Away The Myeline Sheet. For example in the situation of MS the person's immune system reacts against the nervous system where it causes a stripping away of the myeline sheet (the sheet that covers nerves). When that's the situation nerve transmission is disrupted, leading to feelings of pins and needles in the hands and feet, numbness, loss of balance, clumsiness, sensitivity to heat and cold, blurred or double vision, and difficulty walking. Patrick Kingsley, M.D. of Leicestershire, England, a specialist in nutrition and environmental medicine who has treated over two thousand multiple sclerosis patients, states that, “

Physical Limitations. In advanced stages of MS, walking becomes more difficult, movements become more spastic, arms and hands may become weak, speech can become slurred, and chronic urinary urgency or incontinence may develop. Fatigue, one of the 'silent' and most disabling symptoms of multiple sclerosis, may render even the smallest tasks difficult.” Dr. Kingsley adds, “Although the stereotype of an MS sufferer is that of a person in a wheel chair, many people with MS are able to walk and continue working. The disease can be benign, with a few minor attacks spread over many decades, or deterioration can be rapid. Most cases fall somewhere between these extremes.” Multiple sclerosis is often described as a relapsing/remitting disease, where attacks are followed by remission, leaving the MS sufferer worse off than he was before the exacerbation. Because no two cases of MS are identical, the severity of attacks and the state of health following a remission period differs from patient to patient. Unless steps are taken to slow or halt the disease, patients with MS will probably become progressively worse.

Etiology

Multiple Sclerosis is Considered an Autoimmune Disease. The term *autoimmune disease* refers to a varied group of more than 80 distinct, chronic illnesses in which the underlying problem is similar—the body's immune system is misdirected, attacking the body tissues it was designed to protect. Autoimmune disease can affect any system, organ, or tissue in the body, including the

gastrointestinal (GI), nervous, and endocrine systems as well as the eyes, blood, blood vessels, and skin and other connective tissues. Most cases of MS begin between 20 and 40 years of age, and rarely after 50. Females are affected slightly more than males. MS seems to be a disease of temperate latitudes, in either the Northern or Southern Hemispheres, and is rarely seen in equatorial regions.

Characteristic Lesions

The characteristic lesion in MS is one of patchy demyelination of the myelin sheaths in the CNS, particularly in the white matter. Alternative medicine regards MS as a complex, multi-factorial disease involving several causes. When these causes are addressed, the symptoms may be alleviated or even reversed.

Signs & Symptoms

The disease is much noted by its apparently random exacerbations and remissions. As the disease progresses, the remissions become less complete and permanent deficit is apparent. Onset is almost always insidious. Symptoms are vague and the diagnosis is often missed in the early stages.

- Optic neuritis: partial or total loss of vision in one eye with pain on moving that eye
- Diplopia and other visual disorders
- Tic doloureux in a young person
- Ataxic gait (Unintended and uncoordinated body movements)
- Tingling or tightness in the extremities
- Bladder dysfunction: urgency, hesitancy, etc.
- Depression, apathy, lack of judgement, hysteria
- Increased deep reflexes, (+) Babinski
- Charcot's triad: In advanced disease: nystagmus, intention tremor, and scanning speech
- Others specific to the individual

Dietary & Nutritional Deficiencies

People with multiple sclerosis typically have nutritional deficiencies. Studies show that essential fatty acids, the building blocks of the brain and nervous system, are lacking in many MS patients. Multiple sclerosis is most common in Western countries where people consume large amounts of meats, dairy products, processed foods—all foods low in essential fatty acids; and is least common in countries where diets are high in unsaturated fats, including seed oils, olive oil, oily fish, fresh fruits, and vegetables—all foods high in essential fatty acids. The connection with saturated fat intake was first noted in 1950 by Roy Swank, M.D. of Oregon Health Sciences University in Portland, Oregon, and has been confirmed in more recent studies. Stephen Davies, B.M., B.Ch., who runs the Biolab Medical Unit in London, England, has found that even with a balanced diet.

MS patients have difficulty absorbing essential nutrients. Although these differ from person to person, says Dr. Davies, the most common deficiencies are B1, B6, B12, magnesium, zinc, folic acid, amino acids, manganese, selenium, as well as essential fatty acids therefore regular monitoring blood studies should be conducted. Similarly Touch For Health Applied Kinesology Muscle Response Test and IgG and IgG4 Food Sensitivity Test should be conducted. In a study presented at the 67th American Academy of Neurology (AAN) Annual Meeting on April 18-25, 2015 (Abstract 3163):

Compared with healthy controls, women with multiple sclerosis (MS) were found to have lower levels of folate, magnesium, vitamin E, and other nutrients that may have important anti-inflammatory or antioxidant properties. The analysis focused on intake of five nutrients:

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following

nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- **Folate:** This water-soluble B vitamin found naturally in foods such as beans and lentils helps make red blood cells.

- **Magnesium:** A mineral found in foods such as raw spinach, nuts, seeds, and mackerel fish, magnesium helps to keep muscles and nerves healthy.

- **Lutein-zeaxanthin:** Found together in green leafy vegetables and other foods, they are potent antioxidants. Occurring in especially high concentrations in the eye, they are thought to be crucial to healthy vision.

- **Quercetin:** A flavonoid phytoestrogen with antioxidant and anti-inflammatory properties, this nutrient, found in such foods as capers and onions, has potential immunomodulatory and neuroprotective effects.

- **α-Tocopherol:** The dietary form of vitamin E is found in vegetable oils, wheat germ, and other foods. This antioxidant has the potential to attenuate demyelination. The researchers found that compared with controls, participants with MS had a significantly lower mean intake of all of these nutrients and the most significant finding was for the comparison of quercetin between the groups. “Free radicals are believed to play a role in demyelination and axonal damage in MS,” she explained. “Some of these nutrients have antioxidant properties, which may interact with free radicals, inhibiting potentially damaging effects. It’s possible that MS itself depletes the body of nutrients or in some way inhibits their absorption.” In another study:

Biotin was found to be helpful based on improvement in disability, as measured by the Expanded Disability Status Scale (EDSS). As the primary outcome, the top-line result was met. It’s a positive trial of approximately 150 patients.

- Tourbah, A., Frenay, C. L., & Edan, G., et al. Effect of MD1003 (high doses of biotin) in progressive multiple sclerosis: Results of a pivotal phase III randomized double blind placebo controlled study. Program and abstracts of the American Academy of Neurology 2015 Annual Meeting; April 18-25, 2015; Washington, DC. Abstract PL2.002.

Vitamin D

Recent years have seen a flurry of studies involving vitamin D to multiple sclerosis (MS), and all of them tie low levels of vitamin D to the disease. Three of these studies were published in July 17, 2012 issue of *Neurology*, and most recently, reported in the *Journal of Cell Biology* on December 7, 2015 reveals a role for vitamin D in re-myelination of the central nervous system. “Demyelination involves the generation of new myelin sheath-forming oligodendrocytes after primary demyelination in the central nervous system,” explain Robin J. M. Franklin of the University of Cambridge and colleagues. “In common with other regenerative processes, demyelination efficiency declines with aging, with the result that in chronic demyelinating diseases such as multiple sclerosis (MS), demyelination becomes ineffective.” In previous research, Dr Franklin and associates identified the nuclear receptor retinoid X receptor gamma (RXRgamma) as a regulator of oligodendrocyte progenitor cells. Because nuclear receptors usually function in pairs, the team sought to find RXRgamma’s binding partners.

Inhibition of Vitamin D Receptors

They found that RXR γ binds to several nuclear receptors in oligodendrocytes and their progenitor cells, including the vitamin D receptors. Inhibition of the vitamin D receptor impaired the progenitor cells' ability to differentiate, thereby reducing their ability to remyelinate nerve axons, however, vitamin D, which binds to and activates the vitamin D receptor, improved oligodendrocyte progenitor cell differentiation. Epidemiologic studies have established an association between MS risk and vitamin D deficiency; however, the vitamin's immunomodulatory role has been the focus of research that has sought to determine its mechanism of action. "Our data suggest that hypovitaminosis D in MS patients may be a contributor to remyelination failure," the authors conclude. "Further investigation into the molecular mechanisms of VDR in remyelination will open up new opportunities for the development of regenerative medicines for demyelinating diseases." Another study linked low levels of vitamin D plus exposure to the Epstein-Barr virus to the development of MS. Low vitamin D levels predict a near-term conversion of clinically isolated syndromes to definite MS.

Lack of Exposure to Sun

And the risk of developing MS has been linked to lower sun exposure in early life. - 22nd Meeting of the European Neurological Society (ENS). Abstract O-291. Presented June 11, 2012. According to Alberto Ascherio, MD, DrPH, of Harvard School of Public Health, and colleagues, patients with relatively high vitamin D levels in the year after a first multiple sclerosis-like attack showed, over the next 4 years, markedly lower levels of MS disease activity and disability progression than those with lower levels, researchers found.

•• - Ascherio A, et al "Vitamin D as an early predictor of multiple sclerosis activity and progression" JAMA Neurology 2014; DOI: 10.1001/jamaneurol.2013.5993.

"Having a higher serum 25-hydroxyvitamin D level upon an initial episode suggestive of multiple sclerosis (MS) could reduce the chance of a second episode or other signs of disease progression", according to an article published in the March 2014 issue of the American Medical Association journal JAMA Neurology. The study evaluated data from 465 participants in the Betaferon/Betaseron in Newly Emerging multiple sclerosis for Initial Treatment (BENEFIT) trial, which evaluated early versus delayed interferon beta-1b treatment in patients with an initial episode of neurological dysfunction suggestive of MS. (Definitive diagnosis of MS requires the occurrence of a second clinical event.) The subjects were followed for up to five years, during which magnetic resonance imaging (MRI) was conducted quarterly for 12 months, and at 18, 24, 36, 48 and 60 months. For the current study, Alberto Ascherio, MD, DrPH, and his associates examined the association between the risk of disease progression and serum 25-hydroxyvitamin D levels measured at least once among four time points over the two years following enrollment in the BENEFIT trial.

Having a higher serum level of vitamin D was associated with a reduced rate of conversion to MS over the follow-up period. "By the end of the follow-up at 60 months, those patients with serum 25(OH)D concentrations greater than or equal to 50 nmol/L [20 ng/mL] had a 4-times lower change in T2 lesion volume, a 2-fold lower rate of brain atrophy, and lower disability than those below 50 nmol/L [20 ng/mL]," the authors report. "*Our results suggest that identification and correction of vitamin D insufficiency has an important role in the early treatment of MS,*" they conclude.

Food Sensitivities

Intolerance to certain foods is common in patients with multiple sclerosis. Among the most frequent are milk and dairy products, caffeine, tannin, yeast, sugar, fungi, wheat, gluten (found in wheat, barley, oats, and rye), corn, food additives, and fermented products such as ketchup,

vinegar, and wine. In a 1986 study it was found that of 135 MS patients, 65.9% had histories of sinusitis (inflammation of the sinus), a classic symptom of intolerance to milk and dairy products. From a diagnostic perspective the following tests can be of potential value: IgG and IgG4 Food Sensitivity Tests, Chem Screen/CBC blood test, 24 Hour Hormone Analysis, Hair mineral Toxic Metal Analysis, Candida Titer, Touch For Health Applied Kinesiology Muscle Response Test and a Chiropractic spinal examination and care.

Interventional Chiropractic Care

Why? Nothing in the human body successfully lives without proper nerve and blood supply and that includes reproductive organs. The brain can be compared to the city's main power plant and the main power line coming from the power plant is the spinal cord which is housed, protected with in the spine from which organs receive nerve energy, artery's, veins, lymphatics and meridians energy. In the situation of the Multiple Sclerosis the spine plays significant roles in their functions therefore as important as hormones and nutrients are the spine is also a vital component in female as well as male reproductive health. That being the case as potentially good as the following nutraceuticals might be it would enhance them when interventional chiropractic spinal care is also pursued.

Use of Hormonal Contraceptives

Women with multiple sclerosis (MS) or clinically isolated syndrome (CIS) were more likely to have used oral contraceptives in the three years before their diagnosis than women who did not have MS or CIS. (35% increased risk.) "Independent of age, smoking status, parity, and obesity, there was a between the use of oral contraceptives and the development of the first symptoms of MS. These findings suggest that using hormonal contraceptives may be contributing at least in part to the rise in the rate of MS among women." "Hormones play an important role in many diseases, and it is known that pregnancy—which is associated with high estrogen levels—is protective against relapses in women who already have MS, so hormones appear to be involved in some way in this disease."

Low Levels of Estrogen

According to Dr. Hellwig, one idea is that low estrogen levels may trigger autoimmune disease, but there is no information on possible thresholds necessary for a protective or harmful effect. American Academy of Neurology (AAN) 66th Annual Meeting, Philadelphia, April 26 to May 3, 2014; abstract 1644

Candidiasis

Candidiasis, an overgrowth of the yeast *Candida albicans*, is a major cause of food intolerances and, like nutritional deficiencies, can add to the stress on individuals with multiple sclerosis. William G. Crook, M.D. of Jackson, Tennessee, first made the connection between MS and the yeast *Candida albicans*, documenting several cases in which symptoms improved once the candida was treated. Follow Candida Relief Program.

Metabolic Poisoning of Environmental Toxins

Gary Oberg, M.D., past President of the American Academy of Environmental Medicine, notes several ways in which environmental toxins may contribute to multiple sclerosis. "Toxins may cause metabolic poisoning, interrupting the body's normal metabolic pathways and damaging the myelin sheath of nerves, which is the basic defect in MS. Certain substances, while not toxic to everyone, may initiate an autoimmune reaction in susceptible individuals. These individuals make antibodies to the foreign substance which cross-react with myelin, thus damaging the nerves and inducing symptoms characteristic of multiple sclerosis." According to Dr. Oberg, some of the substances that can produce or aggravate symptoms include chemicals in food and tap water,

carbon monoxide, diesel fumes, fumes from domestic gas water heaters, solvents, aerosol sprays, and chipboard and foam in furniture and carpets. Dr. Oberg adds that MS symptoms may also be caused by internal toxins—toxins produced by bacteria and fungi in the gastrointestinal tract, including *Candida albicans*.

The Viral Connection

Medical researchers have long suspected a viral involvement in MS. Recent research on patients infected with the Epstein-Barr virus (a form of herpes virus believed to be the causative agent in infectious mononucleosis) shows that levels of essential fatty acids are very low after the illness, similar to the low levels found in MS patients. This virus interferes with the body's ability to metabolize essential fatty acids, causing a partial breakdown of the body's immune system. An acute episode of infection with the Epstein-Barr virus during adolescence could leave the door open to chronic illness such as MS some years later.

Toxicity from Mercury Dental Amalgams

Mercury is a highly toxic metal that when used in dental amalgam fillings, can seep into body tissues where it accumulates and becomes capable of producing symptoms in the body that are indistinguishable from those of multiple sclerosis. According to Hal Huggins, D.D.S. of Colorado Springs, Colorado, mercury poisoning often remains undetected because patients' symptoms do not necessarily suggest mercury as the initiating cause, but the effects of mercury toxicity are potentially devastating. Mercury has been recognized as a poison since the 1500s, yet mercury amalgams have been used in dentistry since the 1820s. Mercury has been shown to bind to the DNA of cells and cell membranes, causing cell distortion and inhibited cell function. When this happens the immune system no longer recognizes the cell as part of the body and initiates an autoimmune reaction, destroying myelin in the process. MS patients have been found to have over seven times the levels of mercury in their cerebrospinal fluid (the fluid that surrounds the brain and spinal cord) as compared to neurologically healthy patients. Therefore in addition to the IgG and IgG4 and Applied Kinesiology Muscle Response Tests, and Hair Mineral studies should be conducted and any appropriate measures taken.

Multiple Sclerosis & the Microbiome:

In many autoimmune diseases, there has been a lot of recent interest in trying to determine how what we eat and how the kind of bacteria that live in our gut might influence the immune system. Eighty percent of the immune system is in the gut and is probably shaped by what grows in the gut. For example, in rheumatoid arthritis and inflammatory bowel disease, we've seen that the gut microbiome probably makes a difference and alters the expression of those diseases. According to Sushrut Jangi, MD of Brigham and Women's Hospital, discussing the possible connection between our gastrointestinal microbiome and multiple sclerosis (MS): "When the gut flora in mice is changed, it affects whether they acquire the MS-like disease experimental autoimmune encephalomyelitis (EAE). EAE is similar to MS in that when you give certain immunogenic compounds to mice, they develop a disease that looks very similar to MS. They get demyelination and disrupted nerve conduction, leading to deficits similar to those seen in MS. This model has allowed us to investigate how the pathogenesis of MS works. "

Gut Microbes and Vegetarians

So, given the work in mice with EAE, we wanted to determine what the constituents of the gut microbiome are in MS patients compared with non-MS patients. We studied 105 patients and found there is a correlation there. I'd like to think that it's related to the cause, because that would suggest that we might be able to control the disease either by changing diet or prescribing antibiotics or probiotics, or even by doing something more dramatic like fecal transplantation.

“This also mirrors the idea that MS is a disease of the western world. If you go to countries like India and parts of Asia, where diets are far more vegetarian, you don’t really see MS. However, when these people come to the United States and adopt a more westernized diet, the incidence of the disease goes up.”

•• Gandhi, R., Glehn, F. V., & Mazzola, M. A., et al. Gut microbiome is tied to immune cell phenotype in multiple sclerosis. Program and abstracts of the 2014 Joint ACTRIMS-ECTRIMS Meeting; September 10-13, 2014; Boston, Massachusetts. Poster 616.

Treating Multiple Sclerosis

An early diagnosis is an essential first step in treating multiple sclerosis. For the best rate of success, treatment of the disease should begin as soon as possible after diagnosis. Once the disability has gained a hold, it becomes harder to reverse the damage. “There is no question,” says Dr. Swank, “at least in the minds of alternative physicians, that those MS patients who show the greatest improvement are the ones who start treatment earliest.” Many health care professionals believe that if treatment begins soon enough and is adhered to, it is possible to control multiple sclerosis in many, if not all, patients. Dr. Kingsley reasons that, “Cure is possible if the cause or causes can be found and then eliminated.” Because multiple sclerosis affects each patient differently, treatment programs are individualized. Dietary and nutritional needs are to be addressed, as are food allergies and environmental toxins.

Detoxification

Recommendations may be made for detoxification therapy, as well as for the removal of mercury amalgam dental fillings. Among practitioners of alternative medicine, there is a degree of consensus—not generally shared by conventional doctors—that multiple sclerosis can be controlled. This type of approach involves fundamental nutritional, environmental, and life-style changes.

Diet

The best documented success with multiple sclerosis patients is Dr. Swank’s work with a low-saturated fat/high polyunsaturated fat diet.

Nutritional Supplementation Considerations for Multiple Sclerosis (MS)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any food supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

UltraInflamX® Plus 360.

- UltraFlora™ Intensive Care.
- UltraFlora™ Integrity.
- D3 10,000 with K2. dose should be determined through serum testing’s of vitamin D levels.
- GlutaClear®.
- Lutein.
- Ceralin® Forte.
- Mag Glycinate.
- SpectraZyme® Pan 9X ES.

Nutritional Stress Support Considerations

- Trancor™.
- Serenagen®.

Dietary Considerations

•• Anti-Inflammatory Diet Program or Swank Diet

The best documented dietary success with multiple sclerosis patients is Dr. Swank's work with a low-saturated fat/high polyunsaturated fat diet. (See "The Multiple Sclerosis Diet Book" by Roy Laver Swank, M.D., Ph.D.)

Attitude & Lifestyle Changes

Dr. Kingsley advises that "taking an active role in treatment should be the first concern of a person diagnosed with multiple sclerosis. This includes positive cooperation with the practitioner, as well as possible fundamental life-style changes in work, relationships, and environmental conditions. Changes may be necessary to improve a person's condition; it may be inadvisable, even impossible, to carry on as if nothing has happened." Dr. Swank finds stress to be the second most important cause of MS after high fat diets. "Continuing stress, such as from legal actions and family problems can cause MS," he says. Dr. Swank treats these patients to help them sleep and be more relaxed during the day. For mild stress he suggests taking a short rest in the afternoon, and for more severe stress, he advises a rest mid-morning as well.

Interventional Chiropractic Care

Nothing in the human body successfully lives without proper nerve and blood supply and that includes reproductive organs. The brain can be compared to the city's main power plant and the main power line coming from the power plant is the spinal cord which is housed, protected with in the spine from which organs receive nerve energy, artery's, veins, lymphatics and meridians energy. In the situation of the Multiple Sclerosis the spine plays significant roles in their functions therefore as important as hormones and nutrients are the spine is also a vital component in health. That being the case as potentially good as the following nutraceuticals might be it would enhance them when interventional chiropractic spinal care is also pursued.

Hydrotherapy: Constitutional hydrotherapy should be applied two to five times weekly. Crushed ice wrapped in wet towels applied to spastic muscles for 10 minutes followed by exercise; cold (50° F) immersion of spastic extremity for 10 minutes followed by exercise.

Aromatherapy: Rub affected part with mixture of 95 percent olive oil and 5 percent essence of juniper or rosemary.

Practical Hints: Avoid the use of electric heating pads, chlorinated water, as well as fluoridated water, toothpaste, and mouthwash.

Note: The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes Touch For Health Applied Kinesiology Muscle Response Test whole person health and wellness care will have expertise in giving counsel

Nutritionnel Formula Description & Supplémentation Rationale

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

UltraInflamX® Plus 360

UltraInflamX Plus 360 is a multi-mechanistic support nutraceutical with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation, along with specific gastrointestinal tract repair factors to help address leaky gut syndrome associated with autoimmune syndromes.

UltraFlora™ Intensive Care

L. plantarum 299V (UltraFlora Intensive Care) — a strain-identified probiotic that has been specifically shown to be anti-inflammatory in nature and supports the integrity and healthy function of the mucosal lining.

UltraFlora™ Integrity

Lactobacillus salivarius UCC118 (UltraFlora Integrity) — a strain-identified probiotic that has been specifically shown to support intestinal barrier function via preventing the oxidative stress-induced internalization of tight junction proteins. Upon adhesion to intestinal epithelial cells (IEC), UCC118 also produces ABP-118, a bacteriocin that is effective at inactivating or killing several species of pathogenic bacteria, addresses inflammation at the gut wall, and supports the integrity and healthy function of the intestinal mucosal lining. UCC118 represents a new trend in probiotic selection, utilizing a targeted approach to select probiotics with optimal strain-specific characteristics for the intended benefits and outcomes, and with promising effects in human clinical studies.

- Miyauchi, E., O’Callaghan, J., & Butto, L. F., et al. Mechanism of protection of trans epithelial barrier function by *Lactobacillus salivarius*: Strain dependence and attenuation by bacteriocin production. *Am J Physiol Gastrointest Liver Physiol*. 2012;303:G1029-G1041.

- O’Mahony, L., McCarthy, J., & Feeney, M., et al. Immunologic response to a novel probiotic organism in patients with active Crohn’s disease. *Gastroenterology*. 2000;118 (Issue 4, Part 1), A853. Abstract presented at Digestive Disease Week and the 101st Annual Meeting of the American Gastroenterological Association, May 21-24, 2000 in San Diego, CA.

D3 10,000 with K2

Deficiency of vitamin D is common among patients with inflammatory and autoimmune disorders and those with prolonged critical illness. According to Alberto Ascherio, MD, DrPH of Harvard School of Public Health and colleagues, patients with relatively high vitamin D levels in the year after a first multiple sclerosis-like attack showed, over the next 4 years, markedly lower levels of MS disease activity and disability progression than those with lower levels, researchers found. D3 10,000 with K2 provides 10,000 IU per softgel of vitamin D (as D3), designed for greater absorption. This high potency formula also includes bioavailable forms of vitamin K2 to complement vitamin D.

GlutaClear®

GlutaClear provides unique support to help boost the body’s production of glutathione, a primary antioxidant throughout the entire body, especially the brain and nervous system, and is crucial in assisting the removal and metabolism of toxic metals that affect brain and nervous system function.

Lutein

Lutein with Zeaxanthin / Naturally Occurring Carotenoids. Lutein, a yellow pigment carotenoid found mainly in the macula of the eye where it is strongly implicated in maintaining eye health. The macula is a spot in the back of the retina which is responsible for sharpness of vision. Lutein has been shown to reduce the risk of age related macular degeneration and age related cataracts, also as a carotenoid it functions as an antioxidant which inhibits oxidation of lipids.

Ceralin® Forte

Ceralin Forte is formulated to provide well-rounded support for brain and nerve protection, addressing multiple pathways involved in neurological health.

Mag Glycinate

Mag Glycinate, available exclusively from Metagenics, is a fully reacted amino acid chelate produced by a unique, patented process that is designed to enhance absorption and intestinal tolerance of magnesium. Magnesium deficiency is common in MS.

SpectraZyme® Pan 9X ES

SpectraZyme Pan 9X ES is a comprehensive pancreatic enzyme complex that is formulated to help promote healthy digestive function (pancreatic enzyme insufficiency is common in MS patients).

Trancor™

Trancor is formulated to support a sense of tranquility in those who may feel worried or nervous by beneficially modulating the balance between the calming influence of GABA and the excitatory effects of glutamate.

- Designed to support a sense of tranquility by modulating the balance between glutamate and GABA with NAC, green tea catechins, and vitamin B6.
- Taurine and EGCG may enhance the metabolism of GABA.
- Supports relaxation and a sense of calm with magnesium and vitamin B6.
- Designed to act centrally, within the brain, this formula features the amino acids NAC and taurine—which research suggests may be able to cross the blood-brain barrier.

Serenagen®

Serenagen is a classic, comprehensive herbal stress management formula designed for individuals who are “stressed and wired.” It has been used throughout China since the Yuan Dynasty (1279-1368 A.D.).

- According to traditional Chinese Herbology, a demanding, hectic lifestyle deeply influences mood, mental function, cognitive processes, the cardiovascular system, the liver, and tolerance to change.
- Designed to help maintain equilibrium between body systems and promote a sense of inner calm.
- Provide herbal support for those who may be overworked, sleep too little, or have exhausted physical reserves.

Myofibrositis

Myofibrositis is characterized with scar-type tissue causing restriction of tissue and joint motion. Very often when there has been traumatic tearing of soft tissues or long standing muscle spasms cause production of thixotropic gel which organizes itself into collagen scar tissue. This is the body’s attempt to stabilize what is perceived as injury. Three problems result from this scar formation:

1. The scar tissue is more pain-sensitive than normal structural and contractile tissue.
2. The scar tissue is less flexible and therefore diminishes joint motion.
3. The scar tissue is more brittle than healthy tissue and susceptible to re-injury. This condition occurs after trauma or in long-standing overloading of muscles. This can occur in a postural strain situation, for example, when a person works over a desk day after day causing constant, relentless contraction of the neck and upper back muscles. These muscles and the adjacent articular ligaments (rib joints and vertebral joints) may become infiltrated with scar tissue adhesions therefore a Touch For Health Applied Kinesiology Muscle Response Test is a good diagnostic option.

Prognosis can be good with appropriate Interventional Chiropractic care and metabolic therapy associated ergonomic changes designed to prevent chronicity.

Symptoms

- Diminished joint play – restrictions in ranges of movement
- Pain and tenderness with deep palpation of the tissue within and around the spine
- A gritty feel, especially in ligaments and muscles
- Local areas of muscle spasm (trigger points).

Interventional Chiropractic Care

Nothing in the human body successfully lives without proper nerve and blood supply and that includes Myofibrositis. The brain can be compared to the city's main power plant and the main power line coming from the power plant is the spinal cord which is housed, protected with in the spine from which organs receive nerve energy, artery's, veins, lymphatics and meridians energy. In the situation of the Myofibrositis the spine plays significant roles in their functions therefore as important as hormones and nutrients are the spine is also a vital component. That being the case as potentially good as the following nutraceuticals might be it would enhance them when interventional chiropractic spinal care is also pursued.

Nutritional Supplementation Options for Myofibrositis

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **MyoCalm P.M.®**
- **Wellness Essentials® Active.**
- **E Complex-1:1™**

Dietary Considerations

- Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale

MyoCalm P.M.®

MyoCalm P.M. formulated to provide the same specialized formula as MyoCalm® with the addition of lemon balm and hops—herbs traditionally used to promote relaxation and restful sleep.

MyoCalm P.M. is a time-tested, specialized formula that provides bioavailable forms of magnesium and calcium blended with select herbs that support healthy muscle function and:

- Supply important minerals involved in muscular contraction and relaxation responses.
- May help relieve minor muscle pain associated with stress or physical exertion, and may prevent nocturnal leg muscle cramps.
- Features extracts of passionflower and valerian for added relaxation support.
- The addition of lemon balm and hops—herbs traditionally used to promote relaxation and restful sleep.
- Promote muscle relaxation.
- May help relieve minor pain associated with muscle tension, which can be caused by stress or physical overexertion.
- Promote a feeling of calm, and can be taken at bedtime for occasional sleeplessness.

Wellness Essentials® Active

Wellness Essentials Active is formulated to target your unique nutritional needs to help you stay active and vital and maintain overall health along with specific nutritional support for joint flexibility, mobility, and comfort. Each packet provides:

- **Multifaceted health support:** PhytoMulti™ is the “smart multi” with essential nutrients and a proprietary blend of 13 concentrated extracts and phytonutrients to help protect cells and maintain DNA stability—activating health potential like no other supplement.

- **Joint relief:** Kaprex® (1 tablet) provides a safer option for effective joint relief with a proprietary combination of selected plant components.

- **Joint health and connective tissue support:** ChondroCare® is a comprehensive formula designed to provide broad connective tissue support with glucosamine, chondroitin, methylsulfonylmethane (MSM), and other nutrients.

- **Healthy cartilage and connective tissue support:** Glucosamine Sulfate 750™ designed to help support healthy joints and other connective tissues by providing additional glucosamine, a naturally occurring compound in all connective tissues.

E Complex-1:1™

E Complex-1:1 formulated to provide a unique, natural vitamin E supplement that features a 1:1 ratio of alpha- to gamma-tocopherol; this ratio more closely resembles the tocopherol profile found naturally in vitamin E-rich plants.

Narcolepsy / Cataplexy

Narcolepsy is a sleep disorder that causes excessive sleepiness and frequent daytime sleep attacks. It affects males and females alike, with the age of onset typically in the early teens to mid-twenties (although it can appear at any age). The American Sleep Association estimates that 125,000 to 200,000 Americans suffer from narcolepsy; however, it is thought that less than 50,000 of these individuals get adequately diagnosed and treated.

Causes

Some aspects of traditional medicine believe that the cause of narcolepsy remains undiscovered but others believe that the following are related causes:

1. Genetic factors may play a role, as there does seem to be a slightly increased risk for developing narcolepsy in those whose family members have it. Scientists have identified genes that control the action of certain neurotransmitters in the brain responsible for signaling sleep and wake cycles. Narcoleptic dogs and mice exhibit genetic defects in this system, which produce deficiencies in a particular set of proteins known as hypocretins.

Hypocretins. These compounds can be markedly deficient in humans with narcolepsy. These neurotransmitters work to stabilize REM sleep and maintain its occurrence at the appropriate times during the sleep cycle. For unknown reasons, the neurons located in the hypothalamus that produce these chemicals are compromised in some people. This leads to a decreased level of hypocretins in the cerebrospinal fluid of patients with narcolepsy—and to very low levels in those with cataplexy. Whether this altered hypothalamic activity is due to a genetic defect or is caused by environmental triggers such as infection or an autoimmune process is still to be determined. However, it seems clear that abnormalities in this system are at the root of the sleep disturbances that bring about narcolepsy. Because other medical conditions and certain drugs can cause many of the same symptoms, evaluation in a sleep lab is required to make the diagnosis of narcolepsy.

2. **Spinal Problems** in that it is a well-established scientific fact that no tissue in the human body successfully lives without proper nerve and blood supply. The brain can be compared to the city’s main power plant and the main power line coming from the power plant is the spinal cord which is

housed, protected within the spine from which organs receive nerve energy, arteries, veins, lymphatics and meridians energy. In the situation of the narcolepsy the spine plays significant roles in their functions therefore as important as hormones and nutrients are the spine is also a vital component in female as well as male reproductive health. That being the case as potentially good as the following nutraceuticals might be it would enhance them when interventional chiropractic spinal care is also pursued.

Symptoms

The most common symptoms of narcolepsy are: 1) Periods of extreme drowsiness every 3 to 4 hours during the day. You may feel a strong urge to sleep, often followed by a short nap (sleep attack).

- These periods last for about 15 minutes each, although they can be longer.
 - They often happen after eating, but may occur while driving, talking to someone, or during other situations.
 - You wake up feeling refreshed.
- 2) Dream-like hallucinations may occur during the stage between sleep and wakefulness. They involve seeing or hearing, and possibly other senses. 3) Sleep paralysis is when you are unable to move when you first wake up. It may also happen when you first become drowsy. 4) Cataplexy is a sudden loss of muscle tone while awake, resulting in the inability to move. Strong emotions, such as laughter or anger, will often bring on cataplexy.
- Most attacks last for less than 30 seconds and can be missed.
 - The head will suddenly fall forward (similar to a whiplash), the jaw will become slack, and the knees will buckle.
 - In severe cases, a person may fall and stay paralyzed for as long as several minutes. Not all patients have all four symptoms.

Rapid Eye Movement (REM). Narcolepsy is thought to be a result of aberrant regulation of Rapid-Eye Movement (REM) sleep, a stage of normal sleeping during which the eyes are in almost continuous motion beneath closed lids. The normal sleep cycle occurs as the sun goes down and is marked by progressive levels of sedation with deepening muscle relaxation and a slowing of brain waves (non REM sleep); this is followed by REM sleep with dreaming, suppression of muscle tone, and high brain activity. In most people, REM sleep usually occupies about 25 percent of total sleep time, and coincides with vividly recalled dreaming periods. The symptoms of narcolepsy mimic body changes that occur during normal REM—loss of muscle tone, inability to move, and dreaming. Narcoleptic patients experience REM patterns almost immediately after falling asleep at nighttime as well as throughout the day.

EDS. The main symptom of narcolepsy is excessive daytime sleepiness (EDS), which often causes an individual to fall asleep without warning. Sleep episodes can last from seconds to minutes—obviously a danger for individuals who drive or operate hazardous machinery. EDS can also cause memory lapses, lack of concentration, fatigue, irritability, depression, and exhaustion. Other symptoms include cataplexy (the sudden loss of voluntary muscle tone, often triggered by strong emotions such as surprise, laughter, or anger), which may cause them to lose their grip on things they are holding, or go completely limp and fall to the ground.

Hallucinations and Paralysis can occur upon falling asleep or awakening, and can be quite vivid and frightening; as are brief episodes of total paralysis, which also can be experienced at the onset or end of sleeping. This sleep paralysis typically lasts a couple of minutes with or without

awareness that it is happening. In addition, symptoms of automatic behavior can occur, where one continues normal functioning—talking and performing daily activities—but less than optimally and without having any recollection that these events are going on. Up to eighty percent of individuals with narcolepsy experience this kind of automatic activity.

Other signs of narcolepsy include: Headaches, neck and back pains, nighttime restlessness, excessive limb movements, and even the physical reenactment of dreams during the night with biting, screaming, kicking, punching, and thrashing of arms and legs. In some, the challenges and stigma of narcolepsy can lead to diminished motivation and depression.

Treatment

Interventional Chiropractic Care in that the brain, spinal cord, spine and nervous systems are inter-related therefore anytime there is interruption in those systems all kinds of health issues are possible including narcolepsy. That being the possibility regular Touch For Health Applied Kinesiology Muscle Response Test based chiropractic spinal care can have positive effects on narcolepsy. Lifestyle adjustments and learning to cope with the emotional and other effects of the disorder may help you function better in work and social activities. This involves:

- Eating light or vegetarian meals during the day and avoiding heavy meals before important activities
 - Scheduling a brief nap (10 to 15 minutes) after meals, if possible
 - Planning naps to control daytime sleep and reduce the number of unplanned, sudden sleep attacks
 - Informing teachers and supervisors about the condition so you are not punished for being “lazy” at school or work
- According to Rubin Naiman, Ph.D., author and sleep specialist at the Arizona Center for Integrative Medicine, medications such as Provigil® help people with sleep disorders to function more normally by masking symptoms of sleepiness. They do not treat the underlying cause of the disorders. Nor do they address the mental-emotional-spiritual aspects of the basic human need to sleep and dream. While he agrees that medications may be necessary in the treatment of acute cases of narcolepsy, Dr. Naiman suggests those with the condition can learn to sleep more healthily by optimizing general nutrition; eliminating alcohol, caffeine, and nicotine, exercising regularly, and napping routinely for 15-20 minutes as needed. Nutrients that can help manage narcolepsy include calcium and magnesium, choline, chromium Picolinate, coenzyme Q10, Omega-3 fatty acids, B vitamins, vitamin C complex (including bioflavonoids), and vitamins D and E. Some research suggests that the supplement 5-HTP may help those with narcolepsy by reducing the duration of narcolepsy and improving nighttime sleep.

Nutritional Supplement Considerations for Narcolepsy / Cataplexy

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s) nor make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

Similarly a Doctor of Chiropractic that includes Touch For Health Applied Kinesiology Muscle Response Test whole person health and wellness care will have expertise in giving counsel.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing

the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- **L-Tyrosine** — Important in thyroid function. Low levels have been associated with narcolepsy. (Caution: Do not take tyrosine if you are taking an MAO inhibitor drug.) As part of a series of studies of the dopaminergic system in patients with various sleep disorders, eight narcoleptics were treated with oral tyrosine (average dose 100 mg/kg) in an open trial conducted in Bron, France. Within six months, all patients were free from daytime sleep attacks and episodes of cataplexy (sudden muscular weakness that is a distinctive part of the narcolepsy syndrome). The researchers conclude that the findings point to an abnormality of the dopaminergic system in narcolepsy, and that they are of practical clinical interest, even though the study lacked controls. “Our impression, however, is that such a long-lasting placebo effect is unlikely and that tyrosine offers a valuable new approach to the management of narcolepsy.”

- **L-5-Hydroxytryptophan (5 HTP)** — Formulated to reduce the duration of cataplexy and improves nighttime sleep.

- **Calcium and Magnesium** — Needed for energy production and healthy nervous system and muscle function.

- **Chromium Picolinate** — Promote energy and regulates sugar metabolism.

- **Coenzyme Q10** — Promote circulation to the brain.

- **L-Glutamine** — Promote mental ability. Known as brain fuel because it can pass the blood-brain barrier freely.

- **Omega-3 essential fatty acids** — Formulated to assist the body in its attempts to protect cell membranes and support nervous system.

- **Vitamin B complex, especially vitamin B6, B12, and Folic acid** — B vitamins have the ability to boost metabolism and are essential for increased energy levels and normal brain function.

- **Vitamin C with bioflavonoids** — Known to play roles in increasing energy and promotes production of interferon in the body to protect against free radical damage.

- **Vitamin D** — Essential for calcium absorption and neurotransmitter balance.

- **Vitamin E** — Increases circulation and protects heart function and brain cells.

Nutritional Supplementation Considerations for Narcolepsy / Cataplexy

- **Crave-Curb.**

- **CoQ10 200 mg**

- **Wellness Essentials® Healthy Balance.**

- **D3 5000™ .**

Dietary Considerations

FirstLine Therapy® Diet / Mediterranean type diet program

Additional Considerations

- Eliminate/minimize alcohol, caffeine, and nicotine

- Nap routinely for 15-20 minutes as needed

- Exercise regularly

- Investigate food intolerances that may be ed to narcolepsy, especially wheat, dairy products, corn, and chocolate

NOTE: There is information connecting the onset of narcolepsy to the swine flu shot. “Emelie Olsson is plagued by hallucinations and nightmares. When she wakes up, she’s often paralyzed, unable to breathe properly or call for help. During the day she can barely stay awake, and often

misses school or having fun with friends. She is only 14, but at times she has wondered if her life is worth living. Emelie is one of around 800 children in Sweden and elsewhere in Europe who developed narcolepsy after being immunized with the Pandemrix H1N1 swine flu vaccine made by British drug maker GlaxoSmithKline in 2009. Finland, Norway, Ireland, and France have seen spikes in narcolepsy cases, too.” Evidence Grows for Narcolepsy to Swine Flu Shot. Medscape. Jan 22, 2013

Nutritional Formula Description & Supplementation Rationale Crave-Curb

Nutritional Support for Neurotransmitter Balance. Crave-Curb supports the synthesis of the brain reward neurotransmitters (like serotonin and catecholamine’s) and through its effect on the natural opioids will by virtue of inhibiting GABA, cause a significant release of dopamine at the nucleus accumbens. This constant release of possibly therapeutic amounts of dopamine (anti-stress substance/neurotransmitter), leads to a proliferation of D2 receptors, thereby, promoting appetite suppression and reducing craving in general. (High craving behavior appears to be tied to low D2 receptors.) Eight capsules supply:

Vitamin C (ascorbic acid

Vitamin B6 (as pyridoxal-5-phosphate)

Folic Acid

Calcium (as calcium citrate)

Magnesium (as magnesium citrate)

Chromium (as chromium picolinate)

DL-Phenylalanine

L Tyrosine

L-Glutamine

Salidrosea Root Extract (standardized to 3% rosavins and 1% salidroside)

L-5-Hydroxytryptophan (L-5-HTP)

(as Griffonia simplicifolia seed extract)

Other ingredients: Gelatin (capsule), magnesium stearate, and silicon dioxide.

CoQ10. Coenzyme Q10 is essential for the health of virtually all human tissues and organs. CoQ10 also functions as an antioxidant. Although CoQ10 can be synthesized by the body, the body’s capacity to do so may be insufficient to meet CoQ10 requirements in some situations. Susceptibility to CoQ10 deficiency appears to be greatest in cells that are metabolically active, such as those in the heart, immune system, and gingivae.

Vitamin A (Betatene® natural mixed carotenoids) 2000 IU

Vitamin E (d-alpha-tocopherol.

Coenzyme Q10 (Ubiquinone)

Other ingredients: Gelatin, rice bran oil, glycerin, purified water, yellow beeswax, annatto extract, and titanium dioxide.

Wellness Essentials® Healthy Balance

Wellness Essentials Healthy Balance is formulated to target your unique nutritional needs to help you maintain healthy blood sugar levels already in the normal range when taken as part of a healthy diet. Each once-daily packet provides:

•• **Multifaceted health support:** PhytoMulti™ is the “smart multi” with essential nutrients and a proprietary blend of 13 concentrated extracts and phytonutrients to help protect cells and maintain DNA stability—activating health potential like no other supplement.

•• **Insulin activity and blood sugar level support:** MetaGlycemX™ is a scientifically advanced formula to be used as nutritional support along with a healthy diet to help maintain healthy insulin and blood sugar levels already in the normal range.

•• **Healthy insulin function:** Meta Lipoate® is a USP-grade preparation of alpha-lipoic acid (ALA) that delivers maximum value and effectiveness with an excellent safety profile.

D3 5000™ Formulated to:

References

•• Dauvilliers Y., Arnulf I., & Mignot E. Narcolepsy with cataplexy. Lancet. 2007;369(9560):499-511.

•• Treatment of narcolepsy with tyrosine - Nutrition Research Newsletter, Feb, 1989

•• Morgenthaler T. I., Kapur V. K., Brown T., Swick T. J., Alessi C., Aurora R. N., et al. Practice parameters for the treatment of narcolepsy and other hypersomnia's of central origin. Sleep. 2007;30(12):1705-1711.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today

1. Go to www.nutri-dyn.com

2. Click on Create Account

3. Click on Patients

4. Complete the short form and type in the following Account Number 100160

5. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Negative Mood / Depression

Depression (also known as: clinical depression, dysthymic disorder, major depressive disorder, unipolar depression) is a serious medical illness that involves the brain. It is more than just a feeling of being “down in the dumps” or “blue” for a few days. If you are one of the more than 20 million people in the United States who have depression, the feelings do not go away. They persist and interfere with everyday life.

Symptoms can include:

- Sadness
- Loss of interest or pleasure in activities you used to enjoy
- Change in weight
- Difficulty sleeping or oversleeping
- Energy loss
- Feelings of worthlessness
- Thoughts of death or suicide

Depression is a disorder of the brain and being that the brain is involved so is the spinal cord, spine and every tissues and organ in the body.

Causes

There are a variety of causes that include genetic, environmental, psychological, and biochemical factors. Depression usually starts between the ages of 15 and 30, and is much more common in women. Women can also get postpartum depression after the birth of a baby. Some people get seasonal affective disorder (SAD) in the winter. Depression is one part of bipolar disorder. Most of the health problems of Americans are related to lifestyle and dietary practices. Depression is no different. At the root of many cases of depression is an addiction to nicotine, caffeine, and other stimulants. According to Joseph Beasley, M.D., the primary investigator involved in the famous Kellogg Report, “The Impact of Nutrition, Environment, and Lifestyle on Illness in America,” the United States is a nation of addicts. In many instances, people claim that they smoke, drink alcohol, or take drugs because it calms them. In reality, these substances actually complicate matters. The relaxation or chemical high from these drugs is short-lived and ultimately leads to adding even more stress to the system. Individuals suffering from depression or other psychological conditions must absolutely stop smoking, drinking alcohol, and ingesting coffee and other sources of caffeine.

Smoking & Depression

Cigarette smoking is a significant factor in depression. Central to the effect of nicotine is the stimulation of adrenal hormone secretion, including cortisol. Elevated cortisol levels are a well-recognized feature of depression. One of the key effects of cortisol on mood is related to activating the enzyme tryptophan oxygenase. When activated, this enzyme results in less tryptophan being delivered to the brain. Since the level of serotonin in the brain is dependent upon how much tryptophan is delivered to the brain, cortisol dramatically reduces the level of serotonin and melatonin. In addition, cortisol also “down regulates” serotonin receptors in the brain, making them less sensitive to the serotonin that is available. Smoking also leads to a relative vitamin C deficiency, as the vitamin C is utilized to detoxify the cigarette smoke. Low levels of vitamin C in the brain can result in depression and hysteria.

Alcohol & Depression

Individuals with depression must avoid excessive alcohol. Alcohol is a brain depressant. It also increases adrenal hormone output, interferes with many brain cell processes, and disrupts normal sleep cycles. Alcohol ingestion also leads to hypoglycemia. The resultant drop in blood sugar produces a craving for sugar because it can quickly elevate blood sugar. Unfortunately, increased sugar consumption ultimately aggravates the hypoglycemia. Hypoglycemia aggravates the mental and emotional problems of the alcoholic.

Exercise & Depression

Regular exercise may be the most powerful antidepressant available. Various community and clinical studies have clearly indicated that exercise has profound antidepressive effects. These studies have shown that increased participation in exercise, sports, and physical activities is strongly associated with decreased symptoms of anxiety (restlessness, tension, etc.), depression (feelings that life is not worthwhile, low spirits, etc.), and malaise (rundown feeling, insomnia, etc.). Furthermore, people who participate in regular exercise have higher self-esteem, feel better, and are much happier compared to people who do not exercise. Much of the mood elevating effects of exercise may be attributed to the fact that regular exercise has been shown to increase the level of endorphins. When endorphin levels are low, depression occurs. Conversely, when endorphin levels are elevated, so is one's mood. There have been at least 100 clinical studies where an exercise program has been used in the treatment of depression. It was concluded that exercise can be as effective as other antidepressants including drugs and psychotherapy. More recently, even stricter studies have further demonstrated that regular exercise is a powerful antidepressant. The best exercises are either strength training (weight lifting) or aerobic activities such as walking briskly, jogging, bicycling, cross-country skiing, swimming, aerobic dance, and racquet sports. The important thing is to train with an intensity that will keep your heart rate in the training zone.

Interventional Chiropractic Spinal Manipulation and Touch For Health Applied Kinesology Muscle Response Therapy.

Nothing in the human body successfully lives without proper nerve and blood supply and that includes the brain including attitude. The brain can be compared to the city's main power plant and the main power line coming from the power plant is the spinal cord which is housed, protected with in the spine from which organs receive nerve energy, artery's, veins, lymphatics and meridians energy. In the situation of the depression the spine plays significant roles in their functions therefore as important as hormones and nutrients are the spine is also a vital component in mental wellbeing. That being the case as potentially good as the following nutraceuticals might be it would enhance them when interventional chiropractic spinal care is also pursued, acupuncture, Myofascial Release, Neuro/Muscle Skeletal Reeducation and exercise.

Nutritional Factors in Depression

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel especially when it is based on Touch For Health Applied Kinesology Muscle Response Test.

Possible Nutritional Factors

There are a number of important nutritional factors to consider in the depressed individual. First, since the brain requires a constant supply of blood sugar, hypoglycemia must be avoided. Symptoms of hypoglycemia can range from mild to severe, and include depression, anxiety,

irritability, and other psychological disturbances; fatigue; headache; blurred vision; excessive sweating; mental confusion; incoherent speech; bizarre behavior; and convulsions. The association between hypoglycemia (low blood sugar) and depression is largely ignored by most physicians—they simply never even consider it as a possibility, despite the fact that several studies have shown hypoglycemia to be very common in depressed individuals. There is no explanation for this oversight by so many physicians, especially since dietary therapy (usually simply eliminating refined carbohydrates from the diet) is occasionally all that is needed for effective therapy in patients that have depression due to reactive hypoglycemia. In addition to glucose, the brain also requires adequate blood supply and a constant supply of other nutrients. It is a well-established fact that virtually any nutrient deficiency can result in impaired mental function. To function optimally the human brain requires virtually every known nutrient. Correcting an spinal issue and underlying nutritional deficiency can restore normal mental function and relieve depression. However, according to Dr. Werbach, the leading expert in the field of nutrition and mental function: “Even in the absence of laboratory validation of nutritional deficiencies, numerous studies utilizing rigorous scientific designs have demonstrated impressive benefits from nutritional supplementation.” A high potency multivitamin provides a good nutritional foundation upon which to build. When selecting a multivitamin and mineral formula, it is important to make sure that it provides the full range of vitamins and minerals at high potency levels.

Deficiencies of a number of nutrients are quite common in depressed individuals

The most common deficiencies are folic acid, vitamin B12, and vitamin B6. According to research published in *Lancet* and *Archives of General Psychiatry*, the genetic inability to efficiently convert folic acid into its two active forms (L-5-MTHF and 5-Formyl THF) is associated with anxiety and depression.

Dietary Considerations

It is now a well-established fact that certain dietary practices cause, while others prevent, a wide range of disease. Quite simply, a health-promoting diet provides optimal levels of all known nutrients and low levels of food components which are detrimental to health such as sugar, saturated fats, cholesterol, salt, and food additives. A health-promoting diet is rich in whole, natural, and unprocessed foods. It is especially high in plant foods such as fruits, vegetables, grains, beans, seeds, and nuts, as these foods not only contain valuable nutrients but additional compounds, which have remarkable health-promoting properties. As we know, diet and the nutrient density of the foods we consume is inextricably tied to conditions such as heart disease, obesity, and diabetes. However, current research also documents that what we consume, and the nutrient/phytonutrient density of what we consume, (or lack thereof), has significant implications for the brain, thus the need to address base nutrition/phytonutrition and essential fatty acids.

Vitamin D

First and foremost, one should be addressing diet, base nutrition, essential fatty acids, and additional Vitamin D. According to a study by Davison and Kaplan (*Can J Psychiatry*, 2012;57:85-92) and a number of other recent studies: “There are consistent associations between dietary patterns and symptoms of anxiety and depression.” For example, decreasing adherence to a Mediterranean diet pattern was associated with increasing likelihood of depression or anxiety. Greater anti-inflammatory or antioxidant activity of some diets may protect against mood disorders. “People who suffer from mood disorders function better when they are eating better,” Bonnie Kaplan, PhD, from the University of Calgary in Alberta, Canada told *Medscape Medical News*. “It really is true that you are what you eat.” *Ach Gen Psychiatry*. 2009;66:1090-1098 “Low serum levels of vitamin D are associated with clinically significant symptoms of depression in

otherwise healthy individuals...” Interestingly is the vast numbers of muscle skeletal problems vitamin D is always involved. Making a series of assessments of healthy women during a 1-month period, investigators found that more than one third of participants had depressive symptoms, that almost half had vitamin D insufficiency, and that depressive symptoms were predicted by vitamin D levels. “Vitamin D deficiency and insufficiency occur at high rates in healthy young women, and lower vitamin D3 levels are related to clinically significant depressive symptoms,” say the researchers, led by David Kerr, PhD, School of Psychological Science, College of Liberal Arts, Oregon State University, Corvallis. Noting that vitamin D supplementation is a low-cost, simple, and low-risk intervention, they add: “Given the lifespan health risks associated with insufficiency, supplementation is warranted whether or not the modest role of vitamin D in depression observed here generalizes more broadly.” Psychiatry Res. Published online March 6, 2015

Nutritional Supplementation Considerations for Negative Mood / Depression

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes Touch For Health Applied Kinesology Muscle Response Testing and whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

•• **Individualized Wellness Essentials™ Formula.**

•• **D3 5000™.**

•• **UltraFlora™ Spectrum.**

•• **Blisphora™.**

•• **SeroSyn™**

NOTE: Regarding dosing for children

The general recommendations are dosed for an average 150 pound adult. For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc.

NOTE / WARNING: The nutritional support/dietary suggestions outlined, are primarily designed for mild to moderate symptomatology. It should be noted that if the patient is on prescription medication, and the patient’s intent is to reduce or discontinue the prescribed medication, it should be stressed that the prescribing physician needs to be informed, and ideally should participate in any changes in the prescription dosing.

Dietary Consideration

Mediterranean-type Diet. As mentioned above, diet and the nutrient density of the foods we consume, are inextricably ed to conditions such as heart disease, obesity, and diabetes. However what we consume, and the nutrient/phytonutrient density of what we consume, also seems to have significant implications for the brain. Unhealthy diets are also directly connected to increased risk for psychiatric and neurologic conditions such as depression and dementia, whereas healthy diets seem to be protective. A 2009 study found that people who follow Mediterranean dietary patterns—a diet high in fruits, vegetables, nuts, whole grains, fish, and unsaturated fat (common in olive oil and other plant oils)—are up to 30% less likely to develop depression than those who

typically consume meatier, dairy-heavy fare. *Ach Gen Psychiatry*. 2009;66:1090-1098 •• See attached article below.

Nutritional Formula Description & Supplementation Rationale

Individualized **Wellness Essentials™** formula Choose from seven personalized support formulas providing base nutritional support with essential fatty acids and phyto-nutrients. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas formulated to target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. The nutrient/phytonutrient density of what we consume (or lack thereof) has significant implications for the brain. Unhealthy diets are directly connected to increased risk for psychiatric and neurologic conditions such as depression and dementia, whereas healthy diets seem to be protective.

Omega-3 Fatty Acids / EPA-DHA / Fish Oils and Healthy Mental Function

Population studies performed by renowned psychiatric researcher Joseph Hibbeln, M.D. and others draw strong connections between “low intake of omega-3 fatty acids and increased risk of depression, anxiety, and related mood disorders.” –Omega-3 fatty acids: evidence basis for treatment and future research in psychiatry. *J Clin Psychiatry*. 2006 Dec;67(12):1954-67. “A relative deficiency of omega-3s and high tissue levels of omega-6s are both associated with depression, differences in mood, anti-social behavior, neuroticism, and impulsivity.” –

Cognitive function and omega-6 and omega-3 fatty acid balance. Individual Abstract Number: 1734. American Psychosomatic Society 65th Annual Meeting. Budapest, Hungary —March 7-10, 2007. [Accessed online March 8, 2007 at <http://www.psychosomatic.org/events/2007APSabstractsforjournal.pdf>] “Healthy 18- to 25-year-olds at the top of their “cognitive game” can enhance their working memory even further by increasing their intake of omega-3 polyunsaturated fatty acids (n-3 PUFA).” “This is the first study that shows that a dietary supplement (or, in fact, any treatment) improves this important cognitive ability in highly functional healthy young adults”...”indicating that diet plays a role in the cognitive abilities of young healthy adults,” Dr. Moghaddam said. “Diet is not just about weight but can have a fundamental influence on brain function even in young healthy individuals.” –The study was published online October 3, 2012 in *PLoS One*.

D3 5000

D3 5000 features 2000 IU of vitamin D3, the most bioavailable form of vitamin D. (It is advisable to run a “25-(OH)D” serum vitamin D test. If the patient is significantly compromised, increase the vitamin D3 dose. Consider utilizing the **D3 10,000™ with K2** formula.) Increased levels of Vitamin D (serotonin agonist and cortisol antagonist) and full spectrum light have been associated with improved mood.

Depression, and Seasonal Affective Disorder (SAD)

The Importance of Vitamin D (See Neurotransmitters)

Research studies have documented an association between low serum levels of vitamin D and higher incidences of mood disorders: PMS, Seasonal Affective Disorder (SAD), anxiety, non-specified mood disorder, and major depressive disorder. In Seasonal Affective Disorder (SAD), which is a particular subtype of depression characterized by the onset or exacerbation of melancholia during winter months when bright light, sun exposure, and serum 25(OH)D levels are reduced, vitamin D was found superior to light therapy. Increased levels of vitamin D (serotonin

agonist) and full spectrum light have been associated with improved mood. Researcher Pamela K. Murphy, PhD, at the Medical University of South Carolina says people can help manage their moods by getting adequate vitamin D daily.

- Elaine Magee, MPH, RD —WebMD Feature, May 05, 2012.

- Vitamin D3 is believed to enhance mood in healthy subjects during winter. Lansdowne A. T., & Provost S. C. *Psychopharmacology (Berl)*. 1998;135(4):319-23.

- Vitamin D vs broad spectrum phototherapy in the treatment of seasonal affective disorder. *J Nutr Health Aging*. 1999;3(1):5-739.

- The clinical importance of vitamin D (CHOLECALCIFEROL): A paradigm shift with implications for all healthcare providers. —*Alternative Therapies*, Sept/Oct. 2004, Vol. 10, No. 5.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor in anyway intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

UltraFlora™ Spectrum/ The Microbiome Brain Gut Axis

The microbes (probiotic flora) that live in our gastrointestinal tract not only influence how we digest food, absorb drugs, and produce hormones, but they can also interact with our new system to affect our brains. Together the various interactions between microbes and the brain are called the “microbiome–gut–brain axis.” Understanding this axis could have profound implications for our understanding of psychiatric disorders and our nervous system. For example, depression is now known to involve an inflammatory response, and many beneficial bacteria in the gut produce short chain fatty acids like butyrate, which help feed the cells lining the gut to reduce inflammation. Very recently, the microbiome has been tied to depression in humans, with the discovery that certain bacteria in the gut (in particular *Oscillibacter*) produce a chemical that acts as a natural tranquilizer, mimicking the action of the neurotransmitter GABA, which calms nervous activity in the brain and can lead to depression. It is common knowledge that changing your diet can change your mood. Because changing your diet also changes microbes, it is entirely possible that some of these effects have a microbial component.

- Bercik, P. The microbiota-gut-brain axis: Learning from intestinal bacterial? *GUT*. 60. no.3 (March 2011): 288-89.

- Cryan, J. F., & O’Mahony, S. M. The microbiome-gut-brain axis: From bowel to behavior. *Neuro-gastroenterology and Motility: The Official Journal of the European Gastrointestinal Motility Society*. 23, no. 3 (March 2011): 187-92.

Blisphora™

Blisphora is a formula featuring clinically effective levels of SAME (s-adenosine L-methionine), a compound native to the body that is a critical component of many biochemical reactions and plays an important role in supporting positive emotions. This powerful formula combines significant levels of body-ready folate (the next generation of folate with improved bioavailability) and vitamin B12 (an easy-to-absorb methylcobalamin) to support SAME metabolism, methylation, and healthy neurotransmitter synthesis for a balanced mood. Foil-wrapped, enteric-coated tablets ensure product stability.

SeroSyn™

SeroSyn is designed to support a positive mood and a restful, relaxed state through beneficially modulating the metabolism of serotonin. This formula features clinically effective levels of 5-HTP and Theanine per daily serving. What we eat influences our mental and neurologic health. Our understanding of how diet affects the brain has grown significantly.

Depression Dietary Considerations

Research from the past several years suggests that consumption of monounsaturated fatty acids (found in olive oil, avocados, and nuts), polyunsaturated fatty acids (PUFAs: found in nuts, seeds, fish, and leafy green vegetables), and supplements containing Eicosapentanoic acid (EPA) decreases depression risk over time.[1-3]. To that end, adhering to Mediterranean diet patterns—specifically, a diet rich in fruits, vegetables, nuts, whole grains, and fish and high in unsaturated fat is associated with a 30% reduction in depression risk, compared with meat and dairy heavy diets and diets high in trans-fatty acids; intake of the latter is associated with an increased depression risk over time.[4] Conversely, low levels of PUFAs may increase the risk of developing postpartum depression, according to a 2012 literature review published in the Canadian Journal of Psychiatry.[5] Keep in mind, however, that although there is strong evidence of an association between diet and depression, most studies to date have not proven causality, supporting the need for large, randomized primary prevention trials.[6]

Rethinking Fat/PUFA

Beyond reducing depression risk, the unsaturated fatty acids common in the Mediterranean diet have other benefits for the brain. A 2012 review published in Pediatrics reported on the evidence of PUFA deficiency to attention-deficit/hyperactivity disorder, as well as findings from trials where these fats were used successfully to address ADHD symptoms.[7]. Another small study showed that increasing omega-3 fatty acid consumption is believed to enhance working memory in young adults.[8]. Previous work has tied Mediterranean diets high in olive oil consumption with a lower risk for ischemic stroke, mild cognitive impairment, and Alzheimer disease; and particularly the latter two when associated with high levels of physical activity.[9,10], [11,12]

Go With the Salmon

As long as one is not hypersensitive (through IgG and IgG4 and Touch For Health Applied Kinesiology Muscle Response Tests to salmon cold-water fish like salmon, trout, and mackerel are especially good sources of PUFAs, namely omega-3 fatty acids. According to a 2012 study, 2 servings a week are associated with a modest but clinically significant reduction in stroke risk.[13]. A 2010 study suggested that consuming a moderate amount of oily fish was protective against the risk for psychotic symptoms; however, greater intakes were associated with an increased risk.[14] This J-shaped relationship between fish or PUFA intake and mental health problems has also been suggested by other studies and is consistent with the importance of a balanced diet.[15,16].

Fish Oil and Preventing Psychosis. However, concurrent work from randomized controlled trials has suggested that fish oil may help prevent psychosis in high-risk individuals.[17] A multicenter, randomized double-blind study is under way to determine whether omega-3 fatty acid supplementation can help prevent the onset of psychosis and improve symptoms and outcomes in those at high risk for schizophrenia.

Fruit to Fend Off Stroke

2012 was a good year for fruit. An analysis from the Nurses' Health Study found that high consumption of flavanones, a flavonoid subclass found in high concentrations in grapefruits and oranges, is associated with a 19% lower risk for ischemic stroke in women. [18] A Finnish study,

published in *Neurology* reported that a diet high in lycopene, a potent antioxidant found in tomatoes, may cut stroke risk in men.[19]

Polyphenols. Previous work has shown that polyphenols, namely anthocyanins, found in berries and other darkly pigmented fruits and vegetables may slow cognitive decline by inducing autophagy (a process by which cells clear proteinaceous debris to memory loss) and reduce cardiovascular disease risk by reducing oxidative stress and attenuating inflammatory gene expression.[20-22] Each of these studies points to the importance of a healthy diet high in plant foods and low in processed foods for a range of health outcomes, both physical and mental.

Cut the Soda, Keep Up the Coffee

2012 saw more evidence that coffee might be the original wonder drug. A new observational study, to be presented at the American Academy of Neurology meeting in March, shows that people who drink 4 cups of coffee a day are 10% less likely to develop depression.[23] Those who opted for 4 or more servings a day of diet soda or fruit punch were 30% and 38% more likely, respectively, to develop depression. Past work also suggests that the world's most widely used stimulant cuts depression risk, possibly by altering serotonin and dopamine activity and through its antioxidant and anti-inflammatory properties.[24-27]

Alcohol: Always in Moderation

The Greeks touted “nothing in excess,” a refrain that still rings true: Low to moderate* alcohol consumption has been associated with numerous potential physiologic benefits with neurologic implications, including improved cholesterol profiles, beneficial effects on platelet and clotting function, and improved insulin sensitivity.[28] Last year a study found that limited alcohol use is associated with a lower risk for dementia and that moderate alcohol—especially antioxidant-rich red wine intake may protect against cerebrovascular disease.[28,29], [30-32] A new study published in *Circulation Research* found that dealcoholized Merlot reduced blood pressure by approximately 6/3 mm Hg in a sample of 67 men at high cardiovascular risk, suggesting that the beneficial effects of wine consumption may not strictly be due to its alcohol content.[33] However, the health costs to the brain of alcohol consumption can quickly outweigh the benefits, as heavy and long-term alcohol use can lead to alcohol abuse and dependence, impair memory function, contribute to neurodegenerative disease, and hinder psychosocial functioning. *The US Food and Drug Administration defines “moderate alcohol consumption” as up to 1 drink per day for women and up to 2 drinks per day for men. One drink is equivalent to 12 fluid ounces of regular beer, 5 fluid ounces of 12% alcohol wine, or 1.5 fluid ounces of distilled spirits.

Chocolate — and Still More Antioxidants

Many recent studies have added to the already robust body of evidence suggesting that dark, flavonol-rich chocolate may have cardiovascular benefits. A meta-analysis published in *Cochrane Database of Systematic Reviews* reported that individuals who consumed 100 grams of dark chocolate every day (a standard Hershey bar weighs 43 grams), saw an average blood pressure drop of 2.77/2.20 mm Hg compared with control participants.[34] A study out of Finland, published in *Neurology* reported that individuals who eat at least 52 grams of chocolate per week have a 17% lower risk for stroke, compared with those who eat less than 12 grams per week.[35] The flavonols in dark chocolate likely contribute to the reported benefits by scavenging free radicals and improving endothelial and platelet function. But always check the label, as some processed chocolate contains trans-fats, which should be avoided.

What Not to Eat: Cut the Carbs / Prevent Metabolic Syndrome

Various 2012 studies further clarified how overly sweet, unhealthy foods affect the brain. An animal study, out of UCLA found that diets high in fructose can impair cognitive function, which

is reversible with omega-3 fatty acid supplementation.[36] Coauthor Fernando Gomez-Pinilla, PhD, told Medscape Medical News, “High fructose consumption can induce some signs of metabolic syndrome in the brain and can disrupt the signaling of the insulin receptors and reduce the action of insulin in the brain.” Other work published in JAMA suggests that fructose consumption modulates the neurophysiologic pathways involved in appetite regulation and encourages overeating.[37] An October 2012 study published in the Journal of **Alzheimer’s Disease**, reported that a diet high in carbohydrates and sugar raises the risk for mild cognitive impairment in the elderly, while a diet high in fat and protein may reduce this risk.[38] Lead author Rosebud O. Roberts, MD, an epidemiologist at Mayo Clinic in Rochester, Minnesota commented to Medscape Medical News that an “optimal balance” of carbohydrates, fat, and protein may help “maintain neuronal integrity and optimal cognitive function in the elderly.”

Red Meat. Mounting evidence in 2012 reinforces that high consumption of red meat increases stroke risk. The largest meta-analysis to date looking at the atherogenic effects of red meat found that the risk for total stroke increased by up to 13% for each increase in a single serving of fresh, processed, and total amount of red meat consumed per day.[39] Earlier in the year another study found that processed and unprocessed red meat is associated with a higher risk for stroke, while poultry was associated with a reduced risk.[40]

Fruits, Vegetables, Grains, and Fish. A study by Sánchez-Villegas and colleagues found that a diet high in fruits, vegetables, grains, and fish led to a 30% lower depression risk compared with a meaty diet.[4] But, meat quality might be a factor: moderate consumption of unprocessed, free-range/ grass-fed red meat may actually protect against depression and anxiety.[41] Mental health nutrition expert Dr. Felice Jacka, a research fellow at Deakin University in Geelong, Australia, comments in this report that despite the growing locavore movement, much of the livestock in the United States is raised on industrial feedlots, which “...increases saturated fat and decreases very important good fatty acids...pasture-raised animals have a much healthier fatty acid profile.”

Références

- Sánchez-Villegas A., Verberne L., De Irala J., et al. Dietary fat intake and the risk of depression: the SUN project. *PLoS One*. 2011;6:e16268.
- Sánchez-Villegas A., Toledo E., de Irala J., Ruiz-Canela M., Pla-Vidal J., & Martínez-González M. A. Fast-food and commercial baked goods consumption and the risk of depression. *Public Health Nutr*. 2012;15:424-432.
- Sublette M. E., Ellis S., Geant A. L., & Mann J. J. Meta-analysis of the effects of Eicosapentanoic acid (EPA) in clinical trials in depression. *J Clin Psychiatry*. 2011;72:1577-1584.
- Sánchez-Villegas A., Delgado-Rodríguez M., Alonso A., et al. Association of the Mediterranean dietary pattern with the incidence of depression: the Seguimiento Universidad de Navarra/University of Navarra follow-up (SUN) cohort. *Arch Gen Psychiatry*. 2009;66:1090-1098.
- Pierre J. M. Mental illness and mental health: Is the glass half empty or half full? *Can J Psychiatry*. 2012;57:704-712
- Sanchez-Villegas A., & Martinez-Gonzalez M. A. Diet, a new target to prevent depression? *BMC Med*. 2013;11:3. [Pub ahead of print]
- Millichap J. G., & Yee M. M. The diet factor in attention-deficit/hyperactivity disorder. *Pediatrics*. 2012;129:330-337.

- Narendran R., Frankle W. G., Mason N. S., Muldoon M. F., & Moghaddam B. Improved working memory but no effect on striatal vesicular monoamine transporter type 2 after omega-3 polyunsaturated fatty acid supplementation. *PLoS One*. 2012;7:e46832.
- Fung T. T., Rexrode K. M., Mantzoros C. S., Manson J. E., Willett W. C., & Hu F. B. Mediterranean diet and incidence of and mortality from coronary heart disease and stroke in women. *Circulation*. 2009;119:1093-1100.
- Kastorini C. M., Milionis H. J., Ioannidi A., et al. Adherence to the Mediterranean diet in relation to acute coronary syndrome or stroke nonfatal events: A comparative analysis of a case/case-control study. *Am Heart J*. 2011;162:717-724.
- Scarmeas N., Stern Y., Mayeux R., Manly J. J., Schupf N., & Luchsinger J. A. Mediterranean diet and mild cognitive impairment. *Arch Neurol*. 2009;66:216-225.
- Scarmeas N., Luchsinger J. A., Schupf N., et al. Physical activity, diet, and risk of Alzheimer disease. *JAMA*. 2009;302:627-637.
- Chowdhury R., Stevens S., Gorman D., et al. Association between fish consumption, long chain omega-3 fatty acids, and risk of cerebrovascular disease: Systematic review and meta-analysis. *BMJ*. 2012 Oct 30;345:e6698.
- Hedelin M., Löf M., Olsson M., et al. Dietary intake of fish, omega-3, omega-6 polyunsaturated fatty acids, and vitamin D and the prevalence of psychotic-like symptoms in a cohort of 33000 women from the general population. *BMC Psychiatry*. 2010;10:38.
- Sanchez-Villegas A., Henriquez P., Figueiras A., et al. Long chain omega-3 fatty acids intake, fish consumption, and mental disorders in the SUN cohort study. *Eur J Nutr*. 2007;46:337-346.
- Jacka F. N., Pasco J. A., Williams L. J., Meyer B. J., Digger R., & Berk M. Dietary intake of fish and PUFA, and clinical depressive and anxiety disorders in women. *Br J Nutr*. 2012 Oct 10:1-8. [Pub ahead of print]
- Amminger G. P., Schäfer M. R., Papageorgiou K., et al. Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders: A randomized, placebo-controlled trial. *Arch Gen Psychiatry*. 2010;67:146-154.
- Cassidy A., Rimm E. B., O'Reilly E. J., et al. Dietary flavonoids and risk of stroke in women. *Stroke*. 2012;43:946-951.
- Karppi J., Laukkanen J. A., Sivenius J. Serum lycopene decreases the risk of stroke in men. *Neurology*. 2012;79:1540-1547.
- Brooks M. New mechanism for berries' potential brain benefits uncovered. *Medscape Medical News*. August 31, 2010. <http://www.medscape.com/viewarticle/727764>. Accessed January 10, 2013.
- Polouse S. Berry extracts and brain aging: Clearance of toxic protein accumulation in brain via induction of autophagy. Program and abstracts of the 240th National Meeting of the American Chemical Society; August 22-26, 2012; Boston, Massachusetts. Abstract 60.
- Basu A., Rhone M., & Lyons T. J. Berries: Emerging impact on cardiovascular health. *Nutr Rev*. 2010;68:168-177.
- Chen H. Sweetened beverages, coffee, and tea in relation to depression among older US adults. American Academy of Neurology 65th Annual Meeting; March 16-23, 2013; San Diego, California. Abstract 2257.
- Lucas M., Mirzaei F., Pan A., et al. Coffee, caffeine, and risk of depression among women. *Arch Intern Med*. 2011;171:1571-1578.
- Pasco J. A., Nicholson G. C., Williams L. J., et al. Association of high-sensitivity C-reactive protein with de novo major depression. *Br J Psychiatry*. 2010;197:372-377.

- Ng F., Berk M., Dean O., & Bush A. I. Oxidative stress in psychiatric disorders: Evidence base and therapeutic implications. *Int J Neuropsychopharmacol.* 2008;11:851-876.
- O'Connor A. Coffee drinking ed to less depression in women. *New York Times.* February 13, 2012. <http://well.s.nytimes.com/2011/09/26/coffee-drinking-ed-to-less-depression-in-women/> [Accessed January 11, 2013.]
- Wayerer S., Schäufele M., Wiese B., et al; German AgeCoDe Study group (German Study on Ageing, Cognition and Dementia in Primary Care Patients). Current alcohol consumption and its relationship to incident dementia: Results from a 3-year follow-up study among primary care attenders aged 75 years and older. *Age Ageing.* 2011;40:456-463.
- Peters R., Peters J., Warner J., Beckett N., & Bulpitt C. Alcohol, dementia and cognitive decline in the elderly: A systematic review. *Age Ageing.* 2008;37:505-512.
- De Gaetano G., Di Castelnuovo A., Rotondo S., Iacoviello L., & Donati M. B. A meta-analysis of studies on wine and beer and cardiovascular disease. *Pathophysiol Haemost Thromb.* 2002;32:353-355.
- Matos R. S., Baroncini L. A., Précoma L. B., et al. Resveratrol causes antiatherogenic effects in an animal model of atherosclerosis. *Arq Bras Cardiol.* 2012;98:136-142.
- Bertelli A. A., & Das D. K. Grapes, wines, resveratrol, and hearth health. *J Cardiovasc Pharmacol.* 2009;54:468-476.
- Chiva-Blanch G., Urpi-Sarda M., Ros E., et al. Dealcoholized red wine decreases systolic and diastolic blood pressure and increases plasma nitric oxide: Short communication. *Circ Res.* 2012;111:1065-1068.
- Ried K., Sullivan T. R., Fakler P., et al. Effect of cocoa on blood pressure. *Cochrane Database Syst Rev.* 2012; DOI: 10.1002/14651858. CD008893.pub2
- Larsson S. C., Virtamo J., & Wolk A. Chocolate consumption and risk of stroke: A prospective cohort of men and meta-analysis. *Neurology.* 2012;79:1223-1229.
- Agrawal R., & Gomez-Pinilla F. Metabolic syndrome in the brain: Deficiency in omega-3 fatty acid exacerbates dysfunctions in insulin receptor signaling and cognition. *J Physiol.* 2012;590:2485-2499.
- Page K. A., Chan O., Arora J., et al. Effects of fructose vs glucose on regional cerebral blood flow in brain regions involved with appetite and reward pathways. *JAMA.* 2013;309:63-70, 85-86.
- Roberts R. O., Roberts L. A., Geda Y.E., et al. Relative intake of macronutrients impacts risk of mild cognitive impairment or dementia. *J Alzheimers Dis.* 2012;32:329-339.
- Kaluza J., Wolk A., & Larsson S. Red meat consumption and risk of stroke. *Stroke.* 2012;43:2556-2560.
- Bernstein A. M., Pan A., Rexrode K. M., et al. Dietary protein sources and the risk of stroke in men and women. *Stroke.* 2012;43:637-644.
- Jacka F. N., Pasco J. A., Williams L. J., et al. Red meat consumption and mood and anxiety disorders. *Psychother Psychosom.* 2012;81:196-198.

Osteoarthritis / Degenerative Joint Disease (DJD)

Osteoarthritis (OA) is the most common form of arthritis. It is a joint disease caused by the breakdown of cartilage—the firm, rubbery tissue that cushions bones at joints. Healthy cartilage allows bones to glide over one another and cartilage absorbs energy from the shock of physical movement. In OA, cartilage breaks down and wears away. As a result, the bones rub together causing pain, swelling, and stiffness. OA may also limit the range of motion in affected joints. Most often, OA develops in the hands, knees, hips, and spine. The disease affects men and women

nearly equally. More than 20 million people in the United States have OA. Symptoms tend to appear when individuals are in their fifties and sixties.

Signs and Symptoms

- Joint pain (often a deep, aching pain) that is worsened by movement and improved with rest (in severe cases, a person may experience constant pain)
- Stiffness in the morning or after being inactive for more than 15 minutes
- Joint swelling
- Joints that are warm to the touch
- Crunching or crackling noise when the joint moves (crepitation)
- Limited range of motion
- Muscle weakness and postural alterations
- Abnormal growth of bony knobs near joints which cause deformities (such as Heberden's nodes, in which bumps appear on the outermost finger joints)

Causes

Most of the time, the cause of OA is unknown. It is primarily a disease due to aging. However, metabolic, genetic, chemical, nutritional irregularities and mechanical factors can play a role in its development.

Risk Factors

- Increasing age
- Genetic predisposition
- Obesity
- Injury to the joint including spinal injuries and/or hereditary back and joint issues.
- History of inflammatory joint disease
- Metabolic or hormonal disorders (such as hemochromatosis and acromegaly)
- Bone and joint disorders present at birth
- Repetitive stressful joint use (such as with certain occupations like baseball, ballet dancing, and construction work)

Postural issues especially the feet in that if they are either supinated (turned in) or pronated (turned out) then the gait issues cause structural malalignment in the feet, ankles, knees, hip and up through the spine and shoulders,

Diagnosis

There is no single test to diagnose OA, so most doctors use a combination of methods to diagnose the disease and rule out the possibility of other causes. A physical exam that includes Touch For Health Applied Kinesology Muscle Response Test can show limited range of motion, grating of a joint with motion, joint swelling, and tenderness. An x-ray of affected joints will show loss of the joint space and, in advanced cases, wearing down of the ends of the bone and bone spurs.

The following measures may reduce the risk of developing OA:

- Protecting an injured joint from further damage
- Interventional Chiropractic Care, exercising, Touch For Health Applied Kinesology Muscle Response Test based massage, Myofascial Release and Neuro Muscle Skeletal Reeducation.
- Losing weight if there exists obesity.
- Avoiding excessive repetitive motions
- Providing proper nutritional support

Treatment Approach

The goals of treatment are to relieve pain, maintain or improve joint mobility, increase the strength of the joints, and minimize the disabling effects of the disease. The specific treatment depends upon the affected joints. A combination of conventional treatment and complementary and alternative medicine (CAM) may be most effective. Lifestyle approaches, including exercise, and many alternative medical therapies are becoming more popular and are considered safe and effective for the treatment OA. Several natural remedies are at least as effective as conventional medication for symptom relief, and may help keep the disease from getting worse. Americans spend more on natural remedies for OA than for any other medical condition. In 1997, researchers conducted various surveys and found that anywhere from 26-100% of patients with painful conditions of the muscles, tendons, joints, and bones had tried some form of complementary and alternative medicine.

Some approaches for treating OA include:

- Reducing physical stress on the joint (lose weight and improve posture)
- Lifestyle changes (particularly exercise)
- Supplements including S-adenosylmethionine (SAMe), glucosamine, chondroitin, MSM, green-lipped mussel, type II collagen complex, and antioxidants
- Herbs with anti-inflammatory properties including ginger, turmeric, boswellia, black pepper, devil's claw, white willow bark, and capsaicin (cream)
- Acupuncture
- Chiropractic based on Touch For Health Applied Kinesology Muscle Response Test
- Physical therapy and magnet therapy
- Yoga
- Tai chi

Nutritional Supplementation Options for Osteoarthritis / Degenerative Joint Disease (DJD)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes Touch For Health Applied Kinesology Muscle Response Test in their whole person health and wellness care will have expertise in giving counsel. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

Mild to Moderate

Consider:

- **Wellness Essentials Active.**
- **D3 5000™** if documented by the serum vitamin D test.
- **OsteoVantiv™.**

Severe

Add to above protocol:

- **UltraInflamX® Plus 360**

Additional Considerations

Thin, flexible shoes reduce stress on OA knees according to a study in Arthritis Rheum., published online April 10, 2013. "Shoes that mimic walking barefoot may reduce mechanical stress and help protect the knees of patients with osteoarthritis (OA). OA patients who wore the "mobility shoe"

for at least 6 hours per day for up to 6 months had improved gait and reduced knee loading. The lightweight, flat, flexible shoes do not have to be customized for each patient. They have grooves at major flexion points to allow for natural, ‘barefoot-like’ movement.”

If bone on bone the possibility of knee surgery

Dietary Considerations

- Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale Mild to Moderate Wellness Essentials Active

Advanced Daily Nutrition for Joint Support. Targeted to appeal to weekend warriors or just individuals concerned with joint flexibility, mobility, and cartilage health. Each daily packet contains:

- **1 PhytoMulti™**—Multivitamin/mineral with phytonutrient potential for cell protection and DNA stability verified by in vitro ORACFN and comet assays.

- **1 Kaprex®**—Features selective kinase response modulators (SKRMs) in the form of tetrahydro-iso-alpha acids (THIAA) to modulate kinase activity in favor of a balanced inflammatory response and good health.

- **1 Glucosamine Sulfate 750™**—Additional glucosamine with the goal of helping rebuild and maintain the integrity of the cartilage matrix, which is crucial for healthy joint function. A randomized controlled clinical trial has “provided support for the suggestion raised in the 2008 Glucosamine/Chondroitin Arthritis Intervention Trial (GAIT) that glucosamine plus chondroitin sulfate might provide clinically significant pain relief for patients with moderate to severe knee osteoarthritis (OA) pain.” Ann Rheum Dis. Published online January 14, 2015 Regular use of glucosamine, chondroitin, or fish oil supplements reduces high-sensitivity C-reactive protein (hs-CRP) by 16-22%, a marker of inflammation, according to a study published online November 8, 2012, in Am J Epidemiol. A number of studies have found that fish oil helps reduce symptoms of arthritis, including joint pain and morning stiffness. One study suggests that people with arthritis who take fish oil may be able to lower their dose of non-steroidal anti-inflammatory drugs (NSAIDs). Berbert A. A., Kondo C. R., Almendra C. L. et al. Supplementation of fish oil and olive oil in patients with rheumatoid arthritis. Nutrition. 2005;21:131-6

D3 5000™

D3 5000 features 5000 IU of vitamin D3—the most bioavailable form of vitamin D. According to a 2012 study published in Arthritis Rheum., low levels of vitamin D increases the risk for osteoarthritis pain.

OsteoVantiv™

OsteoVantiv is a novel combination of UC-II (indentured type-II collagen) and THIAA (Tetrahydro-Iso-Alpha Acids from hops [Humulus Lupulus L.] cone extract), clinically proven to help revitalize healthy joint function and support a healthy, active lifestyle.

Severe

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

UltraInflamX® Plus 360

UltraInflamX PLUS 360° is formulated to provide specialized nutritional support—including reduced iso-alpha acids (RIAA, from hops), L-glutamine, and easily digestible rice protein—for patients experiencing inflammation and pain.

- Features selective kinase response modulators (SKRMs) in the form of RIAA, which has been shown to beneficially influence the function of enzymes involved in inflammatory processes.
- RIAA has demonstrated potent antioxidant activity and research suggests that it may help improve overall redox status through influencing inflammation signaling molecules such as NF-κB, COX-2, and PGE2.
- Includes ginger and rosemary, which may help support healthy eicosanoid and cytokine metabolism.
- Provides turmeric extract, which has been shown in research to inhibit the activities of a wide variety of enzymes, cytokines, eicosanoids, and reactive species implicated in pain and inflammation.
- Supplies a low-allergenic potential protein base in the form of rice protein concentrate.

Pain / Inflammation Management

The sensation we feel as pain is a feeling triggered in the nervous system and is produced through a number of complex biochemical interactions. These interactions can be likened to a battle between the good guys, the body's natural pain relieving force, and the bad guys, the pain producers. When the good guys are winning the battle, we are not bothered by pain. But when the bad guys begin winning, the resulting pain can make us miserable! People who have a higher pain threshold may have a stronger natural pain relieving force. If you are bothered by pain, it may be time to call for the nutritional reinforcements to come to the rescue! Certain nutritional factors protect and support the body's natural pain relieving force (the good guys). They can be invaluable reinforcements in winning the battle against pain. If you want to win that battle, consider the following information carefully.

Remember: Pain or pain relief may depend on your nutrition!

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes Touch For Health Applied Kinesiology Muscle Response Test whole person health and wellness care will have expertise in giving counsel.

Acute Pain / Inflammation Management

Within the first 72 hours of the injury — Proteolytic Enzymes: “Studies suggest that patients who received proteolytic enzymes showed reduced swelling, pain, and inflammation and experienced faster recovery rates.” Trickett, P. Proteolytic enzymes in treatment of athletic injury. Appl Ther. 1964;30:647652.

Options but keep in mind the following are not proposed as treatments and that if you contemplate on becoming involved with any of them we encourage you to discuss them with your medical doctor and a nutritionally oriented chiropractic physician. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

- **Protrypsin®.**

– OR –

- **Inflamase™.**

Herbal Pain / Inflammation Support:

- **Inflavonoid Intensive Care®.**

– OR –

- **Herbal Eze.**

Chronic Pain / Inflammation Management

The discovery of endorphins and the inhibition of pain transmission by tactile signals has provided a scientific explanation for the effectiveness of such techniques as nutrition, chiropractic care, and acupuncture in the control of pain.

- **UltraInflamX® Plus 360**

- **D3 10,000 with K2.** NOTE: The suggested nutritional support program.

Dietary Considerations

- **Anti-Inflammatory Diet**

Additional considerations:

Avoid pain medication as it causes the following:

- Bleeding or upset stomach/intestines
- Bone and cartilage destruction in arthritis
- Interference with the healing of bones/joints
- Decreased levels of some of the body's own natural pain relieving agents

Pain / Inflammation Management 391

Nutritionnel Formula Description & Supplementation Rationale

Protrypsin®

Protrypsin is a proteolytic enzyme formula designed to support tissue health and regeneration.

- Provide premium-grade chymotrypsin and trypsin—enzymes that support tissue health and balanced eicosanoid synthesis.

- Every batch of raw material is carefully manufactured in a moisture and pH-controlled environment and is independently assayed to ensure maximum enzyme potency. Where traumatic swelling and/or bruising are present. Some consider it to be used with Inflavonoid I.C. / Herbal Eze or by itself when acute injury has caused a great deal of tissue damage, inflammation, and lymphatic congestion. (Enzymatically breaks down the accumulation of dead cells/tissues that proposedly slows healing and puts pressure on nerve endings creating pain.)

Studies suggest that patients who received proteolytic enzymes showed reduced swelling, pain, and inflammation and experienced faster recovery rates.”

- Tricket, P. Proteolytic enzymes in treatment of athletic injury. Appl Ther. 1964;30:647652.

Inflamase™ Believed to be a potent anti-inflammatory substance is A-Chymotrypsin.

Chymotrypsin. Although many supplements have Chymotrypsin-Trypsin combinations, only Inflamase contains pure A-Chymotrypsin along with Bromelain, SOD, and Catalase. These enzymes will circulate freely until they are impaired by this fibrin blockage. At this point they adhere to and break down the fibrin which is believed to help restore drainage to inflamed tissues. Where traumatic swelling and/or bruising are present. To be used with Inflavonoid I.C. /

Herbal ParaCleanse Eze or by itself when acute injury has caused a great deal of tissue damage, inflammation, and lymphatic congestion. (Enzymatically breaks down the accumulation of dead cells/tissues that is formulated to slow healing and puts pressure on nerve endings creating pain.)

Studies suggest that patients who received proteolytic enzymes showed reduced swelling, pain, and inflammation and experienced faster recovery rates.”

- Tricket, P. Proteolytic enzymes in treatment of athletic injury. Appl Ther. 1964;30:647652.

Inflavonoid Intensive Care®

Inflavonoid Intensive Care is formulated to provide relief from minor pain and support healthy joints and muscle tissue and for patients whose joints and/or muscles are impacted by physical stressors, poor posture, and even inactivity and formulated T also:

- Support healthy eicosanoid synthesis such as prostaglandins, thromboxanes, and leukotrienes that can affect muscle, joint, and connective tissue.
- Provide Ayurvedic herbs traditionally used to support healthy joints and muscle tissue.
- Provide lemon bioflavonoids and vitamin C, which help to protect connective tissues from damaging free radicals.
- Features an extract of boswellia, as well as turmeric and ginger; all premium quality and standardized to key compounds to ensure effectiveness, reproducibility, and consistent results.
- Provide cayenne, an herb that has long been prized for its many health benefits such as the relief of minor pain, which complements the activity of the other herbs.
- Offers added antioxidant support from quercetin.
- Provide excellent muscle tissue support and relief of minor pain following intense exercise.

Herbal Eze

Herbal Eze is formulated to enhance the potential value of Touch For Health Applied Kinesology Muscle Response Tests thus be collaborative in providing relief from minor pain and support healthy joints and muscle tissue and for patients whose joints and/or muscles are impacted by physical stressors, poor posture, and even inactivity. Herbal Eze is a blend of herbal ingredients to improve joint health. Recent studies indicate that 5-LOXIN® may do this by reducing pro-inflammatory modulators and enzymatic degradation of cartilage. Traditional medicine considers curcumin to be the most healing herb on earth and studies have shown that Bioperine® increases the bioavailability of curcumin by 2000%. Health Benefits:

- A safe, and effective pain reliever
- An anti-inflammatory
- Improvement in physical functioning
- A potent antioxidant

UltraInflamX® Plus 360

UltraInflamX Plus 360 is a multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation.

Potential Benefits Of Resolution Based Nutrition

For decades, blocking initiation-phase pro-inflammatory mediators (e.g., prostaglandins) or enzymes (e.g., COX-2 enzyme) by pharmacological agents such as nonsteroidal anti-inflammatory drugs (NSAIDs) has been the go-to therapy for many acute and chronic inflammatory conditions. However, anti-inflammation is not the same as pro-resolution. Because initiation phase activities are required to “jump start” resolution, traditional COX-2 and lipoxigenase inhibitors may delay resolution activities and undermine the body’s attempt to return to homeostasis and tissue healing. Unresolved inflammation and unhealed tissue can lead to fibrosis that can impair organ function. Thus, an important key to controlling/resolving inflammation and subsequently preventing chronic inflammatory conditions lies in SPMs and their pro-resolving properties that switch an inflammatory response toward resolution and homeostasis. That SPMs are enzymatically produced from long-chain PUFA (especially EPA and DHA) in tissue exudates indicates the indispensable role of nutrition in regulating inflammation and promoting resolution.

D3 10,000 with K2

Deficiency of vitamin D is common among people with inflammatory and autoimmune disorders and those with prolonged critical illness. D3 10,000 with K2 provides 10,000 IU per softgel of vitamin D (as D3), designed for greater absorption. This high potency formula also includes bioavailable forms of vitamin K2 to complement vitamin D.

References

- *Majno, G., & Joris, I. (2004). Cells, Tissues and disease: Principles of general pathology. Oxford University Press: USA.*
- *Giugliano, D., Ceriello, A., & Esposito, K. The effects of diet on inflammation: Emphasis on the metabolic syndrome. J Am Col Cardiol. 2006;48:677-685.*
- *Recchiuti, A. Immunoresolving lipid mediators and resolution of Inflammation in aging. J Gerontol Geriat Res. 2014;3:151.*
- *Nathan, C., & Ding, A. Nonresolving inflammation. Cell. 2010;140:871-882.*
- *Tabas, I., & Glass, C. K. Anti-inflammatory therapy in chronic disease: Challenges and opportunities. Science. 2013;339:166-172.*
- *Libby, P. Atherosclerosis: The new view. Sci Am. 2002;286:46-56.*
- *Mushtaq, G., Khan, J. A., Kumosani, T. A., & Kamal, M. A. Alzheimer's disease and type 2 diabetes via chronic inflammatory mechanisms. Saudi J Biol Sci. 2015;22:4-13.*
- *Fuentes, E., Fuentes, F., Vilahur, G., Badimon, L., & Palomo, I. Mechanisms of chronic state of inflammation as mediators that obese adipose tissue and metabolic syndrome. Mediators Inflamm. 2013;2013:136584.*
- *Parmeggiani, F., Romano, M. R., & Costagliola, C., et al. Mechanism of inflammation in age-related macular degeneration. Mediators Inflamm. 2012;2012:546786.*
- *Franceschi, C. Inflammaging as a major characteristic of old people: Can it be prevented or cured? Nutr Rev. 2007;65:S173-176.*
- *Lawrence, T., Willoughby, D. A., & Gilroy, D. W. Anti-inflammatory lipid mediators and insights into the resolution of inflammation. Nat Rev Immunol. 2002;2:787-795.*
- *Samuelsson, B., Dahlen, S. E., Lindgren, J. A., Rouzer, C. A., & Serhan, C. N. Leukotrienes and lipoxins: Structures, biosynthesis, and biological effects. Science. 1987;237:1171-1176.*
- *Spite, M., Claria, J., & Serhan, C. N. Resolvins, specialized proresolving lipid mediators, and their potential roles in metabolic diseases. Cell Metab. 2014;19:21-36.*
- *Serhan, C. N. Pro-resolving lipid mediators are leads for resolution physiology. Nature. 2014;510:92-101.*
- *Serhan, C. N., Brain, S. D., & Buckley, C. D., et al. Resolution of inflammation: State of the art, definitions and terms. Faseb J. 2007;21:325-332.*
- *Serhan, C. N. A search for endogenous mechanisms of anti-inflammation uncovers novel chemical mediators: Missing s to resolution. Histochem Cell Biol. 2004;122:305-321.*
- *Maddox, J. F., Hachicha, M., & Takano, T., et al. Lipoxin A4 stable analogs are potent mimetics that stimulate human monocytes and THP-1 cells via a G protein-ed lipoxin A4 receptor. J Biol Chem. 1997;272:6972-6978.*
- *Ariel, A., Fredman, G., & Sun, Y. P., et al. Apoptotic neutrophils and T cells sequester chemokines during immune response resolution through modulation of CCR5 expression. Nat Immunol. 2006;7:1209-1216.*
- *Schwab, J. M., Chiang, N., Arita, M., & Serhan, C. N. Resolvin E1 and protectin D1 activate inflammation-resolution programmes. Nature. 2007;447:869-874.*
- *Chiang, N., Fredman, G., & Backhed, F., et al. Infection regulates pro-resolving mediators that lower antibiotic requirements. Nature. 2012;484:524-528.*

- Serhan, C. N., & Savill, J. *Resolution of inflammation: The beginning programs the end.* *Nat Immunol.* 2005;6:1191-1197.
- Levy, B. D., Clish, C. B., Schmidt, B., Gronert, K., & Serhan, C. N. *Lipid mediator class switching during acute inflammation: Signals in resolution.* *Nat Immunol.* 2001;2:612-619.
- Hong, S., Gronert, K., Devchand, P. R., Moussignac, R. L., & Serhan, C. N. *Novel docosatrienes and 17S-resolvins generated from docosahexaenoic acid in murine brain, human blood, and glial cells. Autacoids in anti-inflammation.* *J Biol Chem.* 2003;278:14677-14687.
- Serhan, C. N., Clish, C. B., & Brannon, J., et al. *Novel functional sets of lipid-derived mediators with anti-inflammatory actions generated from omega-3 fatty acids via cyclooxygenase 2-nonsteroidal anti-inflammatory drugs and transcellular processing.* *J Exp Med.* 2000;192:1197-1204.
- Serhan, C. N., & Petasis, N. A. *Resolvins and protectins in inflammation resolution.* *Chem Rev.* 2011;111:5922-5943.
- Serhan, C. N. *Lipoxins and aspirin-triggered 15-epi-lipoxins are the first lipid mediators of endogenous anti-inflammation and resolution.* *Prostaglandins Leukot Essent Fatty Acids.* 2005;73:141-612.
- Serhan, C. N. *Novel lipid mediators and resolution mechanisms in acute inflammation: To resolve or not?* *Am J Pathol.* 2010;177:1576-1591.
- Serhan, C. N., & Chiang, N. *Resolution phase lipid mediators of inflammation: Agonists of resolution.* *Curr Opin Pharmacol.* 2013;13:632-640.
- Navarro-Xavier, R. A., Newson, J., & Silveira, V. L., et al. *A new strategy for the identification of novel molecules with targeted proresolution of inflammation properties.* *J Immunol.* 2010;184:1516-1525.
- Chan, M. M., & Moore, A. R. *Resolution of inflammation in murine autoimmune arthritis is disrupted by cyclooxygenase-2 inhibition and restored by prostaglandin E2-mediated lipoxin A4 production.* *J Immunol.* 2010;184:6418-6426.

Parathyroid Disorders (Hypoparathyroidism or Hyperparathyroidism)

Most people have four pea-sized glands called parathyroid glands on the thyroid gland in the neck. Though their names are similar, the thyroid and parathyroid glands are completely different. The parathyroid glands synthesize parathyroid hormone (PTH), which helps your body keep the right balance of calcium and phosphorous. If your parathyroid glands make too much or too little hormone, it disrupts this balance. If they secrete extra PTH, you have hyperparathyroidism, and your blood calcium rises predisposing you to kidney stones. In many cases, a benign adenoma (growth) on one or more of the four parathyroid glands that are tucked on the sides of the thyroid gland makes it overactive. Or, the extra hormones can come from enlarged parathyroid glands.

Very rarely, the cause is cancer. If you do not have enough PTH, you are a risk of having and/or developing hypoparathyroidism. In the situation of hypoparathyroidism your blood will tend toward having an imbalanced calcium to phosphorus ratio (too little calcium and too much phosphorous). This should remind us that when it comes to minerals the body must have them in certain biochemical ratios which are influenced by the foods we eat, the mineral based food supplements we take and the integrity of the glandular related activities.

Causes

Causes include injury to the glands, endocrine disorders, or genetic conditions, and diet. Treatment is aimed at restoring the balance of calcium and phosphorous.

The Parathyroid Glands Regulators of Blood Calcium

There are four parathyroid glands, located near each of the two lobes of the thyroid gland. The parathyroid(4 of them that reside at the upper and lower sides of the parathyroid gland) produce parathyroid hormones that regulate blood levels of calcium necessary for strong bones and teeth, nerve function, and blood clotting.

Hypoparathyroidism is a rare disorder associated with insufficient production of parathyroid hormone, the inability to make a usable form of parathyroid hormone, or the inability of kidneys and bones to respond to parathyroid hormone production. A deficiency (Hypothyroidism) of parathyroid hormone lowers blood calcium levels and raises phosphate levels.

Hypoparathyroidism may either be inherited or acquired; the acquired form usually results from parathyroid surgery or an underlying disorder such as cancer or neck trauma. How is that? In the situation of the parathyroid glands the nerves that come from the spinal cord in that region innervate the parathyroid gland therefore if there are issues within the cervical spine then there is a predisposition to parathyroid malfunction.

Signs & Symptoms of Hypoparathyroidism.

Hypoparathyroidism is often accompanied by the following signs and symptoms:

- Muscle spasm or cramping, typically in hands, feet and spine.
- Convulsions
- Cataracts
- Hair loss
- Dry skin or malformed nails
- Anxiety
- Abnormal sensations such as numbness, tingling, or burning, especially around the mouth and fingers
- Candidiasis (Candida albicans yeast infection) in cases resulting from autoimmune polyglandular syndrome, type I

The following signs and symptoms often appear in children with hypoparathyroidism:

- Poor tooth development
- Vomiting
- Headaches and backaches
- Mental deficiency – ADD/ADHD

What Causes Hypoparathyroidism?

Hypoparathyroidism results from a variety of causes, as listed below:

Underdeveloped parathyroid glands at birth. Medical treatment (radiation to thyroid gland, drug treatment, thyroid or parathyroid surgery). An underlying medical condition such as cancer, neck trauma resulting in improper nerve innervation and blood supply to the parathyroid glands, Wilson's disease (high level of copper in tissues), an excess of iron in tissues, low levels of magnesium.

Who's Most At Risk?

People with the following conditions or characteristics are at risk for developing hypoparathyroidism:

- Genetic factors
- Medications that suppress the parathyroid gland such as asparagine, doxorubicin, cytosine arabinoside, cimetidine, and preparations containing aluminum
- Surgery or removal of the parathyroid gland
- Extensive radiation to, or removal of, the thyroid gland.

Diagnosis

Other than the above related symptoms the following should be considered:

1. Ultrasound of the parathyroid glands
2. Radiographic isotopic (Sestamibi) scan of the parathyroid glands
3. Touch For Health Applied Kinesiological Muscle Response Testing
4. Urinalysis
5. PTH (Parathyroid Hormone) blood test
6. Bone Mineral Density Test

Treatment Considerations

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment, prevention or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

A lifelong regimen of dietary and/or supplemental calcium and vitamin D is usually required to restore calcium and mineral balance but before embarking on those (any food supplements it is a good idea to:

1. Consult a licensed health care provider who has expertise in that realm
2. Consider have a Interventional Chiropractic care including Applied Kinesiology evaluation
3. Have a Blood Profile test that includes your electrolytes, and vitamin D, and T3 and T4.

Acute Phase

In the acute phase of hypoparathyroidism, calcium will be administered intravenously; diuretics may be prescribed in that circumstance as well to prevent over excretion of calcium in the urine and to reduce the amount of calcium and vitamin D needed.

Nutritional Supplementation Options to Normalize Parathyroid function;

- **Para Thyrolate®.**
- **D3 5000™** if indicated by serum analysis.
- **Cal Apatite® Bone Builder® with Magnesium.**
- **Chloroplex™.**
- Appropriate **Wellness Essentials®** Formula.

Dietary Considerations

- Consider a low-glycemic index Mediterranean-type diet — FirstLine® Therapy Diet Program.
- Eliminate all potential food allergens including dairy, wheat (gluten), soy, corn, preservatives, and food additives. Your health care provider may want to test for food sensitivities.
- Eat calcium-rich foods including beans, almonds, and dark green leafy vegetables (such as spinach and kale).
- Avoid refined foods such as white breads, pastas, and sugar.
- Eat fewer red meats (preferably grass-fed beef) and more lean meats, cold water fish, or beans for protein.
- Use healthy cooking oils such as olive oil or vegetable oil.

- Reduce or eliminate trans-fatty acids found in commercially baked goods such as cookies, crackers, cakes, and donuts. They are also found in French fries, onion rings, processed foods, and margarine.
- Limit carbonated beverages. They are high in phosphates, which can leach calcium from your bones.
- Avoid coffee and other stimulants, alcohol, and tobacco.
- Drink 6-8 glasses of filtered water daily.
- Exercise moderately at least 30 minutes daily, 5 days a week.

Hyperparathyroidism

There are four parathyroid glands, located behind the two lobes of the thyroid gland. The parathyroid glands produce the hormone that regulates blood levels of calcium and phosphate, minerals necessary for strong bones and teeth.

Primary hyperparathyroidism is characterized by interference of nerve innervation and blood supply designed to come forth from the cervical spine, the an over production of parathyroid hormone, which, in turn, results in an elevation of calcium levels in the blood often predisposing the body to attempt to eliminate the calcium in the urine as kidney stones.

Signs & Symptoms of Hyperparathyroidism

“At least 50% of patients with primary hyperparathyroidism have no symptoms, and approximately 1% of cases go undiagnosed. “The vast majority of cases occur in people with no family history of the disorder. Only about 5% of cases can be ed to an inherited problem. Familial multiple endocrine neoplasia type 1 is a rare, inherited syndrome that affects the parathyroid as well as the pancreas and the pituitary gland. Another rare genetic disorder, familial hypocalciuric hypercalcemia, is sometimes confused with typical hyperparathyroidism. Each accounts for about 2% of primary hyperparathyroidism cases.” NIH: National Institute of Diabetes and Digestive and Kidney Diseases. When symptoms do occur, they are generally attributable to persistently high levels of calcium and may include:

- Generalized back and joint pain
- Bone loss leading to osteopenia and osteoporosis
- Muscle weakness
- Abdominal discomfort
- Heartburn
- Nausea and vomiting
- Constipation
- Lack of appetite
- Ulcers
- Pancreatitis (inflammation of the pancreas)
- Kidney stones
- Excessive thirst
- Excessive urination
- Depression
- Anxiety
- Memory loss
- Excessive drowsiness

What Causes Hyperparathyroidism?

- Primary hyperparathyroidism may develop as a result of one of the following conditions:

- Single or multiple benign tumors (adenomas) in the parathyroid glands
- Parathyroid hyperplasia (excessive growth of normal parathyroid cells)
- Parathyroid malignancies (rare)
- Certain endocrine disorders, such as type I and II multiple endocrine neoplasia (MEN) syndrome
- Diet soft drinks, due to their high phosphate content, are a precipitating factor for calcium loss, this is considered “Nutritionally-Induced Secondary Hyperparathyroidism”

Diagnosis

Other than the above related symptoms the following should be considered:

1. Ultrasound of the parathyroid glands
2. Radiographic isotopic (Sestamibi) scan of the parathyroid glands
3. Applied Kinesiological Muscle Response Testing
4. Urinalysis
5. PTH (Parathyroid Hormone) blood test
6. Bone Mineral Density Test

“**Nutritionally-Induced Secondary Hyperparathyroidism**” is diet/lifestyle-induced hyperparathyroidism. The high phosphorus content in the diet induces a “secondary hyperparathyroidism,” which mobilizes calcium from hard tissue.

“**Lifestyle factors** like alcohol consumption and a high phosphorus intake can displace calcium or increase its urinary excretion. Soft drinks, due to their high phosphate content, are a precipitating factor for calcium loss leading to osteoporosis. Smoking, carbonated drinks, caffeine (which leaches minerals from the body), and antacids (which impair mineral digestion and absorption) all increase the risk of osteoporosis.”•• Nguyen, T. V., et al. Lifestyle factors and bone density: Implications for osteoporosis prevention. *J. Bone Res.* 1994;9(9): 1339.

“**Soft drink consumption may have adverse effects on bone mineral density (BMD)**, but studies have shown mixed results. In addition to displacing healthier beverages, colas contain caffeine and phosphoric acid (H₃PO₄), which may adversely affect bone. Intake of cola, but not of other carbonated soft drinks, is associated with low BMD in women.”

•• Tucker, K. L., et al. Colas, but not other carbonated beverages, are associated with low bone mineral density in older women: The Framingham Osteoporosis Study. *Am J Clin Nutr.* 2006;84:936–42.

Parathyroid Disorders (Hypoparathyroidism or Hyperparathyroidism) 397
 “Long-term consumption of caffeinated and uncaffeinated soft drinks appears to have bone catabolic effects in boys and girls. This effect is mainly mediated by the negative association with total protein intake and is not primarily based on milk displacement.”

•• Libuda, L., et al. Association between long-term consumption of soft drinks and variables of bone modeling and remodeling in a sample of healthy German children and adolescents. *Am J Clin Nutr.* 2008;88:1670–7.

Who’s Most At Risk?

People with the following conditions or characteristics are at risk for developing primary hyperparathyroidism:

- Age: incidence increases with age (but the disease can also affect children)
- Gender: affects twice as many women as men resulting in related issues originating in the cervical spine.
- Genetic endocrine problems (MEN syndromes)

Nutritional Supplementation Considerations to Normalize Parathyroid Function

NOTE: The outlined nutritional support below, although appropriate for “Primary Hyperparathyroidism,” is primarily focused for “Nutritionally-Induced Secondary Hyperparathyroidism” (see description above).

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **Para Thyrolate®.**
- **D3 5000™** if indicated by serum analysis.
- **Cal Apatite® Bone Builder® with Magnesium.**
- Chloroplex™ .
- Appropriate **Wellness Essentials®** Formula.

Dietary Considerations

- Consider a low-glycemic index, Mediterranean-type diet — FirstLine Therapy Diet Program
- Eliminate all potential food allergens, including dairy, wheat (gluten), soy, corn, preservatives, and food additives. Your health care provider may want to test for food sensitivities.
- Unless otherwise advised consider eating calcium-rich foods, including beans, almonds, and uncooked dark green leafy vegetables (such as spinach and kale). Why uncooked? Heat converts the calcium in green leafy vegetables to calcium oxalate crystals (kidney stones).
- Avoid refined foods, such as white breads, pastas, and sugar.
- Eat fewer red meats (preferably grass-fed beef) and more lean meats, cold water fish, or beans for protein.
- Use healthy cooking oils, such as olive oil or vegetable oil.
- Reduce or eliminate trans-fatty acids, found in commercially baked goods such as cookies, crackers, cakes, and donuts. They are also found in French fries, onion rings, processed foods, and margarine.
- Limit carbonated beverages. They are high in phosphates, which can leach calcium from your bones.
- Avoid coffee and other stimulants, alcohol, and tobacco.
- Drink 6-8 glasses of filtered water daily.
- Exercise moderately at least 30 minutes daily, 5 days a week.

References

- Hyperparathyroidism, University of Maryland Medical Center. Accessed at: <http://umm.edu/health/medical/altmed/condition/hyperparathyroidismixzz3ZITszQu6>
 - Bilezikian, J. P., Marcus, R., & Levine, M. (Eds.). (2001). *The Parathyroids*. (2nd ed.). Academic Press.
 - Marx, S. J. Hyperparathyroid and hypoparathyroid disorders. *New England Journal of Medicine*. 2000;343:1863-75.
 - Favus, M. J., et al. (Eds.). (2003). *Primer on the metabolic bone diseases and disorders of mineral metabolism*. (5th Ed.). An official publication of the American Society of Bone and Mineral Research. Philadelphia: Lippincott-Raven.
 - Bilezikian, J. P., Potts, J. T., & El-Hajj Fuleihan, G., et al. Summary statement from a workshop on asymptomatic primary hyperparathyroidism: A perspective for the 21st century. *Journal of Bone Mineral Research*. 2002;17(Supp 2): N2-N11.
- 398 Parathyroid Disorders (Hypoparathyroidism or Hyperparathyroidism)

Nutritional Formula Description & Supplementation Rationale

Para Thyrolate®

Para Thyrolate is designed to help normalize calcium and phosphorus metabolism by virtue of its parathyroid component. Also, thyroid growth and repair factors and iodine are provided. The parathyroid glands, through parathormone hormone, balance the two-way exchange of calcium between bone and blood. Calcium is stored in bone in the form of calcium phosphate. A rise in serum phosphorus is accompanied by a reduction in serum calcium. High parathormone levels can lead to the development of brittle bones, lassitude, loss of appetite, kidney stones, upper abdominal pain, nausea, vomiting, and other digestive disorders. Low parathormone levels can lead to tetany (“pins and needles” sensation), Raynaud’s disease, epilepsy, angina pains, cataracts, anxiety, listlessness, and even psychosis.

D3 5000™

Vitamin D3 to support optimal metabolism of vitamin D to its active form. Physiologic requirement for vitamin D in adults is at a minimum 5000 IU daily.

“In conclusion, long-term replacement of vitamin D deficiency with vitamin D in various commonly prescribed preparations effectively reduced circulating PTH levels. This approach may be helpful in patients with mild primary hyperparathyroidism and in patients who are not willing to undergo surgery or have medical contraindications.”•• Rao, R. R., et al. Prolonged treatment with vitamin D in postmenopausal women with primary hyperparathyroidism. *Endocr Connect.* 2012.

Cal Apatite® Bone Builder® with Magnesium

Cal Apatite Bone Builder with Magnesium provides advanced, bioactive support for healthy bone mineralization with microcrystalline hydroxyapatite concentrate (MCHC)—a calcium-rich, bone-derived supplement that provides a full spectrum of highly absorbable macro- and trace minerals, type 1 collagen protein, the intact portion of bone, and bioactive bone growth factors. Cal Apatite Bone Builder with Magnesium features an exclusive, freeze-dried MCHC that ensures higher levels of intact bone growth factors than other MCHC formulas. This unique formula provides optimized levels of vitamin D and a blend of three forms of magnesium to achieve a 2:1 calcium to magnesium ratio. **NOTE:** “In patients with primary hyperparathyroidism (PHPT), a low calcium intake might cause increased bone loss and thus aggravate osteoporosis, and a high intake might increase serum calcium level and the risk of nephrolithiasis. Most patients with mild PHPT and a low calcium intake tolerate a moderate calcium supplement. This may have beneficial effects on the bones, but the patients must be followed carefully.”

•• Jorde, R., et al. The effects of calcium supplementation to patients with primary hyperparathyroidism and a low calcium intake. *Eur J Nutr.* 2002, Dec;41(6):258-63.

Chloroplex™

Chloroplex is concentrated chlorophyllin, a semi-synthetic sodium/copper derivative of chlorophyll. In contrast to chlorophyll, chlorophyllin is water-soluble. Chlorophyllin, like chlorophyll, has deodorizing activity, is a well-established promoter of cell health, and it eliminates toxins and toxic manifestations. **Appropriate Wellness Essentials® Formula** Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

Parkinson's Disease

A chronic progressive CNS (Central Nervous System) disorder characterized by slowness of purposeful movement, resting tremors, and muscle rigidity, loss of spine and other joint ranges of motion. Also called "Parkinsonism" and "Paralysis Gaitanis." Dorland's Medical Dictionary describes the Parkinsonian complex as, "neurologic disorders characterized by hypokinesia, tremors, and muscular rigidity. It typically occurs late in life, although juvenile forms have been described. "

Diagnosis. The diagnosis for the disorder is made from the history and physical examination. Findings upon examinations are mask-like faces, a fenestrating gait, bradykinesia, muscular weakness, poor balance, palmomental reflex, and a positive globella test. Patients often complain about excessive sweating and leg cramps. They may also experience speech loss, memory loss, and mild depression.

Accelerated Loss of Dopamine. The disease and its symptoms result from an accelerated loss of dopamine (a neurotransmitter) from an area in the brain called the substantia nigra. It should be noted that everyone, as they age, will lose dopamine to some degree. Parkinson's signs occur when the amount of dopamine being produced is less than 80%.

Conventional Treatment of this disorder is only palliative; a cure has yet to be discovered. Medicines are directed toward increasing dopamine in the brain, and others are used to counteract the side effects of the primary drugs. Monoamine oxidase B inhibitors, such as Selegiline, have also shown some success. Surgery has been tried in this disorder: A pallidotomy (a dissection of an area of the brain called the pallium) has been used since the 1940s.

Side Effects. Symptomatic relief is expected; however, side effects such as blindness and stroke are possible. A brain pacemaker has been utilized in the attempt to relieve sincere tremors. The patient is typically middle-aged or elderly when symptoms begin. The disease is extremely gradual in progression. In the majority of patients it is not a familial disorder, but occurs randomly. Although the syndrome is well presented in a worldwide distribution and the manifestations are often clearly distinguishable and easily diagnosed, the disease is idiopathic and the pathophysiology poorly understood.

Substantia Nigra. There is usually a loss of cells in the substantia nigra, locus ceruleus, and in other pigmented cells, as well as a decrease in the dopamine levels in the axon terminals of cells connecting the substantia nigra to the caudate nucleus and putamen.

Begins Unilateral and Becomes Symmetrical. The disease initially presents as a unilateral disorder, but in later stages becomes symmetrical. It has an insidious onset, and may not become incapacitating for many years. After World War I, there was an encephalitis outbreak that led to numerous patients developing symptoms almost exactly like Parkinson's, as the same cells that become disordered in Parkinson's were the same ones to be affected by the encephalitis, which is one of the known causes of the disease. Generally, however, only the idiopathic version of the disease is termed Parkinsonism.

Signs and Symptoms

May range from a minor flu-like illness to a severe liver disease ending in hepatic failure and death; there are usually several distinct stages:

Cogwheel Rigidity

This describes the ratchet-like catches that occur when a sufferer's arm is put through passive movements. It is due to the hypertonia of muscles that equally affects opposing muscles.

Lead-pipe Rigidity

This describes another possible presentation of the muscle rigidity and is a general resistance to movement. With either muscle rigidity, there may be pain, cramping, and decreased strength. However, the patient retains normal sensation and reflexes in the limbs. The patient's writing becomes small and hard to read.

Bradykinesia

The patient exhibits a general slowing of all voluntary movements.

Akinesia - The patient exhibits a paucity or even an absence of spontaneous movements associated with the typical animations of a normal individual.

Festinating Gait

This term describes the patient's difficult process for initiating walking from a standing position. The patient takes several small, awkward steps and then breaks into a jog or run to prevent themselves from falling. The typical patient pose during walking includes small, shuffling steps often dragging the feet, a slightly bent over posture, and having the arms in 90 degree flexion, held tightly at sides.

Propulsion or Retropulsion

This describes the patient who falls forward or backward, respectively, upon being pushed.

Fixed Facial Mien

The typical facial expression of the Parkinson patient is one of a fixed, immobile nature, with a monotonous voice. There may be drooling at the corners of the mouth. The eyes stare and do not blink as often as normal.

Resting Tremor

This is the classic tremor of the Parkinson patient. It occurs during rest, and is described as a pill-rolling of the fingers with the hand bent in flexion. It is often unilateral, but may become bilateral. Although it is most pronounced in the hands, it is also seen in the legs, lips, tongue, and eyelids (when they are firmly closed). The tremor disappears upon voluntary movement and during sleep. It worsens with fatigue, emotional stress, and embarrassment, and many patients will try to hide the affected hand by keeping it in their pocket, or by covering it with their unaffected hand during the interview.

Depression. About half of Parkinson patients present with or will develop depression.

Dietary Considerations

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Low Fat and Animal Protein

Symptoms appear to become less severe when patients are placed on low-animal fat / low-animal protein diets. In one study, patients taking L-dopa were placed on a high-protein diet of 1.6 g/kg or a low protein diet of 0.8 g/kg, with most of the protein consumed during the evening meal.

Symptoms, such as tremors, tapping, and amount of time that a patient had difficulty in walking all were reduced in severity on the lower protein diet. Another study that was double-blinded arrived at the same conclusion, i.e., that symptoms become less severe when patients are placed on low-protein diets.

L-dopa. It was also found that these results did not correlate with L-dopa levels. Thus, it was conjectured that high dietary protein influences L-dopa's central nervous system effects, directly or indirectly, as a result of blood-brain barrier interference. Closely monitoring and adjusting L-

dopa dosage may be necessary because the required therapeutic range may become reduced when the dietary protein is raised. Carter, J., et al. Amount and distribution of dietary protein affects clinical response to levodopa in Parkinson's disease. *Neurology* 39:552-556, 1989

Predisposing Foods

In one study, there appeared to be an increased risk of Parkinson's disease that manifested in newly diagnosed patients who consumed diets that are high in animal fat. Gluten sensitivity is also "common in patients with neurological disease of unknown cause and may have aetiological significance." *Lancet*, 347:369-371(1996)

Antioxidant-Rich Diets

There is growing evidence that diets that are high in antioxidants may help to confer some degree of protection against the neurodegenerative processes involved in the progression of Parkinson's disease. Representative of the growing belief behind this hypothesis, a study conducted in the Netherlands demonstrated that a high intake of dietary vitamin E may protect individuals against the occurrence of Parkinson's disease. De Rijk, M. C., et al. Dietary antioxidants and Parkinson's disease: The Rotterdam Study. *Arch Neurol* 54(6): 762-765, 1997

Vitamin D, Coenzyme Q10, and Glutathione precursors (NAC). The findings of a number of studies indicate that Parkinson's disease patients showed significantly higher odds of deficiency, and supplementation of vitamin D, coenzyme Q 10, and glutathione precursors such as an acetylcysteine (NAC), proved beneficial to patients with Parkinson's disease. Nutritional supplementation, diet, and genetics and their impact on Parkinson's disease (PD); a review of studies - *The Original Internist*, March 2015.

Caffeine (Coffee and Black Tea)

Caffeine at doses of 100 mg twice daily for 3 weeks, then 200 mg twice daily for 3 weeks, was found in a recent trial to improve daytime somnolence, severity of motor symptoms, and other features when compared with placebo. Postuma R. B., Lang A. E., Munhoz R. P., et al. Caffeine for the treatment of Parkinson's disease: A randomized controlled trial. *Neurology*. 2012;79:651-658 Findings suggest that a lowered risk of Parkinson's disease was associated with coffee and black tea consumption. – Nutritional supplementation, diet, and genetics and their impact on Parkinson's disease (PD); a review of studies *The Original Internist*, March 2015

Malnutrition

A study carried out by Sheard et al. (2013) found an association between markers of disease severity and malnutrition in Parkinson's disease. The finding of the study suggested that nutritional screening should be done more often in patients with severe PD and especially in PD patients with depression. Markers of disease severity are associated with malnutrition in Parkinson's disease. *PloS One*, 8(3):e57986. do:10.1371

Environmental Factors

A leading hypothesis of the pathogenesis of Parkinson's has associated excessive oxidative damage of the substantia nigra dopamine containing cells. There are currently numerous predisposing etiologies under investigation as either triggering or contributing factors to the onset of Parkinson's disease. Fahn, S., et al. Experience with tranlycypromine in early Parkinson's disease. *J Neural Transm* 52(suppl.):49-61, 1998 Among the most commonly held factors are infections, industrial exposure, pesticides, head injuries, low dietary antioxidant intakes, and not smoking. Although the reason for a greater risk for contracting Parkinson's disease among nonsmokers has yet to be delineated, it may involve differences in premorbid personality traits.

•• Ben-Shlomo, Y. The epidemiology of Parkinson's disease. *Bailliere's Clin Neurol* 6(1): 55-68, 1997.

- Checkoway, H. Epidemiologic approaches to the study of Parkinson's disease etiology. *Epidemiology* 10(3): 327-336, 1999. Occupational exposures to manganese, copper, lead, and iron have been associated with the development of Parkinson's disease. It also appears that organophosphate poisoning can lead to acute, yet reversible Parkinsonism. This sensitivity most likely represents a genetic susceptibility or another type of predisposition.
- Gorell, J. M., et al. Occupational exposure to manganese, copper, lead, iron, mercury, and zinc and the risk of Parkinson's disease. *Neurotoxicology* 20(2-3):239-247, 1999.
- Bhatt, M. H., et al. Acute and reversible parkinsonism due to organophosphate pesticide intoxication: Five cases. *Neurology* 52(7): 1467-1471, 1999. There is no question that environmental factors play a crucial role in the predisposition, development, and progression of Parkinson's disease. Although all the evidence required for the creation of an all-inclusive list of epidemiologic factors has not been made, there is no question that external factors are intimately involved in the etiology of this disease. This is clearly illustrated by a study conducted in 1992 in southwestern Finland with an urban and rural population of 196,864 subjects as a follow-up to a similar study conducted in the same area in 1971. The conclusions reached were that a significant male and rural predominance was present that was not seen in 1971, suggesting a probable environmental causative factor.

References - Assess need for systemic detox program.

- *Fahn, S., et al. Experience with tranylcypramine in early Parkinson's disease. J Neural Transm* 52(suppl.):49-61, 1998.
- *Ben-Shlomo, Y. The epidemiology of Parkinson's disease. Bailliere's Clin Neurol* 6(1): 55-68, 1997.
- *Checkoway, H. Epidemiologic approaches to the study of Parkinson's disease etiology. Epidemiology* 10(3): 327-336, 1999.
- *Gorell, J. M., et al. Occupational exposure to manganese, copper, lead, iron, mercury, and zinc and the risk of Parkinson's disease. Neurotoxicology* 20(2-3):239-247, 1999.
- *Bhatt, M. H., et al. Acute and reversible Parkinsonism due to organophosphate pesticide intoxication: Five cases. Neurology* 52(7): 1467-1471, 1999.
- *Kuopio, A. M., et al. Changing epidemiology of Parkinson's disease in southwestern Finland. Neurology* 52(2): 302-308, 1999.
- *Ghen, M. J. D.O, Ph.D., & Melindez M., N.D. Protocol for Parkinson's disease. American Journal of Natural Medicine Vol.5, No. 9, November 1998.*
- *Werbach, M. Nutritional Influences on Illness. Tarzana: Third Line Press, 1993. Parkinson's to the Use of Statin Medications Dr. Kailash Chand, deputy chairman of the British Medical Association, speaking following research published March 2015 that found those who take the cholesterol-lowering drugs are more than twice as likely to develop Parkinson's disease in later life than those who do not.*

Side Effects of Cholesterol Lowering Drugs. Other studies have shown a link between the cholesterol-lowering drugs and potentially disabling side effects including cataracts, diabetes, muscle pains, fatigue, and memory loss. The professor of neurology at Penn State College of Medicine in Pennsylvania said: "If we blanket prescribe statins to people we could be creating a huge population of people with neurological problems."

Summary

As with so many degenerative conditions, often the difference between the manifestation of a disease or its symptoms is largely dependent on a person's overall wellness and total physical burdens. Examining risk factors of patients with strong family histories of Parkinson's disease or

with early signs of the disorder can allow meaningful changes in one's exposure risks and greatly improve prognosis. Once dietary and environmental variables have been controlled, nutritional and supplementation intervention protocols can improve the quality of life and clinical outcomes for patients who are suffering from Parkinson's disease and other progressive neurodegenerative conditions.

Options For Nutritional Supplementation for Parkinson's Disease

1) General nerve and foundation nutritional support – as we continually advise discuss these options with the medical personnel your consulting with:

- Individualized **Wellness Essentials™** formula
- **CoQ-10**.
- **Neurosol®**.
- **GlutaClear™**.

2) Vitamin D:

- **D3 10,000™ with K2** can be utilized if the serum vitamin D levels are extremely low.

3) Neuroprotection, synaptogenesis, and neural restoration support:

- **Brain Support** —
- Mild conditions
- Moderate conditions
- Severe conditions:

4) Cellular rejuvenation and restoration for neurological conditions:

- **Brain Restore** —
- Mild conditions:
- Moderate conditions:
- Severe conditions:

5) Toxicity concerns:

- **UltraClear RENEW™ & AdvaClear®** — Clear Change Detoxification Program.

Note: Regarding dosing for children

The general recommendations are dosed for an average 150 pound adult. For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc.

Life Style Considerations:

- Check for food allergy/sensitivities with an IgG and IgG4 and Individual Bio Individual Identity Tests. Utilize Chiropractic care in assisting the best possible freedom from circulatory and never impingement transmission in the brain and spinal cord which regulates every cell and function in the body.
- Consider the addition of coconut oil
- Consider the ketogenic diet

Exercise Suggestions

- Walking or Treadmill exercises for cardiovascular fitness; shown to improve gait speed and mobility
- Resistance exercise for improved muscle strength; shown to improve gait speed and mobility

Nutritional Formula Description & Supplementation Rationale

Individualized **Wellness Essentials™** formula

Choose from seven personalized support formulas providing base nutritional support with essential fatty acids and phyto-nutrients.

Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing

formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition.

Omega-3 Fatty Acids

The omega-3 fatty acids are the primary fatty acid that make up the structure of the brain and nervous system, so it would make sense that any “malfunctioning” of the brain/nervous system would benefit by the addition of omega-3 fatty acids (numerous research studies seem to document that theory). The omega-3 fatty acids seem to improve irritability and depression in Parkinson patients (omega-3 essential fatty acids are crucial for behavioral and brain functions).

Magnesium

MedlinePlus notes that magnesium is an essential nutrient responsible for the contraction and relaxation of muscles. Evidence suggests that a localized reduction in the caudate nucleus occurs in patients who are suffering from Parkinson’s and other neurodegenerative diseases. A cellular magnesium level test may provide a more accurate benchmark for checking magnesium supplementation efficacy. Utti, R. J., et al. Regional metal concentrations in Parkinson’s disease, other chronic neurological diseases and control brains. *Can J Neurol Sci* 16(3): 310-314, 1989

CoQ-10

Stabilized, highly absorbable coenzyme Q10 with natural vitamin E and beta carotene. Coenzyme Q10 has been intensively studied in Parkinsonism. Its suggested mechanism of action involves neuroprotection of the nigrostriatal dopaminergic system. A Cochrane Systematic Review identified 4 double-blind, randomized, controlled trials involving 452 patients with Parkinsonism and found improvements in activities of daily living and mobility at 16 months compared with placebo, at a well-tolerated dose of coenzyme Q10.

- Storch A., Jost W. H., Vieregge P., et al. German Coenzyme Q(10) Study Group. Randomized, double-blind, placebo-controlled trial on symptomatic effects of coenzyme Q(10) in Parkinson disease. *Arch Neurol.* 2007;64:938-944. [Abstract].

- Liu J., Wang L., Zhan S. Y., & Xia Y. Coenzyme Q10 for Parkinson’s disease. *Cochrane Database Syst Rev.* 2011;7:CD008150.

Neurosol®

Peripheral Nerve Support. Supplies potent levels of folate and B vitamins to support nervous system function.

B-Complex and Antioxidants

The Henry Spink Foundation suggests taking B-complex supplements to help treat tics because these vitamins work together to naturally tranquilize the nervous system. The University of Maryland Medical Center (UMMC) explains that niacin (also called vitamin B3) helps nerves function properly, while folic acid (also called folate) and vitamin B9 promote nervous system, emotional, and mental health. There is growing evidence that diets that are high in antioxidants may help to confer some degree of protection against the neurodegenerative processes involved in the progression of Parkinson’s disease. De Rijk, M. C., et al. Dietary antioxidants and Parkinson’s disease: The Rotterdam Study. *Arch Neurol* 54(6): 762-765, 1997 “Cerebral folate deficiency is associated with seizure activity in children up to 18 years of age and is also associated with autistic spectrum disorder.” Michael Stone, MD — Great Lakes Conference, Sept. 2013

GlutaClear™

GlutaClear provides a blend of key ingredients designed to help boost the body’s production of glutathione, a primary antioxidant throughout the entire body. Glutathione plays an important role in protecting the body against oxidative stress and detoxifying harmful compounds. Preliminary

research suggests glutathione may also help protect mitochondria—the principle source of cellular energy—from damaging pro-oxidant influences.

Vitamin D:

D3 10,000™ with K2 High Potency, Bioactive Vitamin D with Vitamin K2. Vitamin D deficiency could be considered a pandemic in our country, with even people in the Sun Belt having less than optimal levels. In a recent study reported in the American Journal of Clinical Nutrition 2008, only 22% of the 637 residents of southern Arizona had optimal vitamin D levels. Considered optimal was any 25-hydroxy vitamin D blood level over 30 Ng/ml, which is considered low by many researchers/practitioners. As evidence of widespread vitamin D deficiency grows, some scientists are wondering whether the sunshine vitamin—once only considered important in bone health—may actually play a role in neurologic conditions such as Parkinson’s disease. Prizer L. P., & Browner N. The integrative care of Parkinson’s disease: A systematic review. J Parkinson’s Dis. 2012;2:79-86

Speedier Brain Processing

An article published in Journal of Neurology, Neurosurgery & Psychiatry, May 21, 2009, reported that 3,369 men with higher vitamin D levels performed better on a test of attention and speed of information processing.

Neuroprotection, synaptogenesis, and neural restoration support:

Brain Support

The Brain Support formula contains:

- **Myricetin: Designed to** inhibits “glutamate-mediated excitotoxicity” in the neuron and as assist the body in reducing (destabilizes) both endogenous and overexpressed tau protein levels in cells.
- **Rosmarinic acid:** Reduces key factors:
 - AB-induced neurotoxicity
 - Reactive oxygen species (induced by AB)
 - DNA fragmentation
 - Tau protein hyper phosphorylation
- **Curcumin: Is believed to** inhibits activation of NF-kB and Abeta-induced cell death, inhibits Abeta formation, extension, and destabilizes preformed Abetas. Curcumin also inhibits acetylcholinesterase (AChE) activity.
- **Ferulic acid: Is believed to assist the body in its efforts to** restore glutathione, prevent amyloid-beta induced neurotoxicity, protect against MSG excitotoxicity in the brain.
- **Grape seed proanthocyanidins:** Neuroprotective against Abeta and tau proteins, reduced cerebral amyloid deposition, and attenuated AD-type cognitive deterioration.
- **Green tea epigallocatechin 3-gallate: Is believed to** selectively protect neurons from apoptosis induced by mitochondrial oxidative stress. Cellular rejuvenation and restoration for neurological conditions:

Brain Restore

The Brain Restore formula is designed to provide:

- **GlyceroPhosphatidylCholine (GPC)** is a powerful, natural compound that is believed to improve focus, concentration, contribute to better memory, and maintain healthy brain function during aging.
- **Acetyl-L-Carnitine (ALC)** transports fatty acids into the inner mitochondrial matrix for beta-oxidation and ATP production. It also is believed to facilitate the body’s removal from the inner mitochondria of the excess short- and medium-chain fatty acids that accumulate during fat metabolism.

- **Phosphatidylserine (PS)** is highly concentrated in the cell membranes of brain neurons. PS is believed to stimulate the release of dopamine (mood, physical movement), increases the production of acetylcholine (learning, memory), enhances neuronal glucose metabolism, reduces cortisol levels, and boosts the activity of nerve growth factor.
- **N-acetylcysteine (NAC)** is believed to assist the body in its attempts to replenish intracellular levels of glutathione, help to restore cells' ability to fight damage from reactive oxygen species. Improving neuronal glutathione to reduce oxidative stress and inflammation is a primary necessity. NAC is reported to play possible roles suppresses the 'master signaling molecule' nuclear factor kappaB (NF-kB), which in turn prevents activation of multiple inflammatory mediators.
- **Gamma-tocopherol** is the most abundant form of vitamin E. It is documented to inhibit the pro-inflammatory COX-2 enzyme, and quench reactive oxygen species that occurs in oxidative stress. Glutamate-cysteine ligase, the rate-limiting enzyme in glutathione synthesis, is increased by gamma-tocopherol, and not alpha-tocopherol.
- **Pyridoxine** Vitamin B6 levels is at times especially low in neurodegenerative disease patients and this raised scientific interest in B6's role in supporting cognitive health beginning in 2004. The neuroendocrinology of vitamin B6 interaction has multiple molecular mechanisms.
- **Niacinamide** Vitamin B3 has been reported to have a successful clinical history with neurological conditions including depression, anxiety, schizophrenia, obsessive-compulsive disorder to name a few. Niacinamide is believed to enhance tryptophan conversion to serotonin. We also know that vitamin B3 has a vital in the neuron mitochondria in that when accepted by the body it is believed to assist in stabilizes the mitochondria by protecting against reactive oxygen species, and is also involved in cellular energy processes. The coenzyme nicotinamide adenine dinucleotide (NAD+) is derived from vitamin B3, and is required for reactions in all three phases of energy production: glycolysis, the Krebs's cycle, and Complex I of the electron transport chain. There are also emerging animal studies demonstrating how vitamin B3 enhances NAD+, NADH, and NADPH levels in brain regions. A depletion of NAD+ is associated with DNA fragmentation, and thus neuronal degeneration.
- **5-methyltetrahydrofolate** is the bioactive form of folate that supports methylation and homocysteine metabolism. The synthesis of S-adenosylmethionine (SAME) is intimately ed with folate and vitamin B12 metabolism, and deficiencies of both these vitamins have been found to reduce brain SAME concentrations. Both folate and vitamin B12 deficiency may cause similar neurological and psychiatric disturbances including depression, dementia, myelopathy and peripheral neuropathy. Brain S-adenosylmethionine levels are severely decreased in neurodegenerative disease. Up to half of all Americans may carry a genetic variation that prevents the body, including the brain, from optimally using folic acid. Scientists believe that this genetic polymorphism may be ed with an increased risk of dementia. 5-MTHF can cross the blood-brain barrier and effectively reduce homocysteine. Elevated homocysteine has been ed with cognitive decline and Alzheimer's disease. In a New England Journal of Medicine discussion, the following summary was stated: "An increased plasma homocysteine level is a strong, independent risk factor for the development of dementia and Alzheimer's disease."
- **Methylcobalamin** Cobalamin deficiency principally affects the peripheral nerves, and in later stages may target the spinal cord. Impaired mental function is the usual result, often first manifesting as "slower thinking," confusion, and memory lapses. Even a blood level of vitamin B12 that is moderately below the optimum can result in considerable damage to the brain and nervous system. Low vitamin B12 status can be a modifiable cause of atrophy, and of likely

subsequent cognitive impairment in the elderly. Methylcobalamin is the molecular state that neurons utilize. Vitamin B12 is one of the primary methylating agents that are needed to enhance methylation chemistry that can be impaired due to gene polymorphisms.

Toxicity Concerns:

UltraClear RENEW™ & AdvaClear®

Designed with the goal of playing a significant role in neurodegenerative disorders—such as Parkinson’s Disease. (Remember that the brain and nervous system are approximately 65% plus fat. All toxins that the body is unable to excrete, are stored the fat. Toxins that are stored in the fat portions of the brain and nervous system can significantly impact brain and nerve function, resulting in or contributing to neurodegenerative disorders.)

Some believe that the use of Clear Change Detoxification Program (**UltraClear RENEW & AdvaClear**) as the combination Food Detoxification Program that addresses both the chemical toxicity and the metal toxicity issues associated with neurodegenerative disorders.

Dietary Considerations

- Check for food allergy/sensitivities through Touch For Health Applied Kinesiology Muscle Response Test and IgG (Fixed) and IgG4 Food (Cyclic) Sensitivity that identify which antigens in foods and other environments chemicals cause toxic and inflammatory reactions in the body. Foremost in the natural approach is the use of diet to control inflammation. Combined with those tests should at minimum include a Blood Chemical Screen, CBC, Hair Mineral/Toxic Metal Analysis and a 24 Urine Hormone Analysis
- Consider the addition of coconut oil.
- Consider the ketogenic diet

The dietary addition of a quality, non-hydrogenated, coconut oil is being touted as Neurodegenerative Disorder Remedy. Researchers say the ketones (medium chain triglycerides) found in coconut oil have slowed the progression of neurodegenerative disorders/disease in some people and may actually prevent it.

Note: The rationale for the use of a source of medium chain triglycerides, such as found in coconut oil, is that in the Alzheimer’s disease/Type 3 Diabetes/Dementia/Parkinson’s Disease/Neurodegenerative Disorders patient, the issue is getting glucose (the brain’s primary source of energy for function) into the brain cells (as a result of insulin resistance). The medium chain triglycerides such as found in coconut oil are readily converted into ketones. Ketones are not insulin dependent for uptake into the brain cells for energy, thus bypassing the insulin resistance issue.

Ketones were first discovered in the urine of diabetic patients in the mid-19th century; for almost 50 years thereafter, they were thought to be abnormal and undesirable by-products of incomplete fat oxidation. In the early 20th century, however, they were recognized as normal circulating metabolites produced by the liver and readily utilized by extrahepatic tissues. In the 1920s, a drastic “hyperketogenic” diet was found remarkably effective for treatment of drug-resistant epilepsy in children. In 1967, circulating ketones were discovered to replace glucose as the brain’s major fuel during the marked hyperketonemia of prolonged fasting. Until then, the adult human brain was thought to be entirely dependent upon glucose. During the 1990s, diet-induced hyperketonemia was found therapeutically effective for treatment of several rare genetic disorders involving impaired neuronal utilization of glucose or its metabolic products. Growing evidence suggests that mitochondrial dysfunction and reduced bioenergetic efficiency occur in brains of patients with Parkinson’s disease (PD) and Alzheimer’s disease (AD). “Because ketones are efficiently used by mitochondria for ATP generation and may also help protect vulnerable neurons

from free radical damage, hyperketogenic diets should be evaluated for ability to benefit patients with PD, AD, and certain other neurodegenerative disorders.” Nutr Rev. 2003 Oct;61(10):327-41

Ketogenic Foods

<http://www.keto.org/foods.htm>>

The ketogenic diet has been effectively used for 50 years to control pediatric seizures and to promote weight loss. Most recently it has been effectively used to treat cancer and Parkinson’s disease.

The general guidelines include lean meats, green vegetables, and non-caloric natural beverages like coffee and tea.

•• **Safe Foods (No Carbs/Trace Carbs)** – Generally Beef, Steak, Hamburger (low fat), Prime Rib, Filet Mignon, Roast Beef, Chicken, Duck (broiled and skinless if tolerable) Tuna, Salmon, Trout, Halibut, Lamb, Eggs, Shrimp, Crab, Lobster, Butter, Oils (Olive Oil, Flaxseed Oil, etc.), Mustard, Salt, Pepper, Soy Sauce, Tea, Coffee, Cream

•• **Minimal Carb Foods (Limited Quantities Only, Check Carb Content!)** — Broccoli, Spinach, Lettuce, Cabbage, Bok Choy, Kale, Asparagus, Mustard Greens, Mushrooms, Cucumbers, Pickles, Olives, Celery, Green Beans, Brussel Sprouts, Cauliflower, Artichokes, Peppers (Red, Green, Jalapeno, Habanero), Onions, Nuts, Flaxseeds, Oysters, Abalone, Protein Powders

•• **Higher Carb Foods (Very Limited Quantities! None for Cancer)** — Grapefruit, Lemons, Limes, Strawberries, Olives, Raspberries, Blackberries, Kiwis, Half-N-Half

Chiropractic Spinal Manipulation and Massage Gentle Touch For Health Applied Kinesiology Muscle Response Therapy; spondylo therapy to increase circulation to spinal cord, check and align atlas, axis of spine (only adjust atlas 2-3 times, check parasympathetic [cervical, sacrum]), massage, acupuncture, Myofascial Release, Neuro/Muscle Skeletal Reeducation and exercise.

Hydrotherapy: Constitutional hydrotherapy should be applied two to five times weekly. Crushed ice wrapped in wet towels applied to spastic muscles for 10 minutes followed by exercise; cold (50° F) immersion of spastic extremity for 10 minutes followed by exercise.

Aromatherapy: Rub affected part with mixture of 95 percent olive oil and 5 percent essence of juniper or

Exercise Suggestions

In patients with Parkinson’s disease (PD), the onset of gait impairment is ed with functional decline, according to Shulman and colleagues (Mov Disord. 2008;23:790-796). Toth and colleagues (Neurology. 1997;48:88-91) report that patients with PD have reduction in physical activity and fitness. However, a systematic review by Goodwin and colleagues (Mov Disord. 2008;23:631-640) found that physical training improved PD-related function. Exercise can improve gait speed, muscle strength, and fitness in patients with PD, according to results of a randomized controlled trial. “Both treadmill exercise and resistance exercise improve symptoms of PD, but different types of exercise improve different symptoms, “first author Lisa M. Shulman, MD, professor of neurology, University of Maryland School of Medicine, Baltimore. “Treadmill exercise improved cardiovascular fitness, resistance exercise improved muscle strength, and both treadmill and resistance exercise improved gait speed and mobility.” November 5, 2012 in the Archives of Neurology.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today
1. Go to www.nutri-dyn.com
2. Click on Create Account
3. Click on Patients
4. Complete the short form and type in the following Account Number 100160
5. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Peripheral Artery (Arterial) Disease (PAD) and Claudication /Atherosclerosis

Peripheral Artery (Arterial) Disease (PAD) happens when there is a narrowing of the blood vessels outside of your heart. The cause of PAD is atherosclerosis. This happens when plaque, a substance made up of fat and cholesterol, builds up on the walls of the arteries that supply blood to the arms and legs. The plaque causes the arteries to narrow or become blocked. This can reduce or stop blood flow, usually to the legs, causing them to hurt or feel numb. If severe enough, blocked blood flow can cause tissue death. If this condition is left untreated, a foot or leg may need to be amputated. A person with PAD also has an increased risk of heart attack, stroke, and transient ischemic attack. You can often stop or reverse the buildup of plaque in the arteries with dietary changes, nutrition, exercise, and efforts to lower high cholesterol levels and high blood pressure. The latest American Heart Association statistics report that approximately eight million patients in the United States are affected with PAD, including 12-20% of individuals older than age 60, with an even larger number remaining undiagnosed. Thus the total PAD burden is estimated to be as high as 12-14 million in the U.S. alone. Inflammation, endothelial cell dysfunction, and defective

nitric oxide metabolism contribute to the development of the atherosclerotic plaque, which is a hallmark of PAD. In simple terms, PAD is a circulatory condition in which the extremities do not receive adequate blood flow due to narrowed arteries.

People who have PAD are at increased risk for Coronary Heart Disease, and PAD is a common co-morbidity of type 2 diabetes.

Many researchers believe that atherosclerosis is caused by damage to the innermost layer of the artery known as the endothelium. High blood pressure, elevated LDL (“bad”) cholesterol, an abnormal accumulation of homocysteine (an amino acid produced by the human body), tobacco smoke, diabetes, hormonal changes following menopause, and infection are all thought to contribute to endothelial damage. Once the endothelium is damaged, it becomes easier for fats, cholesterol, cellular waste products, calcium, and other substances to become deposited in the artery wall. This buildup thickens the endothelium significantly. As a result, the diameter of the artery shrinks, blood flow decreases, and oxygen supply is dramatically reduced. Blood clots may also form on top of the plaque or damaged endothelium, thereby blocking the artery and completely cutting off blood supply. Because many people do not have the classic risk factors of atherosclerosis (such as cigarette smoking and high blood pressure), it is possible that there may be other contributing factors or causes of atherosclerosis, such as inflammation from an infection or autoimmune disease. *What is claudication?* Claudication is pain in the calf, thigh, or hip muscle that occurs after you have walked a certain distance, such as a block or more. The pain stops after you rest for a while. Each time the pain occurs, it takes about the same amount of time for the pain to go away after you stop walking.

How are PAD and claudication related? Claudication occurs because not enough blood is flowing to a muscle you are actively using. PAD can cause the artery that normally supplies blood to the muscle to become narrow. When that happens, less blood can flow through the artery. When you’re resting, enough blood flows to the muscle to meet the needs of the muscle. However, when you walk, the working muscle needs more blood. The narrowed artery may not let enough blood through.

Risk Factors

- Male gender
- Lowered levels of the hormone estrogen following menopause
- Older age
- High blood pressure
- High LDL (“bad”) cholesterol and/or high triglycerides
- Elevated homocysteine levels
- Low HDL (“good”) cholesterol
- Family history of atherosclerosis (which may be related to learned behavior rather than genetic factors)
- Cigarette smoking and regular exposure to second-hand smoke
- Diabetes mellitus
- Insulin resistance
- Obesity, particularly in the abdominal region
- Sedentary lifestyle
- Diets high in saturated fat and trans fatty acids
- Stress
- Depression

Treatment Approach

Atherosclerosis shows no symptoms until a complication (such as chest pain or a heart attack) occurs. For this reason, lifestyle choices such as achieving and maintaining a normal weight, lowering blood pressure and cholesterol, exercising regularly, quitting smoking, and reducing stress are all important steps in preventing atherosclerosis. Once a complication occurs, however, surgery and other procedures may be required to remove plaque from clogged arteries or to create a detour around a blocked artery. Healthy diets designed to lower cholesterol, blood pressure, and excess body weight such as the Mediterranean Diet, are essential in the treatment of atherosclerosis. The Mediterranean Diet is comprised of whole grains, fresh fruits and vegetables, fish, olive oil, and moderate, daily wine consumption. Unlike the American Heart Association diets, the Mediterranean Diet is not low in all fats; it is low in saturated fat but high in monounsaturated fatty acids. In a long-term study of 423 patients who suffered a heart attack, those who followed a Mediterranean Style Diet had a 50% to 70% lower risk of recurrent heart disease compared with controls who received no special dietary counseling.

Avoid Tobacco Products. If you smoke tobacco products Stop Smoking. Cigarette smoking acutely increases the heart rate and arterial blood pressure and may therefore affect the pattern of arterial blood flow. Using a non-invasive ultrasound technique, cigarette smoking was shown to increase arterial wall stiffness and to alter the pattern of arterial blood flow. These effects may help to explain why smoking and some other factors favor the development of atherosclerosis.

Nutritional Supplementation Considerations for Peripheral Artery (Arterial) disease (PAD)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes Touch For Health Applied Kinesology Muscle Response Test in her/his whole person health and wellness care will have expertise in giving counsel

- **ArginCor™**
- Appropriate **Wellness Essentials®** Formula
- **D3 5000™**

Dietary Options

- **FirstLine Therapy®** Diet, a modified Mediterranean-style, low glycemic load diet

Nutritional Formula Description & Supplementation Rationale

ArginCor™

ArginCor is formulated to provide specialized nutritional support for patients with peripheral artery disease. It provides high quality L-arginine, magnesium, folate, and beet powder to increase nitric oxide production to support circulation and heart muscle function.

- Features enhanced levels of L-arginine to support healthy nitric oxide production and blood flow.
- Provides magnesium to support healthy muscle contraction and relaxation.
- Adequate magnesium status may be associated with healthy heart rhythms, and magnesium is commonly deficient in the American diet.

- Provides beet root to help maintain healthy blood pressure.
- Delivers two forms of folate to better ensure improved folate nutrition—even in those with genetic variations in folate metabolism.
- Features L-5-methyltetrahydrofolate—a body-ready, nature-identical folate. Dietary nitrate in the form of daily beetroot juice significantly reduced elevated blood pressure compared with placebo in hypertensive patients over 4 weeks, in a randomized phase 2 trial. Beet Powder is a significant part of the **ArginCor**. As the authors explain, ingestion of dietary (inorganic) nitrate elevates circulating and tissue levels of nitrite via bioconversion in the enterosalivary circulation. In addition, nitrite is a potent vasodilator in humans, an effect thought to underlie the study’s observed BP-lowering effects of dietary nitrate. Supplementation of dietary nitrate as used in this study led to about a 5.5-fold increase in plasma nitrate concentrations, as the authors observe, while plasma nitrite concentrations were elevated by approximately 2.7-fold from baseline. “Irrespective of the method of measurement, the magnitude of BP reduction is of clinical significance because it resembles the average BP reduction achieved with a single antihypertensive medication at standard dose (9.1/5.5 mm Hg),” the authors state. “[And] these appropriately powered data are the first to demonstrate sustained BP-lowering with dietary nitrate in patients with hypertension that require BP control. “Noteworthy as well, investigators observed about a 20% improvement in endothelial function (P<0.001) after 4 weeks in the nitrate group compared with the placebo group, which showed no change in endothelial function. They also observed a decrease in arterial stiffness by 0.59 m/s (P<0.01) following dietary-nitrate consumption compared with baseline and a similar reduction of 0.58 m/s compared with placebo (P<0.05). Reference: Kapil V., Khambata R. S., Robertson A., et al. Dietary nitrate provides sustained blood pressure lowering in hypertensive patients: A randomized, phase 2, double-blind, placebo-controlled study. Hypertension 2014; DOI: 10.1161/ HYPERTENSIONAHA.114.04675

Appropriate Wellness Essentials® Formula

Superior foundation nutrition with phytonutrients and omega-3 fatty acids. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

D3 5000™

Vitamin D deficiency has been reported to increase the risk for cardiovascular disease, especially stroke, as well as risks for hypertension, insulin resistance, diabetes mellitus, and heart failure.

Peripheral Nerve Disorders (Neuritis, Peripheral Neuritis, Peripheral Neuropathy)

Your peripheral nerves are the ones outside your brain and spinal cord but they take their origin pass from the spinal cord through the spines intervertebral foramina . Like static on a telephone line, peripheral nerve disorders distort or interrupt the messages between the brain and the rest of the body. There are more than 100 kinds of peripheral nerve disorders. They can affect one nerve or many nerves. Some are the result of other diseases, like diabetic nerve problems. Others, like Guillain-Barre syndrome, happen after a virus infection. Still others are from nerve compression, like carpal tunnel syndrome or thoracic outlet syndrome. In some cases, like complex regional

pain syndrome and brachial plexus injuries, the problem begins after an injury. Some people are born with peripheral nerve disorders.

Symptoms

Symptoms often start gradually and then get worse. They include:

- Numbness
- Pain
- Burning or tingling
- Muscle weakness
- Sensitivity to touch

Treatment aims to treat any underlying problem, reduce pain, and control symptoms.

- NIH: National Institute of Neurological Disorders and Stroke.

Treatment Options

1. Because the peripheral nerves take their origin in the spinal cord and pass out from the spinal cord through the intervertebral foramina it is logical to have a chiropractic oriented examination including the spine and Touch For Health Applied Kinesiology Muscle Response Test in that it offers very good natural treatment approach's.

2. Nutritional Supplementation Options for Peripheral Nerve Disorders.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any food supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment imply cure or prevention.

Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Never need nutrients therefore is a high probability that where peripheral neuropathy issues exist there may also be related nutritional deficiencies and the following nutraceuticals options that may be of help in nerve conditions.

- **Neurosol®**
- **Meta Lipoate® 300**
- **Acetyl-L-Carnitine**
- **Resveratrol Plus** (each capsule of Resveratrol Plus contains 100 mg. of resveratrol).
- Appropriate **Wellness Essentials®** formula. **NOTE:** Remember that the brain and nervous system are approximately 65% plus fat and all toxins that the body is unable to metabolize and excrete are stored the fat. Toxins that are stored in the fat portions of the brain and nervous system can significantly impact brain and nerve function. In **severe** neuropathy, in adyou may also want to consider detoxification support to the outlined nutritional support above, (see Detoxification section)

Dietary Considerations – again seek professional advice and if your taking any prescribed medications do not stop taking them- always first consult with the medical doctor who prescribed them.

- Low Glycemic, Mediterranean-Type Diet

Nutritional Formula Description & Supplementation Rationale

Neurosol®

Neurosol is a combination of nutrients that directly supports peripheral nerve function deigned to:

- Promote healthy nerve conduction, blood flow to the nerves, and nerve tissue integrity by featuring gamma-linolenic acid (GLA).

- Designed to deliver the added benefits of vitamin C in the form of Ultra Potent-C® to synergistically enhance the effectiveness of GLA and, along with beta-carotene, protect delicate nerve tissue from oxidation.
- Supply levels of folate and vitamins B12 and B6 to support methylation and homocysteine metabolism to support nervous system function.

Meta Lipoate® 300

Meta Lipoate 300 is a premium-grade preparation of alpha-lipoic acid (ALA). Through proprietary technology, the potentially harmful chemical by-product epilipoic acid is removed and polymer residuals kept at a minimum, resulting in a purity-controlled product that delivers maximum value and effectiveness with an excellent safety profile.

Designed To:

- Provide antioxidant activity in both aqueous and fatty regions of the cell, crosses the blood-brain barrier, extends the functional capacities of vitamins C and E and coenzyme Q10, promotes accelerated glutathione synthesis, and directly scavenges free radicals.
- Support glucose transport, metabolism, and utilization, which may promote healthy glucose clearance from the bloodstream.
- Support the health and function of neurological tissue, especially peripheral nerves. Promotes the production of cellular energy (ATP).
- Offers what is a clinically effective levels of alpha-lipoic acid in just two tablets daily. Several published studies report that the antioxidant nutrient alpha-lipoic acid (ALA) can play roles in restoring diabetic nerve function. Contains beneficial effect on several attributes of nerve conduction, and was associated with a favorable effect on neuropathic deficits without causing significant adverse reactions.
- *Diabetes Care*, 18:1160- 67, 1995.
- *Diabet Med.* 2004 Feb;21(2):114-21.
- *Free Radic Res.* 1999 Sep;31(3):171-9.
- *Diabetes Care.* 1999 Aug;22(8):1296-301.
- *Ther Clin Risk Manag.* 2011;7:377-85. Pub 2011 Sep 5.
- *Diabetes.* 2000 Jun;49(6):1006-15.

Diabetic Polyneuropathy. Alpha-lipoic acid used orally or intravenously seems to improve insulin sensitivity and glucose disposal in patients with type 2 diabetes. Patients who took alpha-lipoic acid 600 to 1800 mg orally or 500 to 1000 mg intravenously daily had significant improvement in insulin resistance and glucose effectiveness after four weeks of oral treatment or after 1 to 10 days of intravenous administration. However, alpha-lipoic acid doesn't seem to lower glycosylated hemoglobin (HgbA1c) levels in patients with type 2 diabetes.

- *Konrad T., Vicini P., & Kusterer K., et al. Alpha-lipoic acid treatment decreases serum lactate and pyruvate concentrations and improves glucose effectiveness in lean and obese patients with Type 2 diabetes. Diabetes Care* 1999;22:280-7. 3546.
- *Packer L. Antioxidant properties of lipoic acid and its therapeutic effects in prevention of diabetes complications and cataracts. Ann N Y Acad Sci* 1994;738:257-64.
- *Ziegler D., Hanefeld M., & Ruhnau K. J., et al. Treatment of symptomatic diabetic peripheral neuropathy with the antioxidant alpha-lipoic acid: A 3-week, multicentre randomized controlled trial (ALADIN Study). Diabetologia* 1995;38:1425-33.

•• *Ruhnau K. J., Meissner H. P., & Finn J. R., et al. Effects of 3-week oral treatment with the antioxidant thioctic acid (alpha-lipoic acid) in symptomatic diabetic polyneuropathy. Diabet Med 1999;16:1040-3.*

Giving alpha-lipoic acid orally or intravenously 600 mg to 1200 mg daily seems to reduce symptoms of peripheral neuropathy in diabetes patients. Alpha-lipoic acid seems to improve neuropathic sensory symptoms such as burning, pain, numbness, and prickling of the feet and legs. It also seems to improve objective measures such as ratings of neurological deficit and disability. Onset of symptom improvement occurs within 3 to 5 weeks with oral and intravenous dosing. However, lower doses have not been shown to be effective.

•• *Ziegler D., Hanefeld M., & Ruhnau K., et al. Treatment of symptomatic diabetic polyneuropathy with the antioxidant alpha-lipoic acid: A 7-month, multicenter, randomized, controlled trial (ALADIN III Study). Diabetes Care 1999;22:1296- 301.*

•• *Reljanovic M., Reichel G., & Rett K., et al. Treatment of diabetic polyneuropathy with the antioxidant thioctic acid (alpha-lipoic acid): A 2-year, multicenter, randomized, double-blind, placebo-controlled trial (ALADIN II). Free Radic Res. 1999 Sep;31(3):171-9.*

•• *Sachse G., & Willms B. Efficacy of thioctic acid in the therapy of peripheral diabetic neuropathy. Hormone Metab Res Suppl 1980;9:105-7.*

416 Peripheral Nerve Disorders Management of DN (Diabetic Neuropathy) Includes control of hyperglycemia, other cardiovascular risk factors, and the nutrients alpha lipoic acid and L-carnitine. Postgrad Med J. 2006 Feb;82(964):95-100. PMID: 16461471

Acetyl-L-Carnitine

Acetyl-L-Carnitine, the acetyl ester and biologically active form of L-Carnitine, is designed to deliver both L-Carnitine and acetyl groups and believed to be essential for normal mitochondrial function in all cells, L-Carnitine's primary function is to transport long chain fatty acids into the mitochondria where they are oxidized to produce energy. Acetyl-L-Carnitine is unique in that it can cross the blood-brain barrier where it facilitates energy production in brain cells. The acetyl group it carries contributes to production of the important neurotransmitter, acetylcholine.

Research shows Acetyl-L-Carnitine is critical to youthful cellular function in the brain, heart, liver, peripheral nerves, and immune system, which makes it extremely important for anti-aging. Acetyl-L-Carnitine is unique in that it can cross the blood-brain barrier where it facilitates energy production in brain cells. The acetyl group it carries contributes to production of the important neurotransmitter, acetylcholine. Research shows Acetyl-L-Carnitine is critical to youthful cellular function in the brain, heart, liver, peripheral nerves, and immune system, which makes it extremely important for neuroprotection, regulation of glucose and glycogen metabolism, and a key factor in mitochondrial lipid metabolism.

Chiropractic Intervention including Touch For Health Applied Kinesology Muscle Response Test results:

Diabetic Polyneuropathy.

Patients with neuropathy related to type 1 or type 2 diabetes seem to have improved symptoms after taking Acetyl-L-Carnitine 1500-3000 mg daily in divided doses for a year. Acetyl-L-Carnitine seems to increase nerve fibers, regenerate nerve fiber clusters, and improve vibratory sensations. However, research is conflicting on whether it can modestly improve nerve conduction velocity. In patients who have neuropathic pain as the most significant symptoms, taking Acetyl-L-Carnitine 1000 mg two to three times daily also decreases neuropathy-related pain within six months of beginning treatment. Doses of 500 mg three times daily do not seem to reduce pain.

Acetyl-L-Carnitine also seems more likely to be effective for reducing pain in patients with a shorter duration of diabetes and patients with poorly-controlled type 2 diabetes.

- Onofrij M., Fulgente T., & Melchionda D., et al. *L-acetylcarnitine as a new therapeutic approach for peripheral neuropathies with pain. Int J Clin Pharmacol Res* 1995;15:9-15.
- De Grandis D., & Minardi C. *Acetyl-L-carnitine (levacecarnine) in the treatment of diabetic neuropathy: A long-term, randomized, double-blind, placebo-controlled study. Drugs R D* 2002;3:223-31.
- Quatraro A., Roca P., & Donzella C., et al. *Acetyl-L-carnitine for symptomatic diabetic neuropathy. Diabetologia* 1995;38:123.
- Sima A. A. F., Calvani M., & Mehra M., et al. *Acetyl-L-carnitine improves pain, nerve regeneration, and vibratory perception in p patients with chronic diabetic neuropathy: An analysis of two randomized, placebo-controlled trials. Diabetes Care* 2005;28:89-94.
“Management of DN (Diabetic Neuropathy) includes control of hyperglycemia, other cardiovascular risk factors, and the nutrients alpha lipoic acid and L-carnitine.” *Postgrad Med J.* 2006 Feb;82(964):95-100. PMID: 16461471
“CONCLUSIONS — These studies demonstrate that ALC treatment is efficacious in alleviating symptoms, particularly pain, and improves nerve fiber regeneration and vibration perception in patients with established diabetic neuropathy.”
- Anders A. F. et al. *Acetyl-L-carnitine improves pain, nerve regeneration, and vibratory perception in patients with chronic diabetic neuropathy. Diabetes Care* 28:89-94, 2005
PMID:15616239.

Resveratrol Plus

Resveratrol is an antioxidant that is formulated to help prevent cell damage caused by free radicals (free radicals are unstable atoms caused in part by pollution, sunlight, and our body’s natural burning of fat that can lead to cancer, aging, and brain degeneration). Research on resveratrol has led it to increased life span, increased endurance, cardiovascular benefits, and cancer protection. “The 2-week treatment with resveratrol (10 and 20 mg/kg, i.p.) started 6 weeks after diabetes induction significantly ameliorated the alterations in MNCV, NBF, and hyperalgesia [diabetic neuropathy].” *Life Sci.* 2007 Mar 6;80(13):1236-44. Pub 2007 Jan 20. PMID: 17289084

Appropriate Wellness Essentials® Formula

Wellness Essentials is a combination of popular Metagenics products providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help eliminate the guesswork and confusion regarding daily foundation nutrition.

Chiropractic Intervention

Considering the involvement of the spine, brain and spinal cord in anxiety, very often some Chiropractic intervention is called for and including Touch For Health Applied Kinesology Muscle Response Test Response based therapy.

Pinworm Infection

The pinworm (genus *Enterobius*)—also known as threadworm in the United Kingdom and Australia—or seatworm, is a parasitic worm. Pinworm infection is the most common type of intestinal worm infection in the United States. Pinworms are thin and white, measuring about 1/4 to 1/2 inch (about 5 to 13 millimeters) in length. While the infected person sleeps, female pinworms lay thousands of eggs in the folds of skin surrounding the anus. Most people infected with pinworms have no symptoms, but some people experience anal itching and restless sleep. Pinworm infection occurs most often in school-age children, and the microscopic eggs are easily

spread from child to child. Treatment involves oral drugs that kill the pinworms and thorough washing of bedclothes, bed linens, and underwear. For best results, the entire family should be treated.

Symptoms

Symptoms of pinworm infection may include:

- Itching of the anal or vaginal area
- Insomnia, irritability, and restlessness
- Intermittent abdominal pain and nausea

Some people with pinworms have no symptoms.

Causes

A pinworm infection occurs when pinworm eggs are accidentally swallowed. The microscopic eggs can be carried to the mouth by contaminated food, drink, or fingers. Once swallowed, the eggs hatch in the intestines and mature into adult worms within a few weeks. Female pinworms crawl to the anal area to lay their eggs, which often results in anal itching. When the itchy area is scratched, the eggs cling to the fingers and get under the fingernails. The eggs then get transferred to other surfaces such as toys or bedclothes. The eggs can also be transferred from contaminated fingers to food, liquids, bed linens, clothes, or other people. Pinworm eggs can survive for two to three weeks on surfaces. You can become infected with pinworms if you consume contaminated food or drink or if you touch a contaminated surface and then touch your mouth.

Risk Factors

Risk factors for pinworm infection include:

- **Being of young age.** Pinworm infections are most likely to occur in children between the ages of 5 and 14. The microscopic eggs are easily spread to family members, caregivers, or other children at school or child care centers.
- **Living in crowded spaces.** People who live in institutions are at higher risk of developing pinworm infections.
- **Living in a temperate climate.** While pinworms occur worldwide, they're more common in countries that don't have tropical climates.

Complications

Typical pinworm infections don't cause serious problems. In rare circumstances, heavy infestations may cause:

- **Infection of female genitals.** In women or girls, the parasite may travel from the anal area up the vagina to the uterus, fallopian tubes, and the area around the pelvic organs. This can cause problems such as inflammation of the vagina (vaginitis) and inflammation of the inner lining of the uterus (endometritis).
- **Weight loss.** When a large number of adult pinworms are living in the intestines, they can cause abdominal pain and take enough nutrients that will cause weight loss.

Tests & Diagnosis

Your doctor can confirm the presence of pinworms by identifying the worms or eggs. To help your doctor make a diagnosis, you can perform the tape test. As soon as the person you suspect has pinworms wakes up and before he or she uses the toilet, washes, or gets dressed, press the adhesive side of a piece of transparent tape to the skin around the anus. The eggs stick to the tape. For best results, perform the tape test three days in a row, and then take the tape samples to your doctor. Your doctor can look at the tape under a microscope to see if there are any pinworm eggs.

Prevention

Methods to help prevent the spread of pinworm eggs or to prevent reinfection include:

- **Wash in the morning.** Because pinworms lay their eggs at night, washing the anal area in the morning can help reduce the number of pinworm eggs on your body. Showering may help avoid possible recontamination in bath water.
- **Change underwear and bed linen daily.** This helps remove eggs.
- **Launder in hot water.** Wash bedsheets, nightclothes, underwear, washcloths, and towels in hot water to help kill pinworm eggs.
- **Don't scratch.** Avoid scratching the anal area. Trim your child's fingernails so there's less space for eggs to collect and discourage nail biting.
- **Clean toilet seats daily.** This helps remove eggs.
- **Wash your hands.** To reduce your risk of getting or spreading an infection, wash your hands thoroughly after a bowel movement or changing a diaper, and before eating. **NOTE:** The most common prescription anti-parasite medications for pinworms are:

- Mebendazole
- Albendazole (Albenza) You may have mild gastrointestinal side effects during the course of treatment, and you often need to take at least two doses to get rid of the pinworms completely.

Nutritional Supplementation Considerations for Pinworm Infection

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment prevention or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

In addition to the above outlined prevention strategies, consider the following treatment program for 6-8 weeks minimum. Because parasites reproduce on the lunar cycle, this minimum time frame will address parasite hatchlings during the course of treatment:

- **ParaCleanse**
- **Ultra Flora® Spectrum**

Nutritional Formula Description & Supplementation Rationale

ParaCleanse

ParaCleanse contains natural ingredients designed specifically to support a healthy immune system and a balanced gastrointestinal tract. This intense formula should help the body regulate the balance it needs to cleanse unwanted parasites, microbes, and yeast. Clinical research demonstrates that the herbs contained in ParaCleanse (see description below), have many powerful properties. In addition to supporting a healthy gastrointestinal tract and immune system, research shows that these herbs also help support the intestinal lining, increase the tone of the intestines, improve digestive power, and help clean the gastrointestinal tract.

- *Holarrhena Antidysenterica (bark and seed)*
- *Nopal Cactus (pad) (Opuntia ficusindica)*
- *Noni (fruit and seed) (Morinda citrifolia)*
- *Turmeric (rhizome) (Curcuma longa)*
- *Green Leaf Extract (leaf) (50%) (Camilla sinensis)*
- *Fo Ti Tieng (root) (Polygonum multiflora)*
- *Self Heal (leaf) (Prunella vulgaris)*
- *Turkey Rhubarb Root (Rheum palmatum)*
- *Protease*

- *Lipase*
- *Amylase*
- *Cellulase*
- *Invertase*
- *Lactase*
- *Maltase*

Ultra-Flora® Spectrum

UltraFlora Spectrum formulated to provide multidimensional support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of 7 beneficial probiotic strains including *L. acidophilus* NCFM®, *S. boulardii*, *B. lactis* Bi-07, *B. lactis* Bi-04, *St. thermophilus*, *L. salivarius*, and *L. plantarum*.

- Promote a healthy intestinal environment and immune response
- Help relieve recurring functional bowel discomforts and intestinal irritation
- Contains NCFM, one of the most well-researched probiotic strains
- Designed for reliable outcomes with a concentrated dose of *S. boulardii*

References

- *Parasites and health: Enterobiasis. Centers for Disease Control and Prevention.* <http://www.dpd.cdc.gov/DPDx/html/Enterobiasis.htm>. Accessed Feb. 16, 2012.
- *Kliegman R. M., et al. Nelson Textbook of Pediatrics. 19th ed. Philadelphia, Pa.: Saunders Elsevier; 2011.* <http://www.mdconsult.com/das/book/body/208746819-6/0/1608/0.html>. Accessed Feb. 16, 2012.
- *Fact sheet: Pinworm infection. Centers for Disease Control and Prevention.* <http://www.cdc.gov/parasites/pinworm/index.html>. Accessed Feb. 16, 2012.
- *Ferri's Clinical Advisor 2012. 5 Books in 1. Philadelphia, Pa.: Mosby Elsevier; 2012.* <http://www.mdconsult.com/books/about.do?about=true&u1.0-B978-0-323-05611-3..C2009-0-38601-8--TOP&isbn=978-0-323-05611-3&uniqId=291436269-101>. Accessed Feb. 16, 2012.
- *Pinworm infection. National Institute of Allergy and Infectious Diseases.* <http://www.niaid.nih.gov/topics/pinworm/Pages/default.aspx>. Accessed Feb. 16, 2012.
- *Gardner A. S. Vulvovaginitis and other common childhood gynecological conditions. Archives of Disease in Childhood: Education and Practice Edition. 2011;96:73.*
- *Stermer E., et al. Pruritus anii: An approach to an itching condition. Journal of Pediatric Gastroenterology and Nutrition. 2009;48:513.*

Polymyalgia Rheumatica and Giant Cell Arteritis

Polymyalgia Rheumatica causes muscle pain and stiffness in the neck, shoulders, and hips. It is most common in women and almost always occurs in people over 50. The main symptom of polymyalgia Rheumatica is stiffness after resting. Other symptoms include fever, weakness, and weight loss. In some cases, polymyalgia Rheumatica develops overnight. In others, it is gradual. Polymyalgia Rheumatica sometimes occurs along with **giant cell arteritis**, a condition that causes swelling of the arteries in your

head. Symptoms include headaches and blurred vision. Doctors often prescribe a medicine called prednisone for both conditions. Polymyalgia Rheumatica usually responds to treatment. Without

treatment, it usually goes away after a year or more. Untreated, giant cell arteritis carries a small risk of blindness or stroke. Reference: NIH: National Institute of Arthritis and Musculoskeletal and Skin Disease

How common is polymyalgia Rheumatica?

- Women develop polymyalgia Rheumatica more often than men
- It most often appears in women over the age of 50
- Giant cell arteritis affects both men and women who are over the age of 50
- Some people who develop giant cell arteritis also have polymyalgia Rheumatica
- Polymyalgia Rheumatica predominantly affects Caucasian women over the age of 50; giant cell arteritis affects both men and women, usually over 50 years of age, who may or may not have polymyalgia Rheumatica

Causes

The cause of polymyalgia Rheumatica is not known. There is no single test to diagnose polymyalgia Rheumatica. Your doctor will use your medical history, symptoms, and a physical exam to make the diagnosis. Lab tests for inflammation may help confirm the diagnosis. Temporal, giant cell, and cranial arteritis occur when one or more arteries become inflamed, swollen, and tender. Temporal arteritis most commonly occurs in the head, especially in the temporal arteries that branch off from a blood vessel in the neck called the carotid artery. However, the condition can affect almost any medium to large artery anywhere in the body. The cause is unknown, but is believed to be partly due to a faulty immune response. The disorder has been associated with severe infections and the use of high doses of antibiotics. The disorder may develop along with or after polymyalgia Rheumatica. Giant cell arteritis is almost always seen in people over age 50, but it may sometimes occur in younger people. It is rare in people of African descent. There is some evidence that it runs in families.

Interventional Chiropractic Care

Considering the involvement of the spine, brain and spinal cord in anxiety, very often some Chiropractic intervention is called for and in addition to spinal manipulation to drugs, diet modification, and nutritional support options, moderate exercise can also be beneficial in controlling the stiffness and pain associated with the condition. In addition to promoting overall fitness, physical activity assists in maintaining flexibility and building muscle strength, helping to protect joints. Walking, bicycling, swimming, and some types of moderate and paced weight-bearing exercise are good examples of physical activity that may be appropriate for persons with PMR. It is important to note that lack of exercise can lead to brittle bones and causes muscles to become smaller and weaker. .

NOTE: Always consult your physician before starting an exercise program.

Long-Term Outlook

PMR typically lasts 2-3 years. It may then go away for reasons unknown. However, some persons may have a longer course of PMR; a few have PMR for less than a year. Prednisone is used to suppress the inflammation and treat the symptoms but does not cure the illness (Matsen, 2002). With treatment, most patients with PMR or giant cell arteritis do not have lasting disability. However, in giant cell arteritis, if one or both eyes develop blindness before treatment becomes effective, the blindness may be permanent.

Summary

The number of inflammatory-related diseases that could be successfully treated with cytokine-lowering therapy is staggering. Dietary supplements such as fish oil, DHEA, and vitamin K possess specific mechanisms of suppressing inflammatory cytokines.

Those who continue to suffer from PMR or giant cell arteritis despite taking physician-recommended drugs, modifying diet, and using inflammation-suppressing supplements should initiate aggressive therapy. An inexpensive C-reactive protein (high-sensitivity) blood test (CRP-hs) can help reveal if you have systemic inflammation. If your CRP protein level is over 1.3 mg/L, this is an indication that you have an inflammatory reaction occurring in your body. Those with elevated CRP-hs levels (and who have a disease associated with chronic inflammation) should consider a nutritional support program designed to suppress pro-inflammatory cytokines. A CRP blood test may be done through your physician. Give attention to a healthy lifestyle. Participate in at least 30 minutes of some type of weight-bearing exercise (exercise involving swimming, bicycling, walking, or running) daily. Walking is probably more appropriate for persons with PMR. Maintain a healthy diet including whole foods such as fruits and vegetables, cold water fish, probiotic cultures from food or supplements; limited refined sugar, caffeine, and alcohol; and drink plenty of water. Eat slowly and chew food well. Because systemic inflammation is an underlying cause of PMR, taking steps to interfere with the multiple inflammatory pathways is suggested. Drugs prescribed to treat PMR are often effective but can induce serious side effects. Certain nutrients can help protect against the adverse effects of corticosteroid or NSAID drugs. What follows are the nutritional supplements that can provide a comprehensive approach towards alleviating the inflammation and pain of PMR.

Nutritional Supplementation for Polymyalgia Rheumatica and Giant Cell Arteritis

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

UltraInflamX® Plus 360

- UltraFlora™ Intensive Care
- D3 10,000 with K2

Dietary Recommendations

- Anti-Inflammatory Diet Program

Nutritional Formula Description & Supplementation Rationale

UltraInflamX® Plus 360

UltraInflamX Plus 360 is a multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation.

UltraFlora™ Intensive Care

L. plantarum 299V (UltraFlora Intensive Care) — a strain-identified probiotic that has been specifically shown to be anti-inflammatory in nature and support the integrity and healthy function of the mucosal lining.

D3 10,000 with K2

D3 10,000 with K2 provides 10,000 IU per softgel of vitamin D (as D3), designed for greater absorption. This high potency formula also includes bioavailable forms of vitamin K2 to complement vitamin D. Deficiency of vitamin D is common among patients with inflammatory and autoimmune disorders and those with prolonged critical illness. In addition, we see evidence

of vitamin D insufficiency in a large percentage of patients with Grave's disease, ankylosing spondylitis, systemic lupus erythematosus, and rheumatoid arthritis. "The net effect of the vitamin D endocrine system on the immune response is an enhancement of innate immunity coupled with multifaceted regulation of adaptive immunity. Epidemiological evidence indicates a significant association between vitamin D deficiency and an increased incidence of autoimmune diseases."

Physical Medicine

Chiropractic Spinal Manipulation and Touch For Health Applied Kinesology Muscle Response massage; spondylotherapy (concussion of T10, T11 to increase circulation to spinal cord); check and align atlas, axis of spine, check parasympathetic [cervical, sacrum]), massage, acupuncture, Myofascial Release, Neuro/Muscle Skeletal Reeducation and exercise.

Hydrotherapy: Constitutional hydrotherapy should be applied two to five times weekly. Crushed ice wrapped in wet towels applied to spastic muscles for 10 minutes followed by exercise; cold (50° F) immersion of spastic extremity for 10 minutes followed by exercise.

Aromatherapy: Rub affected part with mixture of 95 percent olive oil and 5 percent essence of juniper.

•• Adorini, A., & Penna, G. *Control of autoimmune diseases by the vitamin D endocrine system. Nat Clin Pract Rheumatol.* 2008;4:404-12.

"Vitamin D insufficiency is emerging as a clinical problem of global proportions and epidemiology has ed vitamin D status with autoimmune disease susceptibility and severity."

•• Adams, J. S., & Hewison, M. *Unexpected actions of vitamin D: New perspectives on the regulation of innate and adaptive immunity. Nat Clin Pract Endocrinol Metab.* 2008;4:80-90.

Post-Cancer Nutritional Support Strategies

Introduction

Diet, nutritional factors, environmental toxin exposure, and impaired detoxification are considered primary agents for the initiation and promotion of cancer today. According to the National Academy of Sciences, **at least 60% of all cancers in women and at least 40% of all cancers in men may be due to dietary and nutritional factors.** It has been estimated that **more than two-thirds of human cancers could be prevented through appropriate lifestyle modification.**

Richard Doll and Richard Peto have reported that 10–70% (average 35%) of human cancer mortality is attributable to diet. According to Samuel Epstein, M.D., Professor of Occupational and Environmental Medicine at the University of Illinois School of Public Health: "Many cancer causing pesticides, hormones and industrial chemicals found in the environment, end up in the food we consume, the water we drink, and the air that we breathe, and food supplements that contain pesticides, bacteria herbicides and hormones tend to accumulate in fatty tissues, whether in fish, cattle, fowl, or people." Likewise, diet, nutritional factors, phytonutrients, and an optimal functioning detoxification system are also the principle preventive measures against cancer, and the ones over which people have the most control.

•• Doll, R. & Peto, R. The causes of cancer: Quantitative estimates of avoidable risks of cancer in the United States today. *J. Natl Cancer Inst.* 66, 1191–1308 (1981).

•• Manson, M. M. Cancer prevention: The potential for diet to modulate molecular signaling. *Trends Mol. Med.* 9, 11–18 (2003).

•• Manson, M. M. et al. Blocking and suppressing mechanisms of chemoprevention by dietary constituents. *Toxicol. Lett.* 112–113, 499–505 (2000).

The Basics

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your oncologist. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

The following instructions are based upon the published work of Sherry Rogers, M.D., in her book *Wellness Against All Odds*. Dr. Rogers is an international expert in environmental medicine. Her book documents the protocols followed by 30 cancer patients—all who were diagnosed as terminal—all that beat their cancers against all odds with nothing but natural remedies.

Diet: Should Be Organic as Possible

New evidence suggests that environmental toxins contribute to most cancers. This is documented in the *Journal of the American Medical Association* and the book *Living Downstream*.

Additionally, when cancer is created in lab rats, it is induced with a single dose of a cancer causing chemical. Today, humans are exposed to more environmental toxins than ever before in history. Additionally, our food supply is deficient in essential vitamins and minerals due to mass farming efforts. Therefore, organic foods are necessary.

Consider the Addition of a Ketogenic Diet / Ketogenic Foods

The ketogenic diet has been effectively used for 50 years to control pediatric seizures and to promote weight loss. Most recently it has been effectively used to treat cancer.

<http://www.keto.org/foods.htm>

NOTE: Cancer can ONLY EAT SUGAR.

Consider Eating a Variety of High-colored Fruits and Vegetables

The National Institutes of Health has described cancer as a vegetable deficiency and now recommends up to 13 servings of fruits and vegetables every day.

Water. Water is the most important nutrient (next to oxygen) for our survival. A minimum of 8 to 10 glasses of pure water must be imbibed each day. **Dr. Rogers suggests every cancer patient drink 1 gallon each day, in a purified form of water with natural minerals.**

(Thinly slice a few slices of organic lemon and soak it in your drinking water.) Distilled water lacks the minerals that add to the health value of spring water.

Exercise

When tolerable movement promotes health by improving circulation, improving lymphatic drainage, and eliminating toxins through sweat.

Elimination

ALL patients described in the book *Wellness Against All Odds* performed daily colon cleanses—most in the form of coffee enemas. Coffee stimulates the release of bile from the liver and gallbladder. Bile is one of the most toxic fluids in our body. It is best to use an organic coffee. (See information and instructions for coffee enemas below.) **NOTE:** Hydro-colonics are far more efficient than enemas.

Visualization

Studies at the University of Wisconsin Madison have shown that people who visualize their immune system as white knights on horses attacking their cancer cells live up to 5 times as long as people who do not use visualization. It is proven that visualization enhances immune function.

Attitude

According to Harvard M.D., Dr. Bernie Seigle, As difficult as it sometimes can be when we're confronted by a terrible diagnosis and illness attitude is the most important factor in recovering from cancer. "Be Happy, enjoy life, get rid of anger and you will live better and longer." It is said

that laytger is the best medicine and the same holds true with forgiveness in that as we forgive those who have trespassed against us we open the door to we finding personal forgiveness. The unforgiving person is the one who suffers. Holding onto grudges, past rejections and hurts prevents healing. Similarly associating with negative people poisons our well as well.

Nutritional Supplementation Considerations for Post-Cancer

Before you embark on this or any other considers make sure that you discuss these considerations with your oncologist. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

- **Meta Arrest Pro**

- Appropriate **Wellness Essentials®** Formula.

- **D3 5000.**

- **UltraFlora™ Spectrum**

Consider following a Mediterranean-type Diet, nutritional factors, environmental toxin exposure, and impaired detoxification are considered primary agents for the initiation and promotion of cancer today. “Although the reviewed studies varied according to certain study characteristics, such as being set in different populations and studying different cancer outcomes, the existing evidence from observational studies collectively suggests that there is a ‘probable ‘protective role of the Mediterranean diet toward cancer in general. **This favorable effect of the Mediterranean diet on cancer reduction is of public health relevance**, given the tendency of modern societies to shift toward a more U.S. and Northern European dietary pattern.”

- Verberne, L., Bach-Faig, A., Buckland, G., & Serra-Majem, L. Association between the Mediterranean diet and cancer risk: A review of observational studies. *Nutr Cancer*. 2010;62(7):860-70. doi: 10.1080/01635581.2010.509834.

Nutritional Formula Description & Supplementation Rationale

Meta Arrest Pro

Jeffrey Kotulski, DO, formulated a custom blend of nutrients (Meta Arrest Pro) to assist the body’s ability to keep cancer in remission. Meta Arrest Pro is a nutritional support formula that someone would take every day for life, once they start battling cancer and to keep it from coming back. This is Dr. Kotulski’s description of how Meta Arrest Pro works: “Meta Arrest Pro works by inhibiting vascular endothelial growth factor (VEGF), a tumor angiogenesis stimulator, which occupies a central position in the process of angiogenesis.

Angiogenesis literally means creation of new blood vessels. The word “agio” means blood vessels while “genesis” means creation.

Angiogenesis in cancers becomes cause for worry when it occurs within tumors and cancers, feeding and sustaining them. Tumors are “diffusion limited” in their growth without their own blood supply. The activation of the “antigenic switch” allows the tumor to recruit surrounding blood vessels and stimulate them to form new vessels in the tumor. The tumor vasculature supplies the tumor with oxygen and nutrients, which enables further growth. In the next stage, the tumor can invade the vessel wall and spread to distant organs to form dormant micrometastases. Finally, secondary angiogenesis can occur, allowing these dormant micrometastases to grow into overt metastases. The natural substances found in Meta Arrest Pro are more adaptogenic and hence will not inhibit collateral circulation, when it comes to atherosclerosis, and another common property of these nutrients is that they all are for the most part anti-inflammatory as well.

VEGF-blocking therapy appears very promising in the treatment of cancer, since it is directed only against migrating and proliferating capillary endothelial cells at a site of angiogenesis.

Appropriate **Wellness Essentials®** Formula

Personalized Nutrition with Targeted Health Support Wellness Essentials is a combination of popular Metagenics products designed to target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition.

D3 5000

Numerous studies have documented that people with higher blood levels of vitamin D have lowered risks of cancers of the breast, prostate, colon, esophagus, pancreas, ovary, rectum, bladder, kidney, lung, and uterus, along with non-Hodgkin's lymphoma and multiple myeloma.

UltraFlora™ Spectrum

UltraFlora Spectrum designed to provide support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of seven beneficial probiotic strains. (Saccharomyces boulardii, Bifidobacterium lactis Bi-07, Lactobacillus plantarum Lp-115, Lactobacillus salivarius Ls-33, Lactobacillus acidophilus NCFM®, Streptococcus thermophilus St-21, and Bifidobacterium lactis BI-04)

- Promote a healthy intestinal environment and immune response.
- Help relieve recurring functional bowel discomforts and intestinal irritation.
- Contains NCFM®, one of the most well-researched probiotic strains.
- Designed for reliable outcomes with a concentrated dose of S.boulardii.

Pre- and Post-Workout Nutritional Support Protocols

Nutritional Supplementation Considerations for Pre- and Post-Workout

Nutritional Support

Pre-Workout Primary Support Drink

Mix together in water and consume 30-45 minutes before workout:

- **Dynamic Health Drink**
- **Dynamic Performance Drink**
- **Dynamic BCAA Drink**

Secondary support Should be added to primary support drink if workout is over 1 hour, or highly intense.

- **Endura®**
- **Glutamine**

Post-Workout Support Drink

Mix together in water and consume immediately after workout:

- **Dynamic Health Drink**
- **Dynamic Performance Drink.**
- **Dynamic BCAA Drink**

Secondary support

Should be added to primary support drink if workout is over 1 hour, or highly intense.

- **Endura®**
- **Glutamine**

Additional food supplements to augment your workout intensity and recovery:

- **Tribulstan.**
- **EnergiX®**

•• **Wellness Essentials® Men's Vitality**

•• **Wellness Essentials® Women**

Nutritional Formula Description & Supplementation Rationale

Dynamic Health Drink

Contains Whey-Plus™ protein, Dynamic Fruits & Greens®, and FiberDyn for optimal daily supplementation.

Dynamic Performance Drink

Critical performance nutrients for energy and quick muscle repair (**Branched-Chain Amino Acids (BCAA)**, Ribose, 5-Loxin® and Ginger extract, Arginine, Creatine, N-Acetyl Cysteine (NAC), Lipoic Acid, L-Carnitine, D-Aspartic Acid). Dynamic Performance Drink contains all the nutrients needed to assure the body is ready for an intense workout. It contains scientifically documented nutrients needed for complete muscle recovery. It also contains potent antioxidants to reduce free radical damage to muscle, just the right amount of powerful anti-inflammatory herbs to optimize muscle repair, and specialty nutrients needed to increase cellular energy and recovery. Dynamic Performance Drink takes the guesswork out of how to effectively supplement to maximize your training results.

Dynamic BCAA Drink

Research shows that branch chain amino acids are more important than a protein supplement for keeping (and building) muscle mass. Dynamic BCAA Drink has the three proven branch chain amino acids that work most effectively for muscle growth and stamina. The essential branched chain amino acids (BCAAs) include leucine, isoleucine, and valine—all of special importance for athletes because they are metabolized in the muscle, rather than in the liver. Theoretically, after digestion—once protein is broken down into individual amino acids—these amino acids can either be used to build new proteins or be burned as fuel to produce energy. If the athlete's diet is adequate in nutrition then the above essential amino acids will be used for protein synthesis, which is optimal for advanced human performance. It should also be noted that essential amino acids are not produced in the body such as nonessential amino acids, but rather obtained through proper nutrition. Therefore, it is often theorized that the supplementation of BCAAs are of essential importance to athletes due to their ability to alleviate any deficiencies that the body alone cannot produce.. BCAAs have also been known to reduce fatigue in both anaerobic and endurance sports. It has also been noted that leucine may be the most critical BCAA because of its anti-catabolic properties and vital role in protein synthesis.

•• *Whitney, E., & Rolfes, S. Supplements as ergogenic aids. Understanding Nutrition. 2005.*

•• *Ohtani, M., Sugita, M., & Maruyama, K. Amino acid mixture improves training efficiency in athletes. J Nutr. 2006 Feb; 136(2): 538S-543S.*

•• *Kern, M. Branched chain amino acids (BCAA). CRC Desk Reference of Sports Nutrition, San Diego State University. 20-21. 2005.*

Glutamine

An Essential amino acid that speeds recovery via increased protein synthesis and reduced muscle breakdown. "In humans, glutamine is the most abundant amino acid in the extra- and intracellular compartments, contributing to over 50% of the free amino acid pool in muscle." Am J Clin Nutr. 1999 Oct;70(4):484-9. PMID:10500016

Endura®

Rehydration, and higher carbs for muscle glycogen replenishment. Endura® is a patented rehydration formula mix with a unique blend of electrolyte minerals that are found in muscle cells. Provides carbohydrates in the form of glucose polymers and fructose, delivered in a special,

balanced blend designed to help delay the onset of fatigue during strenuous activity. Delivers key electrolytes to help replace those excreted through sweat during exercise, activity, and/or hot weather conditions. Provides high concentrations of absorbable magnesium, a mineral essential for cellular energy metabolism and glucose homeostasis. (Available in delicious, all-natural Orange and Lemon-Lime flavors.) Pre- and Post-Workout Nutritional Support Protocols 427

Tribulstan

This proprietary tribulus terrestris herbal is designed to enhance the pituitary signaling of the testis to produce maximal natural testosterone. Tribulstan is an all-natural, safe, highly concentrated and remarkably efficacious formula, derived from the leaves of **Bulgarian Tribulus**

Terrestris. Tribulstan is uniquely different from other Tribulus supplements on the market.

Protodioscin, the biologically active steroidal saponin in Tribulus, stimulates the pituitary to synthesize and subsequently augment the amount of luteinizing hormone in the body. Luteinizing hormone signals the testes to produce testosterone, resulting in an increase of testosterone production. Most notably, Tribulstan contains 60% protodioscin by weight, whereas most Tribulus formulas on the market comparably contain an upwards of only 45% protodioscin by weight. The proprietary purification and extraction processes from which this active ingredient is derived, are both laborious and expensive; it requires raw Tribulus to be purified over one-hundred fold.

Remarkably, Tribulstan is the only Tribulus formula on the market that contains such an optimal level of protodioscin. **Note:** All tribulus research was based on this product.

EnergiX®

EnergiX is one of the most effective, yet safe nutrition formulas to reduce fatigue and enhance physical performance. EnergiX maximizes oxygen consumption and oxygen pulse, increases ATP for muscle contraction, regulates cortisol levels, increases muscle pump, relapses energy, focus, and performance. EnergiX also supports the adrenal glands (e.g. stressed adrenals) and neurochemistry (acetylcholine).

Wellness Essentials® Men's Vitality

Wellness Essentials Men's Vitality is a combination of four specialized formulas packaged together to provide essential vitamins and minerals, omega-3 fatty acids, antioxidants, and calcium to support overall health and well-being. Also contains a unique, all-natural herbal formula to support optimal male vitality, stamina, and healthy sexual function. Each daily packet contains the following four products:

- **Tribulus Synergy®**—A specialized, concentrated blend of the highest quality Ayurvedic botanical extracts featuring beneficial levels of tribulus fruit extract—a key herb used traditionally to support male libido and healthy sexual function. In combination with cowage seed and ashwagandha extracts, this formula promotes vitality and strength.

- **PhytoMulti™**—PhytoMulti now represents an entirely new class of multivitamin/mineral supplementation with a combination of phytonutrients and essential vitamins and minerals. Scientific opinion now suggests that a simple multivitamin/ mineral may not provide preferred daily support for both wellness and healthy aging.

- **Testralin™**—Testralin is designed for men to support healthy testosterone and estrogen balance and help maintain male reproductive health. This powerful formula provides 14 key ingredients—including green tea, flax lignans, and plant sterols—that help promote healthy testosterone balance and beneficially influence estrogen and testosterone metabolism.

Wellness Essentials® Women

Wellness Essentials Women is a combination of three specialized nutritional formulas packaged together to provide comprehensive nutritional support and convenience for women in a single dose packet. Each daily packet contains the following three products:

•• **PhytoMulti™**—PhytoMulti is designed to be a multivitamin/mineral supplementation with a novel combination of phytonutrients and essential vitamins and minerals. Scientific opinion now suggests that a simple multivitamin/mineral may not provide preferred daily support for both wellness and healthy aging.

•• **Cal Apatite® 1000**—Formulated to support optimal bone health and healthy muscle function. This unique, proprietary formula features microcrystalline hydroxyapatite concentrate (MCHC), an excellent source of calcium, delicate protein matrix, organic factors, and bone growth factors that are naturally found in healthy bone.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today

1. Go to www.nutri-dyn.com

2. Click on Create Account

3. Click on Patients

4. Complete the short form and type in the following Account Number 100160

5. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Pregnancy — Prenatal Care — Morning Sickness / Nausea — Risks for Miscarriage / Spontaneous Abortion

Achieving a Healthy Pregnancy

Before embarking on any diet, exercise or food supplement program be sure to consult with the medical personnel that are caring for you.

Based on and adapted from the seminar by Joel M. Evans, M.D., OB/GYN — “Achieving a Whole Pregnancy: Bringing Holism into Birth”

Joel M. Evans, M.D., OB/GYN, is a board-certified OB/GYN, author of the book *The Whole Pregnancy Handbook*, and Founder and Director of The Center for Women’s Health where he practices integrative obstetrics and gynecology. A frequent lecturer on holistic health care, Dr. Evans is an Assistant Professor at the Albert Einstein College of Medicine. He was recently honored as a Founding Diplomat of the American Board of Holistic Medicine, and is recognized as the first physician in Connecticut to be board certified in both holistic medicine and obstetrics and gynecology. Dr. Evans utilizes a wide variety of complementary and alternative therapies that blend the best of modern medicine with the wisdom of traditional healing. NOTE: The Metagenics formula **Wellness Essentials® Pregnancy** was formulated by Joel M. Evans, M.D., OB/GYN.

Diet and Lifestyle

Because pregnancy is physically demanding, it’s useful to think about reasonable changes to diet and lifestyle that you might make in order to improve your general health and well-being and prepare the way for a healthy pregnancy.

- **Reducing your chemical load.** When you eat foods that have a lot of additives and preservatives, you consume chemicals that are more difficult for the body to break down.

- **If you want to begin your pregnancy with your body functioning as well as it can, it’s better to eat foods with fewer chemicals.** Overall, that means eating whole grains, five to seven daily servings of (preferably organic) fruits and vegetables, and avoiding foods with artificial sweeteners as well as packaged foods (like snack foods) with a long shelf life. And, if possible, detox before pregnancy!

- **Preparing for pregnancy.** Once you become pregnant, you need more vitamins and minerals like calcium, iron, zinc, folic acid, choline, and the omega-3 fatty acids (**EPA-DHA**).

Detoxification

How important is detoxification/reducing your chemical load and increasing your vitamins, minerals, and fatty acids?

- Toxic chemicals — of the 287 chemicals detected in umbilical cord blood, 180 cause cancer in humans or animals, 217 are toxic to the brain and nervous system, and 208 cause birth defects or abnormal development in animal tests.

- Fetuses of women who ate an “imprudent” diet (including high intakes of chips/crisps, sugar, confectionary, white bread, soft drinks, and red meat and low intakes of fruit/vegetables, rice/pasta, yogurt, and whole meal bread) had reduced ductus venous shunting and increased liver blood flow, which have longer-term detrimental consequences for lipid and clotting factor homeostasis.

- Recent research has established that acute lymphoblastic leukemia (ALL), the most common childhood cancer and the second most common cause of mortality in children aged 1-14 years, can originate in utero. Thus, maternal diet may be an important risk factor for ALL.

- Daily consumption of artificially sweetened soft drinks may increase the risk for preterm delivery, according to the results of a Danish prospective cohort study reported in the September, 2010 issue of the American Journal of Clinical Nutrition. (Am J Clin Nutr. 2010;92:626-633)
- Sugar-sweetened drinks have been linked to a higher risk for obesity, and replacement with artificially sweetened drinks has been offered as an alternative. However, aspartame—a sweetener—is broken down to aspartic acid, phenylalanine, and methanol. Methanol has been shown in animal studies (and now the above mentioned cohort study), to decrease the length of gestation through an effect likely to be on the maternal uterine environment.
- Use of non-aspirin NSAIDs in early pregnancy is reported to twice the risk for miscarriage, according to the results of a nested case-control study reported online September 6, 2011, in the Canadian Medical Association Journal.
- **Vitamin D status — Pregnancy Complications:** “Vitamin D deficiency in pregnant women is associated with increased risk of obstetrical complications such as pre-eclampsia, bacterial vaginosis, associated preterm delivery, gestational diabetes mellitus, and small-for-gestational age births.” Recurrent Pregnancy Losses: “A high proportion of women with Recurrent Pregnancy Loss (RPL) have vitamin D deficiency and the risk of auto- and cellular immune abnormalities is increased in women with RPL and vitamin D deficiency.” “Vitamin D Deficiency May Be a Risk Factor for Recurrent Pregnancy Losses by Increasing Cellular Immunity and Autoimmunity.” Hum Reprod. 2014;29(2):208-219

Nutritional Supplementation Considerations for Prenatal Support

- **Wellness Essentials® Pregnancy.**
- **D3 2000™ Complex**
- **Probiotic Supplementation**
- 3rd trimester to 6 months postpartum — **UltraFlora™ Balance**
- 6 months to 1 year — **UltraFlora™ Balance**

Nutritional Supplementation Considerations for Morning Sickness / Nausea

Again seek the counsel of the patient’s oncologist. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

In addition to a good prenatal multivitamin/mineral supplement, such as Wellness Essentials Pregnancy, consider the following:

- **B6 Sustained Release**
- **Mag Glycinate™**

Nutritional Supplementation Considerations for Miscarriage / Spontaneous Abortion / Recurrent Pregnancy Loss (RPL) to Minimize Risk

- **Vessel Care®**
- **CoQ10 100mg.**
- **NAC-600 MG.**
- **Profeminell.**

Nutritional Formula Description & Supplementation Rationale for Prenatal

Support. As possibly good as the following nutritional supplements might be any woman who is contemplating taking them should discuss them with her medical doctor before doing so.

Wellness Essentials® Pregnancy

Daily Essentials for Before, During, and After Pregnancy. Each once-daily packet contains:

- Advanced Prenatal Multi tablets
- Calcium/Magnesium tablets
- Choline softgel

Note: A woman should consider taking Wellness Essentials Pregnancy the moment she starts planning to have a child, rather than waiting until after a positive pregnancy test. Research shows that fetal brain and spinal cord development begins in the earliest stages of pregnancy—a time when a woman may not even realize she is pregnant—indicating the need to establish healthy levels of supportive nutrients early on. This is especially true when it comes to proper levels of omega-3 fatty acids, folate, choline, calcium, magnesium, and antioxidants (essential nutrients found in Wellness Essentials Pregnancy).

D3 2000™ Complex

D3 2000 Complex delivers 2000 IU of the preferred form of vitamin D, as vitamin D3, in each tablet. Sufficient vitamin D levels are crucial for the overall health and development of both the child and mother, and recently it has been directly connected to the neurocognitive development of offspring. *Pediatrics*. Published online February 13, 2012. Vitamin D supplementation of 4000 IU/day is safe and effective for healthy pregnant women and their infants, according to the results of a large, double-blinded, randomized clinical trial published online June 27, 2011 in the *Journal of Bone & Mineral Research*.

Probiotic Supplementation

UltraFlora Balance is one of the most recommended, practitioner-exclusive probiotic formulas in use worldwide. It supplies a probiotic blend of *B. lactis* Bi-07 and *L. acidophilus* NCFM® with a non-dairy base in capsule form. This NCFM strain has been the topic of over 60 published scientific articles, including clinical trials for a number of bothersome GI symptoms. This formula offers daily support for GI and immune health, helps maintain a healthy balance of intestinal flora, and facilitates the digestion of lactose.

References:

- *JAMA*, July 20, 2005, Vol 294, No. 3.
- *Haugen, et al. Circ Res. Jan 2005;96:12-14.*
- *Jensen, et al. Cancer Causes Control. 2004 Aug; 15(6):559-70.*
- *Devereux, et al. Antenatal determinants of neonatal immune response to allergens. Clin Exp Allergy. 2002 Jan;32(1):43-50.*
- *Danbury, J. A., et al. Fish oil supplementation in pregnancy modifies neonatal progenitors at birth in infants at risk of atopy Pediatric Research Vol. 57, No. 2, Feb 2005.*
- *Popp-Snijders, et al. Fish oil increases insulin sensitivity. Diabetes Res 1987;4:141-147.*
- *Engström, et al. Prostaglandines leucotriènes essential fatty acids. 1996;54:419-425.*
- *Saldeen, et al. Fish oil supplementation after 30 weeks:*
- *lowers the risk of premature birth by 40% to 50%, increases the length of pregnancy by 5 days*
- *, results in babies with a 100-g higher birth weight*
- *. Obstet Gynecol Surv. 2004 Oct;59(10):722-30.*
- *M.T. Salam, et al. [Poster: 304 American Thoracic Society 5/25/04] Maternal fish consumption during pregnancy and risk of childhood asthma. Preventive Medicine University of Southern California, Los Angeles, CA.*
- *Hibbeln, J.R. Seafood consumption, the DHA content of mothers' milk and prevalence rates of postpartum depression: A cross-national, ecological analysis. J Affect Disord 2002;69:15-2 J Affect Disord 2002;69:15-29.*

- *Mojska, H. Influence of trans fatty acids on infant and fetus development. Acta Microbiol Pol. 2003;52 Suppl:67-74.*
- *Dunstan, et al. The effect of supplementation with fish oil during pregnancy on breast milk immunoglobulin A, soluble CD14, cytokine levels, and fatty acid composition. Clin Exp Allergy. 2004 Aug;34(8):1237-42.*
- *McCann, J. C., & Ames, B. N. Is docosahexaenoic acid, an n-3 long-chain polyunsaturated fatty acid, required for development of normal brain function? An overview of evidence from cognitive and behavioral tests in humans and animals. [Changes in brain concentrations of DHA are positively associated with changes in cognitive or behavioral performance]. Am J Clin Nutr Aug 2005;82:281-95.*
- *Shaw, G. M., et al. Preconceptional dietary intake of choline and betaine and neural tube defects in offspring. Am J Epidemiol 2004 Jul 15;160(2):102-9.*
- *Zeisel S.H. Choline: Needed for normal development of memory. Am Coll Nutr. 2000 Oct;19(5 Suppl):528S-531S.*
- *Zeisel S. H. Nutritional importance of choline for brain development. J Am Coll Nutr. 2004 Dec;23(6 Suppl):621S-626S.*
- *Ota, K. et al. Vitamin D Deficiency May Be a Risk Factor for Recurrent Pregnancy Losses by Increasing Cellular Immunity. Hum Reprod. 2014 Feb;29(2):208-19.*

Prostate Cancer

The prostate is the gland below a man's bladder that produces fluid for semen. Prostate cancer is common among older men. It is rare in men younger than 40. Risk factors for developing prostate cancer include being over 65 years of age, family history, and being African-American. Symptoms of prostate cancer may include:

- Problems passing urine, such as pain, difficulty starting or stopping the stream, or dribbling
- Low back pain
- Pain with ejaculation

The comprehensive Nutrition and Lifestyle Support Strategies for Prostate Cancer outlined below is based on recommendations from "Nutrition and Cancer — New Strategies to Win the War on Cancer, Essential Information for the 563,700+ New Cancer Patients

Who Will be Diagnosed This Year" a seminar series by Robert A. Rakowski, DC, CCN, DACBN, DIBAK. It is a comprehensive and aggressive nutritional support protocol that covers the biochemical aspects of prostate cancer.

Nutrition and Lifestyle Support Strategies for Prostate Cancer

Diet / Exercise Considerations

The following instructions are based upon the published work of Sherry Rogers, M.D. in her book *Wellness Against All Odds*. Dr. Rogers is an international expert in environmental medicine. Her book documents the protocols followed by 30 cancer patients—all who were diagnosed as terminal—all who beat their cancers against all odds with nothing but natural remedies.

Diet – must be all organic

New evidence suggests that environmental toxins contribute to most cancers. This is documented in the *Journal of the American Medical Association* and the book *Living Downstream*. Additionally, when cancer is created in lab rats, it is induced with a single dose of a cancer causing chemical. Today, humans are exposed to more environmental toxins than ever before in history.

Additionally, our food supply is deficient in essential vitamins and minerals due to mass farming efforts. Therefore, organic foods are necessary. Eat a variety of high colored fruits and vegetables The National Institutes of Health has described cancer as a vegetable deficiency and now recommends up to 13 servings of fruits and vegetables every day.

Water

Water is the most important nutrient (next to oxygen) for our survival. A minimum of 8 to 10 glasses of pure water must be imbibed each day. Dr. Rogers suggests every cancer patient drink 1 gallon each day. It should be a purified form of water with natural minerals. (Thinly slice a few slices of organic lemon and soak it in your drinking water.) **NOTE:** Distilled water lacks the minerals that add to the health value of spring water.

Interventional Chiropractic Care

Interventional Chiropractic and Care, Chiropractic Managed Touch For Health Massage, Chiropractic and chiropractic managed massage, acupuncture, Myofascial Release, Neuro Muscle Skeletal Reeducation Trigger Zone Therapy have great potential in the management of patients with Benign prostate issues. This is related to the fact that the prostate like all other tissues are in part regulated by the brain, spinal cord, nerves, arteries, veins, lymphatic and acupuncture meridians that pass through the intervertebral foramina of the spinal column. Heat is typically used to help relieve pain.

Exercise

Movement promotes health by improving circulation, improving lymphatic drainage, and eliminating toxins through sweat.

Elimination

ALL patients described in the book *Wellness Against All Odds* performed daily colon cleanses—most in the form of coffee enemas. Coffee stimulates the release of bile from the liver and gallbladder. Bile is one of the most toxic fluids in our body.

The Coffee Retention Enema

When used as a retention enema—an enema that is held in the body for a specified period of time—coffee does not go through the digestive system, and does not affect the body as a coffee beverage does. Instead, the coffee solution stimulates both the liver and the gallbladder to release toxins, which are then flushed from the body. Many people report that a coffee retention enema is quite helpful during a serious illness, after hospitalization, and after exposure to toxic chemicals. This enema can also be used during fasts to relieve the headaches caused by a fast-induced release of toxins.

Procedure: Consult with your medical provider before embarking on this program.

To make the coffee enema solution, place 2 quarts of steam-distilled water in a pan, and add 6 heaping tablespoons of **organic** ground coffee (do not use instant or decaffeinated). Boil the mixture for fifteen minutes, cool to a comfortable temperature, and strain. Use only 1 pint of the strained coffee at a time, and refrigerate the remainder in a closed jar. Place 1 pint of the enema solution in an enema bag. Do not use petroleum jelly to lubricate the tip of the enema bag. Instead, use vitamin E oil (buy it in oil form or pierce the end of a vitamin E capsule and squeeze the liquid onto the tip). The liquid will both ease insertion and have a healing effect on the anus and the lining of the colon if these areas are inflamed. Aloe Vera may also be used for this purpose. The best position to assume when receiving the enema is “head down and rear up.” After the liquid has been inserted, roll onto your right side and hold the solution in your body for fifteen minutes before allowing the fluid to be expelled. Do not roll from side to side. Do not be concerned if the

liquid is not expelled after fifteen minutes. Simply stand up and move around as usual until you feel the urge to expel the liquid.

Considerations

To maximize the benefits of this or any other retention enema, use a cleansing enema first. Do not abuse coffee enemas by using them too often. Use them only once daily while following a program for a specific disorder, unless you are being treated for cancer. People with cancer may need up to three enemas a day. You may also use coffee enemas occasionally as needed.

Estrogen and Prostate Cancer

Key issues:

- Estrogens have been used to treat prostate cancer; however, these hormones and related compounds have also been identified as potential causative agents of prostate cancer.
- Evidence that supports estrogen as a prostate cancer-causing agent includes association of elevated levels of estrogen with prostate cancer, changes in estrogen receptor status in advanced prostate cancer, and rodent models and chimeric human tissue graft models showing induction of prostate cancer using estrogen plus testosterone.
- Early exposure to estrogens appears to predispose individuals to later development of prostate cancer.
- Potential mechanisms of estrogen-driven carcinogenesis include prostatic estrogen receptor-mediated events, epigenetic changes, genotoxicity, hyperprolactinemia, and chronic inflammation.

Reference: Nelles, J. L., Wen-Yang, H., & Prins, G. S. Estrogen action and prostate cancer. *Expert Rev Endocrinol Metab.* 2011 May; 6(3): 437–451.

Nutrient Considerations In Attempting to Reduce Xenoestrogen “Build-up” and Promote Healthy Estrogen Detoxification

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor are we in anyway attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

What are xenoestrogens? Synthetic or natural hormones that mimic estrogens and disrupt normal estrogens and have estrogen like effects. Sources are often from the excretions of animal hormones that were excreted in the urine and feces of animals and then spread on ground that enter ground water and/or the ground that foods (phytoestrogens) are grown and then those foods absorb the hormones and re-enter their life cycle are either feed to animals or becomes foods that are consumed by humans thus interrupting the normal hormone activities of animals or humans.

“Estrogens have been used to treat prostate cancer; however, these hormones and related compounds have also been identified as potential causative agents of prostate cancer.” The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

- **Estrium®.**
- **Testralin™.**

•• **Meta I-3-C®**

Nutrient Recommendations to Manage Healthy Insulin Levels “Men with the highest insulin have the highest risk of prostate cancer mortality.”

•• **Insinase™.**

Nutrient Considerations in attempting to Manage Stress

•• **Tran-Q®.** There are reports that methylfolate leads to prostate cancer cell death. But it is not a cure all therefore needs evaluation by the medical people involved.

Nutrient Considerations to Promote Cancer Cell Death

Anyone under medical care should consult with those medical providers. This is especially so if they are on chemo therapy as many times they can be indications of certain food supplements, and diets. When a person is in a life threatening situation they logically are looking for anyone who can help them and offer hope. That’s understandable but sometimes the difficulty of the health situation causes us to lose common sense and be predisposed to trying ideas and programs that in scientific reality are detrimental therefore we need to discuss those ideas with qualified medical people (Oncologists) who are involved in our situation.

Vessel Care®.

Nutrient Recommendations to Promote Healthy Levels of Vitamin D. “Vitamin D insufficiency increases risk to prostate cancer.”

•• **D3 10,000 with K2** indicated by serum vitamin D testing.

Nutrient Recommendations to Provide a “Broad-Spectrum” Combination of Phyto-Nutrients / Phyto-Chemicals. “Combinations of phyto-chemicals may be far more effective against and helping the body address cancer.”

•• **Dynamic Fruits & Greens®.**

Nutrient Considerations In Reducing the Number of Prostate Cancer Cells and Stopped Cell Cycle Progression

“Melatonin treatment dramatically reduced the number of prostate cancer cells and stopped cell cycle progression.”

•• **Melatonin Pro**

Nutrient Recommendations to Maintain Mucosal Integrity, Improve Immune Competence, Inhibit Cell Proliferation and Increased Apoptosis Rate “Potential mechanisms of glutamine effects include maintenance of mucosal integrity, improved immune competence, inhibition of cell proliferation, increased apoptosis rate, increased synthesis of glutathione, induction of heat shock protein synthesis, and increased synthesis of glucagons-like peptides.”

•• **Glutagenics®.**

Nutrient Considerations to Provide Pancreatic Enzymes

Because of the involvement of Pancreatic enzymes in digestion they may play roles in in treating advanced human cancer.”

•• **SpectraZyme® Pan 9X ES.**

Nutrient Recommendations to Provide the Omega-3 Fatty Acid — DHA

(Docosahexaenoic Acid) “DHA may slow the proliferation of tumor cells and minimize their metastatic potential.”

NOTE: VITAMIN INFUSIONS can be very helpful, if you can find a doctor who utilizes them. “The antioxidants lipoic acid, vitamin K3, and phenyl ascorbate are effective against SW620 HFST in the millimolar range, suggesting their potential use

as anticancer agents.” “Pro-oxidant concentrations of vitamin C do not negate the cytotoxicity of doxorubicin, though lower ascorbate concentrations may protect tumor cells as well as normal tissues.”

“These results indicate that the use of antioxidants, particularly ascorbate and lipoic acid in combination, as anti-cancer agents warrants further study.”

Reference: Casciari, J. J., et al. Cytotoxicity of ascorbate, lipoic acid, and other antioxidants in hollow fiber in vitro tumors. *British Journal of Cancer*. (2001) 84 (11) 1544-1550.

•• **Coffee Enemas.**

A coffee enema is a low-volume enema that stays in the sigmoid colon, the S-shaped last section of the large intestine. A special circulatory system exists between the sigmoid colon and the liver, called the enterohepatic circulation system. When the stool reaches the sigmoid colon, it is full of decomposed material and toxins. These toxins are sent directly to the liver for detoxification rather than being circulated throughout the body. The caffeine in the coffee is the active ingredient in a coffee enema. **DO NOT USE DECAFFEINATED COFFEE.** Given rectally, it helps detoxify the liver and emulsifies fat. Coffee enemas promote cleansing of the intestines as well as the liver and gallbladder.

Dietary Considerations

•• Low glycemic index Mediterranean-type Diet / FirstLine Therapy® Diet Program. NOTE:

According to a recent assessment of the dietary patterns of men who participated in the Physicians’ Health Study, it was concluded that a “Western diet was not good for overall survival or prostate cancer survival. The researchers were able to identify what they thought were the most important products in the diet. For men eating the healthy diet, oil and vinegar used in salad dressings were identified as conferring a benefit. “Other studies have looked at the benefits of oil and vinegar and found that the Mediterranean diet, with significant olive oil intake, improves overall health and reduces mortality. Whether that will help men who have a diagnosis of prostate cancer is less clear. It is interesting, however, that most of the men diagnosed with localized prostate cancer don’t actually die from prostate cancer. They die from other causes. “For men with prostate cancer who want to improve their overall survival, these guidelines suggest avoiding the Western diet. Whether a Mediterranean diet will lower their risk of dying from prostate cancer remains unclear.”

References:

•• Yang, M., Kenfield, S. A., & Van Blarigan, E. L., et al. *Dietary patterns after prostate cancer diagnosis in relation to disease-specific and total mortality. Cancer Prev Res.* 2015;8:545-551.

•• Guasch-Ferré, M., Hu, F. B., & Martínez-González, M. A., et al. *Olive oil intake and risk of cardiovascular disease and mortality in the PREDIMED Study. BMC Med.* 2014;12:78. *Coffee Consumption May Reduce Risk for Advanced Prostate Cancer. Regular coffee consumption is associated with a striking decrease in fatal or metastatic prostate cancer, according to an analysis of long-term data from the Health Professionals Follow-up Study. J Natl Cancer Inst. Published online May 17, 2011. According to the researchers, coffee contains “diverse biologically active compounds that include caffeine, minerals, and phytochemicals.” They add that many studies suggest that long-term coffee drinking may be ed to improved glucose metabolism and insulin secretion.*

Nutritional Formula Description & Supplementation Rationales Nutritional Formula Description & Supplementation Rationales to Reduce Xenoestrogen Build-up and Promote Estrogen Detoxification

Estrium is designed to provide a specialized blend of macronutrients with all essential vitamins and minerals, along with non-soy phytoestrogens, antioxidants, and flaxseed hull specially selected for their ability to promote healthy estrogen metabolism and promote healthy hormone balance. “Risk of aggressive prostate cancer was strongly inversely associated with estradiol, testosterone ratio, sex steroid hormones, specifically the estrogen-androgen balance, may be important in the development of aggressive prostate cancer.”

•• Black, A., et al. Sex steroid hormone metabolism in relation to risk of aggressive prostate cancer. *Cancer Epidemiol Biomarkers Prev.* 23(11); 2374–82.

Testralin™

Testralin is designed to support healthy testosterone and estrogen balance and help maintain male reproductive health. This powerful formula provides 15 key ingredients—including green tea, flax lignans, and plant sterols—that may help promote healthy testosterone balance and beneficially influence estrogen and testosterone metabolism. “High levels of circulating testosterone and low levels of SHBG—both within normal endogenous ranges—are associated with increased risks of prostate cancer. Low levels of circulating estradiol may represent an additional risk factor. Circulating levels of DHT and AAG do not appear to be strongly related to prostate cancer risk.” *J Natl Cancer Inst* 1996;88:1118–26

Meta I-3-C®

Meta I-3-C features indole-3-carbinol (I3C) which promotes healthy estrogen metabolism and estrogenic activity. I3C is a naturally occurring compound found in cruciferous vegetables such as broccoli, Brussels sprouts, and cabbage. Weill Cornell Medical College scientist have pinpointed the hormone estrogen as a key player in about half of all prostate cancers”
<http://www.medaus.com/p/337,7996.html> “We have shown previously that a known Xenoestrogen, bisphenol A (BPA), activates a tumor-derived AR mutant (T877A), leading to androgen-independent prostate cancer cell proliferation.” *Cancer Res.* 2005 Jan 1;65(1):54-65. PMID: 15665279. “Greater risk of any gallbladder disease or surgery with estrogen.” *JAMA.* 2005; 293: 330-339

NOTE: Excess estrogen are believed to be possibly promote gallbladder problems and prostate cancer. If a person’s gallbladder was removed at a young age, they are at increased risk and an estrogen detoxification program is strongly recommended. Indole-3-carbinol (I3C) has a potent anti-proliferative effect in LNCaP and other human prostate carcinoma cells. “These findings implicate this dietary indole-3-carbinol (I3C) as a potential chemotherapeutic agent for controlling the growth of human prostate carcinoma cells.” *Cancer* Volume 98, Issue 11, pages 2511 - 2520; published online: 29 Oct 2003. “Indole-3-carbinol strongly influences estradiol metabolism in humans and may provide a new chemo preventive approach to estrogen-dependent diseases.” *J Natl Cancer Inst* 82:947–949, 1990

Nutrient Considerations in the Management of Healthy Insulin Levels

“Men with the highest insulin, have the highest risk of prostate cancer mortality.”

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor make a diagnosis, treatment or imply cure or prevention. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Insinase™

Insinase features selective kinase response modulators (SKRMs)—RIAA and acacia—which have been clinically shown in a preliminary study at the FMRC to improve fasting insulin and lipid parameters. “Men with C-peptide concentrations in the highest quartile, [HIGHEST INSULIN] had a higher risk of prostate cancer mortality.” *Lancet Uncool*. 2008 Nov;9(11):1039-47. *Pub* 2008 Oct 3. PMID: 18835745 *If diabetes runs in the family, and insulin problems increase the risk of prostate cancer death, A LOW GLYCEMIC DIET AND INSULIN- SUPPORT IS STRONGLY SUGGESTED.* “In PET scan, an injected glucose analog highlights tumors, which are hungrier for glucose than normal cells are. *Science* 26 May 2006: Vol. 312. no. 5777, pp. 1158 – 1159

Nutrient Options to Manage Stress

“Stress promotes cancer by multiple mechanisms.” But as we look at them please keep in mind that we are talking about stress not psychiatric problems.

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel

Tran-Q®

Tran-Q has been traditionally used to maintain a calm spirit, relax the body, and quiet the heart. According to traditional Chinese Herbology, a sustained intense emotional state causes a disharmony between liver and heart energy resulting in nervousness and mild mood changes.

“Scientists have discovered that everyday emotional stress is a trigger for the growth of tumors. Any sort of trauma, emotional or physical, can act as a ‘pathway’ between cancerous mutations bringing them together in a potentially deadly mix.” <http://www.telegraph.co.uk/health/healthnews/6981222/Stress-could-cause-cancer-claim-scientists.html>

“Aromatase activity in mature adipocytes was stimulated by cortisol plus insulin (P<0.05) with no gender-specific differences.” *Nature*; July 2000, Volume 24, Number 7, Pages 875-881

“**Methylfolate** leads to prostate cancer cell death.” **Vessel Care® Vessel Care** is a comprehensive formula that features L-5-methyltetrahydrofolate—a body-ready, nature identical folate—along with vitamins B6 and methylated B12, trimethylglycine, and choline. Together, these nutrients support methylation, which promotes healthy homocysteine metabolism.

Completing the formula are intrinsic factor, which promotes absorption of vitamin B12 and zinc for added support. “These results show that 5-methyltetrahydrofolate is transported into PC-3 prostate cancer cells by a carrier mediated process that results in apoptosis.” *J Nutr Biochem*. 2003 Aug;14(8):473-9. PMID: 12948878 **Nutrient Considerations in Promote Healthy Levels of**

Vitamin D

“Vitamin D insufficiency increases risk to prostate cancer.” D3 10,000 with K2 D3 10,000 with K2 provides 10,000 IU per softgel of vitamin D (as D3), designed for greater absorption. This high potency formula also includes bioavailable forms of vitamin K2 to complement vitamin D.

“Vitamin D insufficiency increases risk for prostate cancer.” *Biomedical and Life Sciences Issue* Volume 17, Number 8 October, 2006

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today
1. Go to www.nutri-dyn.com
2. Click on **Create Account**
3. Click on **Patients**
4. Complete the short form and type in the following **Account Number 100160**
5. Click **submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Prostate Cancer

Patient Recommendations to Provide a “Broad-Spectrum” Combination of Phyto-Nutrients / Phyto-Chemicals “Combinations of phyto-chemicals may be far more effective against and helping the body address cancer.” But as we look at them we are not in any way suggesting that if a person is under traditional medical care they should seek the advice of their medical doctor before embarking on this or any other food supplement program for prostate (or any other form of) cancer. We are aware that a diagnosis of cancer can be very debilitating and cause people to look at alternative approaches to treat cancer. Some may be viable but again we caution any of those people to seek competent medical advice.

Dynamic Fruits & Greens®

Dynamic Fruits & Greens is an easy-to-mix, great tasting, nutrient-rich superfood formula with whole food concentrates designed to provide synergistic phytonutrient nutrition. It provides a super blend of 100% natural fruit and vegetable extracts, vitamins, flax lignans, ionic trace minerals, enzymes, antioxidants, phytonutrients, and symbiotic intestinal flora. This dynamic blend supports your body's natural energy, metabolism, fat-burning, digestion, detoxification, immunity, repair, recovery, revitalization, and longevity. "Evidence is emerging that specific combinations of phytochemicals may be far more effective in protecting against cancer than isolated compounds." Eur J Nutr. 2008 May;47 Suppl 2:51-9. PMID: 18458834

Nutrient Options to Reduce the Number of Prostate Cancer Cells and Stopped Cell Cycle Progression

"Melatonin treatment dramatically reduced the number of prostate cancer cells and stopped cell cycle progression."

Melatonin Pro

Melatonin is a hormone synthesized endogenously in the pineal gland, collected by the venous capillary system, and then secreted into the cerebrospinal fluid and the venous systemic circulation. There is evidence that oral melatonin used daily can significantly decrease levels of prostate-specific antigen (PSA) and growth factors for prostate cancer, prolactin (PRL), and insulin-like growth factor-1 (IGF-1). "Melatonin (10 mgs) treatment dramatically reduced the number of prostate cancer cells and stopped cell cycle progression in both LNCaP and PC3 cells." The Prostate Volume 63, Issue 1, pages 29 - 4317 Sep 2004

Nutrient Considerations to Maintain Mucosal Integrity, Improve Immune

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Competence, Inhibit Cell Proliferation and Increased Apoptosis Rate

"Potential mechanisms of glutamine effects include maintenance of mucosal integrity, improved immune competence, inhibition of cell proliferation, increased apoptosis rate, increased synthesis of glutathione, induction of heat shock protein synthesis, and increased synthesis of glucagons-like peptides." Eur J Nutr. 2009 Nov 21. PMID: 19936817

Glutagenics®

Glutagenics features three key ingredients—glutamine, degly-cyrrhizinized licorice (DGL), and aloe Vera.

Nutrient Recommendations to Provide Pancreatic Enzymes

"Pancreatic enzymes to treat advanced human cancer."

SpectraZyme® Pan 9X ES

SpectraZyme Pan 9X ES (formerly called Azeo-Pangen™ Extra Strength), is a comprehensive enzyme complex that provides per tablet:

Protease 104,000 USP units

Amylase.04,000 USP units

Lipase.. 16,640 USP units

During the first two decades of this century, a number of physicians, both in Europe and in the United States, used injectable pancreatic enzymes to treat advanced human cancer, oftentimes (depending on the quality of the product) with great success. http://www.dr-gonzalez.com/clinical_pearls.htm

Nutrient Considerations to Provide the Omega-3 Fatty Acid - DHA (Docosahexaenoic Acid)

“DHA may slow the proliferation of tumor cells and minimize their metastatic potential.” Int J Oncol. 2010 Mar;36(3):737-42. PMID: 20126994

Prostatitis (Prostatic Hypertrophy, Benign)

Pathology

A common entity which occurs in about four out of every five men in America over the age of 50 years. It is characterized by the growth of multiple fibroadenomatous nodules enlarging the prostate gland and compromising the urethra causing variable degrees of bladder outlet obstruction.

Physiology

Progressive urinary frequency and urgency, with incomplete emptying and rapid refilling of the bladder, hesitancy and intermittency, and decreased size and force of the urinary stream are the common diagnostic signs.

Nutritional Supplementation Considerations for Prostatitis (Prostatic Hypertrophy, Benign)

Acute Nutritional Support: 4-6 weeks

•• **Concentrated Ultra Postage®.**

•• **Testralin.**

NOTE: Dr. Robert Rakowski has found clinical evidence that the prostate can shrink with the addition of:

Recovery / Maintenance Nutritional Support

•• **Wellness Essentials® Men's Vitality.**

•• **Concentrated Ultra Prostagin®.**

Dietary Considerations

•• **Anti-Inflammatory® Diet** or

•• **Low glycemic index Mediterranean Type Diet/FirstLine Therapy® Diet Program**

•• Dietary restrictions on the use of alcohol, coffee, smoking, and spicy foods should be established

Nutritional Formula Description & Supplementation Rationale

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any food supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Concentrated Ultra Prostagin®

Concentrated Ultra Prostagin combines the unique benefits of select herbs, amino acids, and nutrients in an exclusive formula designed to support prostate health.

•• Features a potent, premium quality, standardized extract of saw palmetto—a popular herb known for maintaining prostate health—that delivers a minimum of 288 mg of naturally occurring fatty acids and sterols in just 2 tablets daily.

•• Provides a nettle root extract equivalent to 1000 mg raw, dried, unprocessed herb. Nettles are an herb recognized for its prostate-supportive properties.

•• Supplies amino acids, vitamin B6, and zinc—nutrients essential for maintaining male reproductive health.

- Provides 2 mg of lycopene, a natural carotenoid found in certain fruits and vegetables—particularly tomatoes—that has been found to have a protective effect on prostate health, perhaps due to its antioxidant properties, influence on cytokines, and interaction with androgen-metabolizing enzymes.
- Supplies 200 IU of vitamin D, which recent research suggests helps to promote the health of prostate cells.

Testralin

Promotes healthy male hormone balance and addresses prostate health by providing phytonutrients known to inhibit the conversion of testosterone to DHT (dihydrotestosterone). Wellness

Essentials® Men's Vitality

- **Multifaceted health support:** PhytoMulti™ is the “smart multi” with essential nutrients and a proprietary blend of 13 concentrated extracts and phytonutrients to help protect cells and maintain DNA stability—activating health potential like no other supplement.
- **Libido and healthy sexual function support:** Tribulus Synergy® is specifically formulated to support a healthy male response.
- **Testosterone levels and prostate health support:** Testralin® provides key ingredients that may help promote healthy hormone balance.

Concentrated Ultra Prostagin®

Concentrated Ultra Prostagin combines the unique benefits of select herbs, amino acids, and nutrients in an exclusive formula designed to support prostate health and proper urination.

Psoriasis & Psoriatic Arthritis

Psoriasis

Psoriasis is a skin disease that causes itchy or sore patches of thick, red skin with silvery scales. You usually get the patches on your elbows, knees, scalp, back, face, palms, and feet, but they can show up on other parts of your body. Some people who have psoriasis also get a form of arthritis called psoriatic arthritis. A problem with the immune system causes psoriasis and that immune dysfunction is termed autoimmune disease. In a process called cell turnover, skin cells that grow deep in your skin rise to the surface. Normally, this takes a month. In psoriasis, it happens in just days because the cells rise too fast. Psoriasis can be hard to diagnose because it can look like other skin diseases. Your doctor might need to look at a small skin sample under a microscope. Psoriasis can last a long time, even a lifetime. Symptoms come and go. There are five main types of psoriasis:

- **Erythrodermic** — The skin redness is very intense and covers a large area.
- **Guttate** — Small, pink-red spots appear on the skin.
- **Inverse** — Skin redness and irritation occurs in the armpits, groin, and in between overlapping skin.
- **Plaque** — Thick, red patches of skin are covered by flaky, silver-white scales. This is the most common type of psoriasis.
- **Pustular** — White blisters are surrounded by red, irritated skin. Psoriasis usually occurs in adults. It sometimes runs in families. Treatments include creams, medications, and light therapy.

Light Therapy

Natural ultraviolet light from the sun and artificial ultraviolet light can be used to treat psoriasis. One treatment, called PUVA, uses a combination of a drug that makes skin more sensitive to light and ultraviolet A light.

What Causes Psoriasis?

Psoriasis begins in the immune system, mainly with a type of white blood cell called a T cell. T cells help protect the body against infection and disease. With psoriasis, T cells are put into action by mistake. They become so active that they set off other immune response (auto-immune syndrome). This leads to swelling and fast turnover of skin cells. People with psoriasis may notice that sometimes the skin gets better and sometimes it gets worse. Things that can cause the skin to get worse include:

- Infections
- Stress – Food Allergys
- Changes in weather that dry the skin
- Certain medicines.

Psoriatic Arthritis

Psoriatic arthritis is a type of arthritis that often occurs with psoriasis of the skin.

Causes

Psoriasis is a common, chronic skin condition that causes red patches on the body. It is considered an autoimmune disorder and about 1 in 20 people with psoriasis will develop arthritis with the skin condition. In most cases, psoriasis comes before the arthritis. The cause of psoriatic arthritis is not known, genes may play a role and there is some research indicating a connection between “alpha-gliadin/gluten sensitivity/celiac disease” and psoriasis & psoriatic arthritis. In general, people who have psoriasis have a higher rate of arthritis than the general population.

Symptoms

The arthritis may be mild and involve only a few joints, particularly those at the end of the fingers or toes. In some people the disease may be severe and affect many joints, including the spine. When the spine is affected, the symptoms are stiffness, burning, and pain, most often in the lower spine and sacrum. People who also have arthritis usually have the skin and nail changes of psoriasis. Often, the skin gets worse at the same time as the arthritis. **NOTE:** *Both psoriasis & psoriatic arthritis* are considered auto-immune syndromes.

The Alpha-gliadin/Gluten/Celiac Disease Connection to Psoriasis & Psoriatic

Arthritis—Consider a Gluten-Free Diet

- *34.1% of psoriasis patients have elevated antibodies to alpha-gliadin (AGA), a peptide of wheat. Clinical and Experimental Dermatology, 36, 302-304, 2010*
- *We found a highly significant correlation between positive serum alpha-gliadin (AGA) and duration of psoriasis. Clinical and Experimental Dermatology, 36, 302-304, 2010*
- *Recent studies showed an association between celiac disease and psoriasis and an improvement of skin lesions after 3-6 months of gluten free diet...without other pharmacological approaches. Thirty of 33 patients with positive alpha-gliadin (AGA) antibodies strictly complied with gluten free diet, and showed a significant decrease of psoriatic lesions. World J Gastroenterol 2007; 13(14): 2138-2139*
- *16% of patients with psoriasis have been found to present high levels of anti-gluten antibodies. This observation was considered a possible sign of “gluten sensitivity” and prompted the evaluation of the effect of a gluten-free diet on the manifestations of psoriasis. J Intern Med 2011;269:582-590*
- *Physicians who care for patients with psoriasis should be aware of the possible association between psoriasis and celiac disease. British Journal of Dermatology 2009 161, pp1331-1334*
- *The single most important risk factor for celiac disease is having a first-degree relative with already-defined celiac disease, particularly a sibling. A rate up to 20% or more has been noted. World J Gastroenterol 2010 April 21; 16(15): 1828-1831*

Nutritional Supplementation Considerations for Psoriasis & Psoriatic Arthritis

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any food supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **UltraInflamX® Plus 360** — 2 scoops twice daily; blend (for no longer than 15 seconds), shake, or briskly stir about two level scoops into 8 fluid ounces of chilled water, juice, or acceptable fruit as listed in the dietary guidelines; follow recommended dosage guidelines (Program Guide); consume within 10 minutes of reconstitution.

- **UltraFlora™ Intensive Care.**

- **D3 10,000 with K2 based on** if the serum vitamin D levels are extremely low.

- The nutritional support program should be implemented for a minimum of 90-120 days before judging its efficacy.

- The addition of a scoop of Dynamic Fruits & Greens to the above UltraInflamX Plus 360 shake will not only have the additional health benefits of additional greens, but will also significantly improve the taste, which improves patient compliance!

Hydrochloric acid deficiency is sometimes associated with psoriasis. If seen:

- **Metagest®.**

Fat malabsorption, biliary sluggishness, and liver dysfunction are often associated with, and possibly a contributing factor in psoriasis.

- **Lipo-Gen™**

Dietary Considerations

- Anti-Inflammatory Diet

Nutritional Formula Description & Supplementation Rationale

UltraInflamX® Plus 360

UltraInflamX Plus 360 is a multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation associated with psoriasis and psoriatic arthritis.

UltraFlora™ Intensive Care

L. plantarum 299V (UltraFlora Intensive Care) is a strain-identified probiotic that has been specifically shown to be anti-inflammatory in nature and support the integrity and healthy function of the mucosal lining.

Pro-resolving Mediators” (Lipoxins, Resolvins, Protectins & Maresins), derived from the precursor substances 17-HDHA and 18-HEPE from omega-3 fatty acids.

- Inflammation is an immune response to insults such as injuries (cuts, w infections [bacterial, viral, or fungal], or unhealthy dietary patterns.

- Although acute inflammation is a normal, protective response, it can give rise to chronic inflammation if left unresolved.

- Groundbreaking research has discovered that SPMs are produced at the inflamed site after the initial inflammatory response, and function as “resolution agonists,” orchestrating resolution to facilitate the return to homeostasis and tissue healing.

- An important key to controlling/resolving inflammation and subsequently preventing chronic inflammatory conditions lies in SPMs and their pro-resolving properties.

- SPMs are produced from long-chain polyunsaturated fatty acids—especially EPA and DHA—illustrating the importance of appropriate nutrition in the body’s resolution of inflammation.
- Although EPA and DHA are metabolic precursors of SPMs, SPMs are directly responsible for resolution activities whereas EPA and DHA are involved in other beneficial biological activities. Therefore, SPM supplementation may represent an effective approach in supporting resolution.

POTENTIAL BENEFITS OF RESOLUTION-BASED NUTRITION

For decades, blocking initiation-phase pro-inflammatory mediators (e.g., prostaglandins) or enzymes (e.g., COX-2 enzyme) by pharmacological agents such as nonsteroidal anti-inflammatory drugs (NSAIDs) has been the go-to therapy for many acute and chronic inflammatory conditions. However, anti-inflammation is not the same as pro-resolution. Because initiation phase activities are required to “jump start” resolution, traditional COX-2 and lipoxygenase inhibitors may delay resolution activities and undermine the body’s attempt to return to homeostasis and tissue healing. Unresolved inflammation and unhealed tissue can lead to fibrosis that can impair organ function. Thus, an important key to controlling/resolving inflammation and subsequently preventing chronic inflammatory conditions lies in SPMs and their pro-resolving properties that switch an inflammatory response toward resolution and homeostasis. That SPMs are enzymatically produced from long-chain PUFA (especially EPA and DHA) in tissue exudates indicates the indispensable role of nutrition in regulating inflammation and promoting resolution.

References

- Majno, G., & Joris, I. (2004). *Cells, Tissues and disease: Principles of general pathology*. Oxford University Press: USA.
- Giugliano, D., Ceriello, A., & Esposito, K. *The effects of diet on inflammation: Emphasis on the metabolic syndrome*. *J Am Coll Cardiol*. 2006;48:677-685.
- Recchiuti, A. *Immunoresolving lipid mediators and resolution of Inflammation in aging*. *J Gerontol Geriat Res*. 2014;3:151.
- Nathan, C., & Ding, A. *Nonresolving inflammation*. *Cell*. 2010;140:871-882.
- Tabas, I., & Glass, C. K. *Anti-inflammatory therapy in chronic disease: Challenges and opportunities*. *Science*. 2013;339:166-172.
- Libby, P. *Atherosclerosis: The new view*. *Sci Am*. 2002;286:46-56.
- Mushtaq, G., Khan, J. A., Kumosani, T. A., & Kamal, M. A. *Alzheimer’s disease and type 2 diabetes via chronic inflammatory mechanisms*. *Saudi J Biol Sci*. 2015;22:4-13.
- Fuentes, E., Fuentes, F., Vilahur, G., Badimon, L., & Palomo, I. *Mechanisms of chronic state of inflammation as mediators that obese adipose tissue and metabolic syndrome*. *Mediators Inflamm*. 2013;2013:136584.
- Parmeggiani, F., Romano, M. R., & Costagliola, C., et al. *Mechanism of inflammation in age-related macular degeneration*. *Mediators Inflamm*. 2012;2012:546786.
- Franceschi, C. *Inflammaging as a major characteristic of old people: Can it be prevented or cured?* *Nutr Rev*. 2007;65:S173-176.
- Lawrence, T., Willoughby, D. A., & Gilroy, D. W. *Anti-inflammatory lipid mediators and insights into the resolution of inflammation*. *Nat Rev Immunol*. 2002;2:787-795.
- Samuelsson, B., Dahlen, S. E., Lindgren, J. A., Rouzer, C. A., & Serhan, C. N. *Leukotrienes and lipoxins: Structures, biosynthesis, and biological effects*. *Science*. 1987;237:1171-1176.
- Spite, M., Claria, J., & Serhan, C. N. *Resolvins, specialized proresolving lipid mediators, and their potential roles in metabolic diseases*. *Cell Metab*. 2014;19:21-36.

- Serhan, C. N. *Pro-resolving lipid mediators are leads for resolution physiology.* *Nature.* 2014;510:92-101.
 - Serhan, C. N., Brain, S. D., & Buckley, C. D., et al. *Resolution of inflammation: State of the art, definitions and terms.* *Faseb J.* 2007;21:325-332.
 - Serhan, C. N. *A search for endogenous mechanisms of anti-inflammation uncovers novel chemical mediators: Missing s Psoriasis & Psoriatic Arthritis 449 to resolution.* *Histochem Cell Biol.* 2004;122:305-321.
 - Maddox, J. F., Hachicha, M., & Takano, T., et al. *Lipoxin A4 stable analogs are potent mimetics that stimulate human monocytes and THP-1 cells via a G protein-ed lipoxin A4 receptor.* *J Biol Chem.* 1997;272:6972-6978.
 - Ariel, A., Fredman, G., & Sun, Y. P., et al. *Apoptotic neutrophils and T cells sequester chemokines during immune response resolution through modulation of CCR5 expression.* *Nat Immunol.* 2006;7:1209-1216.
 - Schwab, J. M., Chiang, N., Arita, M., & Serhan, C. N. *Resolvin E1 and protectin D1 activate inflammation-resolution programmes.* *Nature.* 2007;447:869-874.
 - Chiang, N., Fredman, G., & Backhed, F., et al. *Infection regulates pro-resolving mediators that lower antibiotic requirements.* *Nature.* 2012;484:524-528.
 - Serhan, C. N., & Savill, J. *Resolution of inflammation: The beginning programs the end.* *Nat Immunol.* 2005;6:1191-1197.
 - Levy, B. D., Clish, C. B., Schmidt, B., Gronert, K., & Serhan, C. N. *Lipid mediator class switching during acute inflammation: Signals in resolution.* *Nat Immunol.* 2001;2:612-619.
 - Hong, S., Gronert, K., Devchand, P. R., Moussignac, R. L., & Serhan, C. N. *Novel docosatrienes and 17S-resolvins generated from docosahexaenoic acid in murine brain, human blood, and glial cells.* *Autacoids in anti-inflammation.* *J Biol Chem.* 2003;278:14677-14687.
 - Serhan, C. N., Clish, C. B., & Brannon, J., et al. *Novel functional sets of lipid-derived mediators with anti-inflammatory actions generated from omega-3 fatty acids via cyclooxygenase 2-nonsteroidal anti-inflammatory drugs and transcellular processing.* *J Exp Med.* 2000;192:1197-1204.
 - Serhan, C. N., & Petasis, N. A. *Resolvins and protectins in inflammation resolution.* *Chem Rev.* 2011;111:5922-5943.
 - Serhan, C. N. *Lipoxins and aspirin-triggered 15-epi-lipoxins are the first lipid mediators of endogenous anti-inflammation and resolution.* *Prostaglandins Leukot Essent Fatty Acids.* 2005;73:141-612.
 - Serhan, C. N. *Novel lipid mediators and resolution mechanisms in acute inflammation: To resolve or not? Am J Pathol.* 2010;177:1576-1591.
 - Serhan, C. N., & Chiang, N. *Resolution phase lipid mediators of inflammation: Agonists of resolution.* *Curr Opin Pharmacol.* 2013;13:632-640.
 - Navarro-Xavier, R. A., Newson, J., & Silveira, V. L., et al. *A new strategy for the identification of novel molecules with targeted proresolution of inflammation properties.* *J Immunol.* 2010;184:1516-1525.
 - Chan, M. M., & Moore, A. R. *Resolution of inflammation in murine autoimmune arthritis is disrupted by cyclooxygenase-2 inhibition and restored by prostaglandin E2-mediated lipoxin A4 production.* *J Immunol.* 2010;184:6418-6426.
- Regarding Vitamin D and Autoimmune Disease**
- “Vitamin D insufficiency is emerging as a clinical problem of global proportions and epidemiology has ed vitamin D status with autoimmune disease susceptibility and severity.”

- Adams, J. S., & Hewison, M. *Unexpected actions of vitamin D: New perspectives on the regulation of innate and adaptive immunity. Nat Clin Pract Endocrinol Metab.* 2008;4:80-90.
- “1,25-dihydroxyvitamin D3 [1,25(OH)₂D₃], the biologically active metabolite of vitamin D₃, not only regulates bone and calcium metabolism, but also exerts immunomodulation via the nuclear VDR expressed in antigen-presenting cells and activated T/B cells.”
- Van Etten, E., & Mathieu, C. *Immunoregulation by 1,25-dihydroxyvitamin D₃: Basic concepts. J Steroid Biochem Mol Biol* 2005;97:93-101.
- “The net effect of the vitamin D endocrine system on the immune response is an enhancement of innate immunity coupled with multifaceted regulation of adaptive immunity.” *Epidemiological evidence indicates a significant association between vitamin D deficiency and an increased incidence of autoimmune diseases, and clarification of the physiological role of endogenous VDR agonists in the regulation of autoimmune responses will support the pharmacological VDR agonists for use in the clinic. The anti-proliferative, pro-differentiated, immunomodulatory, and anti-inflammatory properties of synthetic VDR agonists could be exploited to treat a variety of autoimmune rheumatic diseases, from RA to SLE, and possibly also multiple sclerosis, type 1 diabetes or IBDs.*”
- Adorini, A., & Penna, G. *Control of autoimmune diseases by the vitamin D endocrine system. Nat Clin Pract Rheumatol* 2008;4:404-12.

Metagest®

Metagest features betaine HCl combined with pepsin—a proteolytic enzyme—to complement the natural production of digestive agents in the stomach.

Lipo-Gen™

Lipo-Gen is a highly specialized formula that features a broad-spectrum and unique blend of lipotropic nutrients combined with select amino acids, vitamins, and herbs to support healthy liver and gallbladder function.

Restless Legs Syndrome and Leg Cramps

Leg Cramps

Nocturnal leg cramps constitute a relatively common complaint in the general practice of medicine and may be very distressing to the patient. Not only is the cause obscure and the treatment relatively unsatisfactory, but even its proper medical name, *systemma* (anything twisted up together), is unknown to most physicians. Muscle cramps are sudden, involuntary contractions or spasms in one or more of your muscles. They often occur after exercise or at night, lasting a few seconds to several minutes. It is a very common muscle problem. Muscle cramps can be caused by nerves that malfunction. Sometimes this malfunction is due to a health problem, such as a spinal cord injury or a pinched nerve in the neck, mid or lower back. It is important that they not be confused with thrombophlebitis. When thrombophlebitis exists in the legs usually the muscle (leg is hot/fervish) hard and much more painful than a muscle cramp and they are not going to mess around with. . Other causes are:

- Straining or overusing a muscle and problems in the lumbar spine and/or sacroiliac articulation.
- Dehydration
- A lack of minerals in your diet or the depletion of minerals in your body
- Not enough blood getting to your muscles

Cramps can be very painful. Stretching or gently massaging the muscle can relieve this pain.

Restless Leg Syndrome (RLS)

There are at least two clinical forms of RLS:

1. The classic mixed sensorimotor form in which pain, numbness, and lightning stabs of pain in the lower or even the upper limbs are relieved by movement or local massage.

2. The pure motor or myoclonic form which does not involve any sensory component. The folate-responsive form is exclusively of the mixed type

•• Boutez, M. I., et al. (1979). Neuropsychological correlates of folic acid deficiency: Facts and hypotheses, in MI Botez, EH Reynolds, Eds. Folic acid in neurology, psychiatry, and internal medicine. New York: Raven Press. Restless legs syndrome (RLS) is a neurological disorder characterized by throbbing, pulling, creeping, or other unpleasant sensations in the legs and an uncontrollable, and sometimes overwhelming, urge to move them. Symptoms occur primarily at night when a person is relaxing or at rest and can increase in severity during the night. Moving the legs relieves the discomfort. Often called paresthesia's (abnormal sensations) or dysesthesias (unpleasant abnormal sensations), the sensations range in severity from uncomfortable to irritating to painful. The most distinctive or unusual aspect of the condition is that lying down and trying to relax activates the symptoms. Most people with RLS have difficulty falling asleep and staying asleep. Left untreated, the condition causes exhaustion and daytime fatigue. Many people with RLS report that their job, personal relations, and activities of daily living are strongly affected as a result of their sleep deprivation. They are often unable to concentrate, have impaired memory, or fail to accomplish daily tasks. It also can make traveling difficult and can cause depression. As many as 10% of the U.S. population may have RLS. Several studies have shown that moderate to severe RLS affects approximately 2-3 percent of adults (more than 5 million individuals). An additional 5 percent appears to be affected by a milder form. Childhood RLS is estimated to affect almost 1 million school-age children, with one-third having moderate to severe symptoms. Some people with RLS will not seek medical attention, believing that they will not be taken seriously, that their symptoms are too mild, or that their condition is not treatable. Some physicians wrongly attribute the symptoms to nervousness, insomnia, stress, arthritis, muscle cramps, or aging. RLS occurs in both men and women, although the incidence is about twice as high in women. It may begin at any age. Many individuals who are severely affected are middle-aged or older, and the symptoms typically become more frequent and last longer with age. RLS is classified as a movement disorder, as individuals are forced to move their legs in order to gain relief from symptoms. More than 80% of people with RLS also experience a more common condition known as periodic limb movement of sleep (PLMS).

PLMS is characterized by involuntary leg twitching or jerking movements during sleep that typically occur every 15 to 40 seconds, sometimes throughout the night. The symptoms cause repeated awakening and severely disrupted sleep. Although many individuals with RLS also develop PLMS, most people with PLMS do not experience RLS. People who have PLMS and do not have RLS or another cause for the PLMS may be diagnosed with periodic limb movement disorder (PLMD). PLMD may be a variant of RLS and thus respond to similar treatments.

Common signs and symptoms of restless legs?

People with RLS feel uncomfortable sensations in their legs, especially when sitting or lying down, accompanied by an irresistible. Restless Legs Syndrome and Leg Cramps urge to move the affected limb. These sensations less commonly affect the arms, trunk, or head. Although the sensations can occur on just one side of the body, they most often affect both sides. Because moving the legs (or other affected parts of the body) relieves the discomfort, people with RLS often keep their legs in motion to minimize or prevent the sensations. They may pace the floor, constantly move their legs while sitting, and toss and turn in bed. A classic feature of RLS is that the symptoms are worse at night with a distinct symptom-free period in the early morning,

allowing for more refreshing sleep at that time. Other triggering situations are periods of inactivity such as long car trips, sitting in a movie theater, long-distance flights, immobilization in a cast, or relaxation exercises. Many individuals also note a worsening of symptoms if their sleep is further reduced by events or activity. RLS symptoms may vary from day to day and in severity and frequency from person to person. Individuals with mild RLS may have some disruption of sleep onset and minor interference in daytime activities. In moderately severe cases, symptoms occur only once or twice a week but result in significant delay of sleep onset, with some disruption of daytime function. In severe cases of RLS, the symptoms occur more than twice a week and result in burdensome interruption of sleep and impairment of daytime function. Individuals with RLS can sometimes experience remissions—spontaneous improvement over a period of weeks or months before symptoms reappear—usually during the early stages of the disorder. In general, however, symptoms become more severe over time. People who have both RLS and an associated medical condition tend to develop more severe symptoms rapidly. In contrast, those who have RLS that is not related to any other condition and experience onset at an early age show a very slow progression of the disorder; many years may pass before symptoms occur regularly.

What causes restless legs syndrome? In most cases, the cause of RLS is unknown. However, it may have a genetic component; RLS is often found in families where the onset of symptoms is before age 40. Specific gene variants have been associated with RLS. Evidence indicates that low levels of iron in the brain also may be responsible for RLS. Considerable evidence suggests that RLS is related to a dysfunction in the brain's basal ganglia circuits that use the neurotransmitter dopamine, which is needed to produce smooth, purposeful muscle activity and movement.

Disruption of these pathways frequently results in involuntary movements. Individuals with Parkinson's disease, another disorder of the basal ganglia's dopamine pathways, often have RLS as well.

RLS also appears to be related to the following factors or conditions, although researchers do not yet know if these factors actually cause RLS:

Conditions such as varicose veins and chronic diseases such as kidney failure, metabolic syndrome/diabetes, thyroid dysfunction, fibromyalgia, and peripheral neuropathy and problems involving the lumbar spine and sacroiliac articulations thus interfering with the normal distribution of the nerves, artery's, lymphatics as acupuncture meridians of the lumbar plexus . Treating the underlying condition often provides relief from RLS symptoms.

Certain medications that may aggravate symptoms. These medications include ant nausea drugs (prochlorperazine or metoclopramide), antipsychotic drugs (haloperidol or phenothiazine derivatives), antidepressants that increase serotonin, and some cold and allergy medications that contain sedating antihistamines.

Pregnancy, especially in the last trimester. In most cases, symptoms usually disappear within 4 weeks after delivery.

Alcohol and sleep deprivation also may aggravate or trigger symptoms in some individuals. Reducing or completely eliminating these factors may relieve symptoms, but it is unclear if this can prevent RLS symptoms from occurring at all. *How is restless legs syndrome diagnosed?*

There is no specific test for RLS. The four basic criteria for diagnosing the disorder are:

- Symptoms that are worse at night and are absent or negligible in the morning
- A strong and often overwhelming need or urge to move the affected limb(s), often associated with paresthesia's or dysesthesias
- Sensory symptoms that are triggered by rest, relaxation, or sleep

•• Sensory symptoms that are relieved with movement and the relief persists as long as the movement continues. Physicians should focus largely on the individual's descriptions of symptoms, their triggers and relieving factors, as well as the presence or absence of symptoms throughout the day. A neurological and physical exam, plus information from the individual's medical and family history and list of current medications, may be helpful. Individuals may be asked about frequency, duration, and intensity of symptoms as well as their tendency toward daytime sleep patterns and sleepiness, disturbance of sleep, or daytime function.

Laboratory tests may be performed to rule out other conditions. Blood tests can identify calcium, iron and vitamin deficiencies as well as other medical disorders associated with RLS. In some cases, sleep studies such as polysomnography (a test that records the individual's brain waves, heartbeat, breathing, and leg movements during an entire night) may identify the presence of other causes of sleep disruption (e.g., sleep apnea), which may impact management of the disorder.

Diagnosing RLS in children may be especially difficult, since it may be hard for a child to describe where it hurts, when and how often the symptoms occur, and how long symptoms last.

Pediatric RLS can sometimes be misdiagnosed as "growing pains" or attention deficit disorder.

How is restless legs syndrome treated? RLS can be treated, with care directed toward relieving symptoms. Moving the affected limb(s) may provide temporary relief. Sometimes RLS symptoms can be controlled by finding and treating an associated medical condition, such as peripheral (related to issues involving the lumbar spine and sacroiliacs) neuropathy, diabetes, etc. Certain lifestyle changes and activities that may reduce symptoms in persons with mild to moderate symptoms include:

- Decreased use of caffeine, alcohol, and tobacco
- Supplements to correct deficiencies in *iron, folate, and magnesium (*NOTE: A trial of iron supplements at a therapeutic level is recommended only for individuals with documented low iron levels)

- Changing or maintaining a regular sleep pattern

- A program of moderate exercise; and massaging the legs, taking a hot bath, or using a heating pad or ice pack

Common drugs prescribed to treat RLS include: Dopaminergic agents (drugs that increase dopamine), largely used to treat Parkinson's disease, have been shown to reduce symptoms of RLS and PLMS when they are taken at bedtime and are considered the initial treatment of choice. The U.S. Food and Drug Administration (FDA) has approved ropinirole, pramipexole, and rotigotine to treat moderate to severe RLS. Both drugs are generally well tolerated but can cause nausea, dizziness, or other side effects. Good short-term results of treatment with levodopa plus carbidopa have been reported but anyone who is contemplating taking any of those medications is well advised to look up the adverse effects of them.

Although dopamine-related medications are effective in managing RLS, long-term use can lead to worsening of the symptoms in many individuals. This apparent progressive worsening is referred to as "augmentation." With chronic use, a person may begin to experience symptoms earlier in the evening than in the afternoon until finally the symptoms are present around the clock. The initial evening or bedtime dose becomes less effective, the symptoms at night become more intense, and symptoms begin to affect the arms or trunk. Fortunately, this apparent progression is reversible by removing the person from all dopamine related medications. Another important adverse effect of dopamine medications that occurs in some people is the development of impulsive or obsessive behaviors such as obsessive gambling or shopping. Should they occur, these behaviors can be reversed by stopping the medication. The FDA has approved gabapentin enacarbil, which metabolizes in the body to become gabapentin, for the treatment of moderate to

severe RLS. Other medications may be prescribed “off-label” (not specifically designed to treat RLS) to relieve some of the symptoms of the disorder:

- Benzodiazepines can help individuals who have mild or intermittent symptoms obtain a more restful sleep. However, even if taken only at bedtime they can sometimes cause daytime sleepiness. Benzodiazepines such as clonazepam and diazepam are generally prescribed to treat anxiety, muscle spasms, and insomnia. Because these drugs also may induce or aggravate sleep apnea in some cases, they should not be used in people with this condition.
- Opioids such as codeine, propoxyphene, or oxycodone may be prescribed at night to diminish pain and help to relax individuals with more severe symptoms. Side effects include dizziness, nausea, exacerbation of sleep apnea, and the risk of addiction.
- Anticonvulsants such as gabapentin and pregabalin can decrease the sensory disturbances such as creeping and crawling sensations and nerve pain. Dizziness, fatigue, and sleepiness are among the possible side effects.

What is the prognosis of people with restless legs?

RLS is generally a lifelong condition for which there is no cure. Nevertheless, current therapies can control the disorder, minimizing symptoms and increasing periods of restful sleep. Symptoms may gradually worsen with age, although the decline may be somewhat faster for individuals who also suffer from an associated medical condition. In addition, some individuals have remissions—periods in which symptoms decrease or disappear for days, weeks, or months—although symptoms usually eventually reappear. A diagnosis of RLS does not indicate the onset of another neurological disease, such as Parkinson’s disease.

Contributing Factors

- Thyroid dysfunction
- Varicose veins
- Metabolic Syndrome / Diabetes
- Fibromyalgia including spinal problems

Nutritional Supplementation Considerations for Restless Legs Syndrome and Leg Cramps

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply cure or prevention. Similarly a Doctor of Chiropractic that includes Touch For Health Applied Kinesiology Muscle Response Test whole person health and wellness care will have expertise in giving counsel

Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Mild to Moderate

- **Legs On Edge.**
- **MyoCalm® P.M.**
- **E Complex-1:1™**
- Appropriate **Wellness Essentials®** Formula

In severe restless legs syndrome, add to the above protocol:

- **Attencia™**

Dietary Considerations

- FirstLine Therapy® Diet / Mediterranean Diet

Interventional Chiropractic Care

Chiropractic Spinal Manipulation and Massage Being that it is possible the RLS can be related also to issues in people lumbar spine and sacroiliacs, acupuncture, with the purpose of correcting or minimalizing spinal issues , increasing circulation to and from the brain and spinal cord). One should also be sure to check and align atlas, axis of spine (only adjust atlas 2-3 times, check parasympathetic [cervical, sacrum]), exercise, Myofascial Release, Neuro/Muscle Skeletal Reeducation, Trigger Zone Therapy and/or Acupuncture.

Case Reports

- Three women diagnosed as having acquired folate deficiency based on depressed serum folate concentrations had mild symptoms of restless legs, depression, muscular and mental fatigue, depressed ankle jerks, diminution of vibratory sensation in the legs, a stocking type hypoesthesia, and chronic constipation. All 3 recovered with adequate folate treatment.
- Three women who were members of a family with restless legs syndrome, fatigability, and diffuse muscular pain had folate deficiency based on depressed serum folate concentrations. One also had subacute combined degeneration of the spinal cord and kidney disease but no megaloblastosis; the other 2 had minor neurologic signs. All 3 responded to large doses of folic acid.

Reference: Boutez, M. I., et al. Neurologic disorders responsive to folic acid therapy. Can Med Assoc J. 15:217-22, 1976.

Nutritional Formula Description & Supplementation Rationale Legs On Edge

Nutritional support for occasional leg symptoms such as minor pain and discomfort while also supporting healthy sleeping patterns. This formula also supports the legs with occasional urges to move your legs when sitting or lying still for a long period of time, and/or the occasional creepy and itchy sensation.

MyoCalm® P.M.

The components of this formula are designed to work in concert to support healthy muscle relaxation, help prevent muscle cramping and spasm, and relieve nocturnal leg cramps. MyoCalm P.M. is a time-tested, specialized formula that provides bioavailable forms of magnesium and calcium blended with select herbs that support healthy muscle function. Supplies important minerals involved in muscular contraction and relaxation responses. May help relieve minor muscle pain associated with stress or physical exertion, and may prevent nocturnal leg muscle cramps. Features extracts of passionflower, lemon balm, hops, and valerian for added relaxation support.

E Complex-1:1™

E Complex-1:1 is a unique, natural vitamin E supplement that features a 1:1 ratio of alpha- to gamma-tocopherol; this ratio more closely resembles the tocopherol profile found naturally in vitamin E-rich plants. According to Alan R. Gaby, M.D., vitamin E should be included relative to its capacity to improve blood flow and to prevent the production of tissue-damaging free radicals. Patients with leg cramps received prompt and gratifying relief from their symptoms while taking vitamin E. The group included 24 private patients with leg cramps and two with the “restless legs” syndrome, probably a related condition. One of the patients with leg and foot cramps also had severe nocturnal rectal cramps which were also relieved.

- Ayres, S., & Mihian, R. Leg cramps and “restless leg” syndrome responsive to vitamin E. Calif Med. 111:87-91, 1969.

Attencia™

Attencia is scientifically formulated to promote attention and focus with a novel blend of targeted ingredients. This unique formula features the cognition-enhancing benefits of caffeine from phytonutrient-rich green coffee bean extract and guarana extract combined with Theanine, essential fatty acids, and zinc to support alertness and cognitive performance, through modulating the metabolism of neurotransmitters such as dopamine, gamma-aminobutyric acid (GABA), and norepinephrine. **NOTE:** Dopamine issues have been documented to be associated with restless legs syndrome.

Wellness Essentials®

Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas. “The human body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

Rheumatoid Arthritis

Rheumatoid arthritis is a chronic inflammatory condition that affects the entire body, but especially the synovial membranes of the joints. It is a classic example of an “autoimmune disease,” a condition in which the body’s immune system attacks the body’s own tissue. Although rheumatoid arthritis is a systemic disease, it affects primarily the joints. The joints typically affected by rheumatoid arthritis are the hands and feet, wrists, ankles, and knees. Involved joints will characteristically be quite warm, tender, and swollen. The skin over the joint can take on a ruddy purplish hue. As the disease progresses, very often joint deformities result in the hands and feet. Somewhere between 1% and 3% of the population is affected; female patients outnumber males almost 3:1; and the usual onset is 20 to 40 years, although rheumatoid arthritis may begin at any age.

Diagnostic Summary

Fatigue, low-grade fever, weakness, joint stiffness, and vague joint pain may precede the appearance of painful, swollen joints by several weeks’ Severe joint pain with much inflammation that begins in small joints, but progressively affects all joints in the body

Presence of rheumatoid factor (RF) –less than 15IU/ml or less than 1:6) in serum. Systemic manifestations are common, including: inflammation of the blood vessels (vasculitis), muscle wasting, skin nodules, inflammation of the heart and lungs, enlargement of the spleen, anemia, and depressed white blood cell counts thus the possibility of food allergies. That being a possibility one can determine that possibility through an IgG (Fixed) and IgG4 Food (Cyclic) Sensitivity and Touch For Health Applied Kinesiology Muscle Response Tests that identify which antigens in foods and other environments chemicals cause toxic and inflammatory reactions in the body. Foremost in the natural approach is the use of diet to control inflammation. Combined with those tests should at minimum include a Blood Chemical Screen, CBC, Hair Mineral/Toxic Metal Analysis and a 24 Urine Hormone Analysis

Signs and Symptoms

The onset of rheumatoid arthritis is usually gradual, but occasionally it is quite abrupt. Several joints are usually involved in the onset, typically in a symmetrical fashion, i.e., both hands, wrists, or ankles. In about one-third of persons with rheumatoid arthritis, initial involvement is confined to one or a few joints. Most persons with rheumatoid arthritis feel fatigued as a result of the anemia that often accompanies the disease. Other common findings include carpal tunnel

syndrome (tingling and pain in the fingers caused by pressure on the nerve as it enters the hand through the wrist), and Raynaud's phenomenon (a condition where the blood flow through the fingers is severely reduced when they are exposed to cold). In some cases, soft nodules develop beneath the skin over bony surfaces. More serious complications, such as inflammation of the heart and lungs, are usually only seen in more severe cases.

Causes

There is abundant evidence that rheumatoid arthritis is an autoimmune reaction, where antibodies develop against components of joint tissues. Yet what triggers this autoimmune reaction remains largely unknown, speculation and investigation has centered around genetic susceptibility, abnormal bowel permeability (Leaky Gut Syndrome where there is an ongoing antigen/antibody reactions (food hypersensitivity) both in the gut as well as systemically in particular joints and surrounding soft tissues), and microorganisms, as well as dietary factors. In short, rheumatoid arthritis is a classic example of a multifactorial disease where there is an interesting assortment of genetic and environmental factors and food allergies which contribute to the disease process.

Genetic Factors

A specific genetic marker (histocompatibility antigen HLA-DRw4) is found in 70% of patients with rheumatoid arthritis compared to 28% in the general population. This strongly implies that the likelihood of developing rheumatoid arthritis is influenced by genetic factors which govern immune response. Severe rheumatoid arthritis is also found at four times the average rate in children of parents with rheumatoid arthritis. As strong as these genetic associations are, environmental factors are necessary for the development of the disease. This is perhaps most evident in studies with identical twins. These studies show that it is quite rare for both twins to develop rheumatoid arthritis.

Interventional Chiropractic Care

Interventional Chiropractic and Care, Touch For Health Applied Kinesology Muscle Response Test Chiropractic Managed Massage, Chiropractic and chiropractic managed massage, acupuncture, Trigger Zone therapy, Ultrasound Electro Muscle Stimulation, Myofascial release and Neuro Muscle Skeletal Reeducation have great potential in the management of patients with RA issues. This is related to the fact that like all other tissues are in part regulated by the brain, spinal cord and the nerves, arteries, veins, lymphatic and acupuncture meridians that pass through the intervertebral foramina of the spinal column. Heat is typically used to help relieve muscle joint pain.

Exercise

Tolerant movement promotes health by improving circulation, improving lymphatic drainage, and eliminating toxins through sweat and contribute to the freeing up of Life Force releasing Innate Intelligence to go about correcting any spinal subluxations as well as impingements and interferences in the body.

Abnormal Bowel Permeability (Leaky Gut Syndrome)

An interesting association between rheumatoid arthritis and abnormal bowel function exists that may provide a unified theory as to the cause of rheumatoid arthritis. What is currently known is that individuals with rheumatoid arthritis have increased intestinal permeability. This means that their intestines are too "leaky." Food allergies are thought to contribute greatly to the increased permeability of the gut in rheumatoid arthritis. The release of histamine and other allergic compounds after eating an allergic food greatly increases the "leakiness" of the gut (Leaky Gut Syndrome). The result of a leaky gut is an increased absorption of large dietary and bacterial

molecules. Normally these molecules are prevented from being absorbed because they are too large. In rheumatoid arthritis, however, they are absorbed into the body predisposing people to systemic disorders. The body's response to these molecules (antigens) is to form antibodies to bind them therefore an antigen/antibody reactions. Antibodies are released by our white blood cells to bind to foreign molecules—such as those found in proteins and on bacteria, viruses, and cancer cells—resulting in the formation of an immune complex (antigen/antibody reactions). In the case of rheumatoid arthritis, food and bacterial molecules are acting as antigens that are being bound by the antibodies. The resulting immune complex then triggers the immune system to release compounds to destroy it. These compounds work great when antibodies bind to bacteria and viruses, but when immune complexes are deposited in joint tissues these compounds actually destroy not only the immune complex, but also surrounding joint tissue. Another way in which the body may develop antibodies to its own tissue is by developing “cross-reacting” antibodies. The increased gut permeability and altered bacterial flora result in the absorption of antigens that are very similar to antigens in joint tissues. Antibodies formed to these antigens would “cross-react” with the antigens in the joint tissues. Increasing evidence appears to support this concept as well. Clinically, physicians use the presence of immune complexes to monitor the patient as the serum and joint fluid of nearly all individuals with rheumatoid arthritis contain the “rheumatoid factor” (RF). The rheumatoid factor represents the formation of multiple immune complexes. Most of the rheumatoid factor is formed locally in the affected joints by white blood cells. The level of rheumatoid factor can be measured in the blood and usually correlates with the severity of arthritis symptoms. That is, when rheumatoid factor levels are high, severity is high, and when rheumatoid factor levels are low, severity is low.

Standard Medical Therapy

Standard medical therapy is of limited value in most cases of rheumatoid arthritis as it fails to address the complexity of this disease in an appropriate manner. Standard medical treatment of rheumatoid arthritis primarily involves the use of aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs). Like the use of these drugs in osteoarthritis, use of these drugs in the treatment of rheumatoid arthritis is a classic example of suppression of symptoms, but acceleration of factors which promote the disease process. In the case of rheumatoid arthritis, NSAIDs have been shown to greatly increase the already hyper permeable gastrointestinal tract of rheumatoid arthritis sufferers. The use of NSAIDs in rheumatoid arthritis is also a significant cause of serious gastrointestinal tract reactions including ulcers, hemorrhage, and perforation. Approximately 20,000 hospitalizations and 2,600 deaths occur each year in individuals with rheumatoid arthritis due to **NSAIDs**. If NSAIDs are not effective, corticosteroids may be used. However, most experts and medical textbooks clearly state long-term use of corticosteroids in rheumatoid arthritis is not advised due to the side effects. Nonetheless, long-term corticosteroid use is quite common in patients with rheumatoid arthritis. If NSAID and cortisone therapy does not offer benefit, more aggressive and potentially more toxic treatments are used along with continued use of NSAIDs and corticosteroids. Hydroxychloroquine, gold therapy, penicillamine, azathioprine, methotrexate, and cyclophosphamide are examples of drugs currently in use. Unfortunately, in most cases, the benefit produced by these drugs is greatly outweighed by the significant toxicity they possess. The use of these drugs often requires the use of additional drugs to deal with side effects. It is not uncommon for individuals with rheumatoid arthritis to be on 12 or more prescription drugs at one time. And finally, joint surgery and replacement are reserved for the most severe cases.

Side Effects

The side effects of oral corticosteroids are a function of dosage levels and length of time on the medication. Most of the problems of side effects are not due to taking too much of the drug for a short period of time, but rather reflect long-term use. The number and severity of side effects is a matter of dosage and length of treatment. At lower doses (less than 10 mg. per day), the most notable side effects are usually increased appetite, weight gain, retention of salt and water, and increased susceptibility to infection. These side effects are almost always expected with corticosteroids. Common side effects of long-term corticosteroid use at higher dosage levels include: depression and other mental/emotional disturbances (up to 57% of patients being treated with high doses of prednisone for long periods of time develop these symptoms); high blood pressure; diabetes; peptic ulcers; acne; excessive facial hair in women; insomnia; muscle cramps and weakness; thinning and weakening of the skin; osteoporosis; and susceptibility to the formation of blood clots.

The Natural Approach to Rheumatoid Arthritis

Antigens

Rheumatoid arthritis represents a disease known to have many contributing factors. The natural approach involves reducing as many of these factors as possible including poor digestion, food allergies, increased gut permeability, increased circulating immune Complexes Antigen/antibody Reactions involving IgG (Fixed) and IgG4 Food (Cyclic) Sensitivity and Touch For Health Applied Kinesiology Muscle Response Testing that can identify which antigens in foods and other environments chemicals cause toxic and inflammatory reactions in the body. Foremost in the natural approach is the use of diet to control inflammation. Combined with those tests should at minimum include a Blood Chemical Screen, CBC, Hair Mineral/Toxic Metal Analysis and a 24 Urine Hormone Analysis

Diet has been strongly implicated in rheumatoid arthritis for many years, both in regards to cause and cure. Population studies have demonstrated that rheumatoid arthritis is not found in societies that eat a more “primitive” diet and is found at a relatively high rate in societies consuming the so-called “Western” diet. Therefore, sometimes no matter how one tries to eat healthy they still are not going to see improvements in their health until they identify foods that are causing an antigen/antibody toxic reactions.

Food Allergy in Rheumatoid Arthritis

Virtually any food can result in aggravating rheumatoid arthritis (antigen/antibody reactions do to immunity issues), but the most common offending foods are wheat, corn, milk and other dairy products, beef, and nightshade family foods (tomato, potato, eggplants, peppers, tobacco), as well as food additives. A recent study highlights the effectiveness of eliminating food allergens as part of a healthy diet and lifestyle program in the treatment of rheumatoid arthritis. In a 13-month study conducted in Norway at the Oslo Rheumatism Hospital, two groups of patients suffering from rheumatoid arthritis were studied to determine the effect of diet on their condition. One group followed a therapeutic diet (the treatment group), the other group (control group) was allowed to eat as they wished. Both groups started the study by visiting a “health farm,” or what we in American call a “spa,” for four weeks. The treatment group began their therapeutic diet by fasting for seven to ten days. Dietary intake during the fast consisted of herbal teas, garlic, vegetable broth, decoction of potatoes and parsley, and the following juices: carrot, beet, and celery.

Elimination Rotation

Interestingly enough, no fruit juices were allowed. Patients with rheumatoid arthritis have historically benefited from fasting, however, strict water fasting should never be done as it doesn't

support the detoxification mechanism. Fasting decreases the absorption of allergic food components and reduces the levels of inflammatory mediators as well. A juice fast, or a fast similar to the one used in this study, is safer than a water fast and may actually yield better results. Short-term fasts of three to five days duration are recommended during acute worsening of rheumatoid arthritis. After the fast the patients reintroduced a “new” food item every second day. If they noticed an increase in pain, stiffness, or joint swelling within two to 48 hours, this item was omitted from the diet for at least seven days before being reintroduced a second time. If the food caused worsening of symptoms after the second time, it was omitted permanently from the diet. The results of the study further supported the positive results noted in other studies, showing short-term fasting followed by a vegetarian diet results in “a substantial reduction in disease activity” in many patients. The results indicated a therapeutic benefit beyond elimination of food allergies alone. The authors suggested that the additional improvements were due to changes in dietary fatty acids. Before discussing the role dietary fats play in rheumatoid arthritis, let’s examine the importance of proper digestion.

Digestion and Rheumatoid Arthritis

Proper digestion is a requirement for optimum health, and incomplete or disordered digestion can be a major contributor to the development of many diseases, including rheumatoid arthritis. The problem is not only that ingestion of foods and nutritional substances are of little benefit when breakdown and assimilation are inadequate, but also that incompletely digested food molecules (antigens) can be inappropriately absorbed into the body. Since many individuals with rheumatoid arthritis are deficient in digestive factors including hydrochloric acid and pancreatic enzymes, incomplete digestion may be a major factor in rheumatoid arthritis. If an individual is experiencing any signs or symptoms of gastric acid insufficiency as listed below (or if the patient scores high under Hypoacidity on the **Health Appraisal Questionnaire**) consider adding **Metagest®** to the outlined nutritional protocol.

Common Signs & Symptoms of Low Gastric Acidity

- Bloating, belching, burning, and flatulence immediately after meals
- A sense of “fullness” after eating
- Indigestion, diarrhea, or constipation
- Multiple food allergies
- Nausea after taking supplements
- Itching around the rectum
- Weak, peeling, and cracked fingernails
- Dilated blood vessels in the cheeks and nose
- Acne
- Iron deficiency
- Chronic intestinal parasites or abnormal flora
- Undigested food in stool
- Chronic candida infections
- Upper digestive tract gassiness

Challenge Protocol for Hydrochloric Acid Supplements

The challenge protocol for hydrochloric acid supplementation developed by Jonathan Wright, M.D., instructs patients to: “Consider by taking one tablet of hydrochloric acid (Metagest®) at your next large meal. If this does not produce a warming sensation or abdominal discomfort, at every meal after that of the same size take one more tablet. If your body is tolerating the supplement you could consider increasing the dose until you reach seven tablets or when you feel

a warmth in your stomach or abdominal discomfort, whichever occurs first. A feeling of warmth in the stomach means that you have taken too many tablets for that meal, and you need to take one less tablet for that meal size. It is a good idea to try the larger dose again at another meal to make sure that it was the hydrochloric acid that caused the warmth and not something else. After you have found the largest dose that you can take at your large meals without feeling any warmth, maintain that dose at all meals of similar size. You will need to take less at smaller meals. When taking a number of tablets it is best to take them throughout the meal. As your stomach begins to regain the ability to produce the amount of hydrochloric acid needed to properly digest your food, you will notice the warm feeling again and will have to cut down the dose level.”

Dietary Fats

Fatty acids are important mediators of allergy and inflammation through their ability to form inflammatory prostaglandins, thromboxanes, and leukotrienes. Altering dietary oil intake can significantly increase or decrease inflammation depending on the type of oil being increased. By altering the type of dietary oils consumed and stored in cell membranes, prostaglandin metabolism can be manipulated. Prostaglandin manipulation can be extremely powerful in the treatment of inflammation, allergies, high blood pressure, and many other health conditions. The basic goal in most situations is twofold: (1) reduce the level of arachidonic acid, and (2) increase the level of EPA (omega-3 fatty acids). Mediterranean-type diets are often beneficial in the treatment of many chronic allergic and inflammatory conditions including rheumatoid arthritis, presumably as a result of decreasing the availability of arachidonic acid for conversion to inflammatory prostaglandins and leukotrienes while simultaneously supplying linoleic and linolenic acids. In addition, many nutrition-oriented physicians recommend GLA, flax seed oil, and/or fish oil supplements to further modify prostaglandin synthesis.

Specialized Pro-resolving Mediators (SPMs)

Inflammation is an immune response to insults such as injuries, cuts, wounds, vertebral and extremity misalignments, muscle spasms, infections (bacterial, viral, or fungal), or unhealthy dietary patterns. Although acute inflammation is a normal, protective response, it can give rise to chronic inflammation if left unresolved. Research has discovered that SPMs are produced at the inflamed site after the initial inflammatory response, and function as “resolution agonists,” orchestrating resolution to facilitate the return to homeostasis and tissue healing. An important key to controlling/resolving inflammation and subsequently preventing chronic inflammatory conditions lies in SPMs and their pro-resolving properties. Acute inflammation, if left unresolved or uncontrolled, can give rise to a prolonged state of chronic inflammation that causes damage to the host, resulting in pain and/or dysfunction. Many chronic diseases such as cardiovascular disease, arthritis, diabetes, metabolic syndrome, inflammatory bowel disease, periodontal disease, asthma, and age-related macular degeneration, as well as some neurological disorders, have been linked to chronic inflammation. Furthermore, aging may be associated with a mild pro-inflammatory state that has been termed “inflammaging.” SPMs are produced from long-chain polyunsaturated fatty acids—especially EPA and DHA—illustrating the importance of appropriate nutrition in the body’s resolution of inflammation. Although EPA and DHA are metabolic precursors of SPMs, SPMs are directly responsible for resolution activities whereas EPA and DHA are involved in other beneficial biological activities. Therefore, SPM supplementation may represent an effective approach in supporting resolution but one should make sure that the EPA and DHA that they are contemplating take is GMP certified*. •• Repetto, V. (2015, November 6). Getting rid of inflammation with specialized pro-resolving mediators (SPMs).

Retrieved from <https://drvittoriarepetto.wordpress.com/2015/11/06/getting-rid-of-inflammation-with-specialized-pro-resolving-mediator-spm-a-nyc-chiropractor-applied-kinesiologist-explains/Omega-3-Fatty-Acids>. The studies of fish oil supplementation in rheumatoid arthritis have demonstrated far better and more consistent responses than the studies with GLA supplementation. The first double-blind, placebo-controlled study of rheumatoid arthritis patients using 1.8 grams of EPA a day showed less morning stiffness and tender joints. These results led to considerable scientific interest as well as numerous popular press accounts of the possible benefits of fish oil for allergic and inflammatory condition. Over a dozen follow-up studies have consistently demonstrated positive benefits. As well as improvements in symptoms (morning stiffness and joint tenderness), fish oil supplementation has produced favorable changes in suppressing the production of inflammatory compounds secreted by white blood cells. While the results of these studies are impressive, all of these studies were relatively short-term (less than one year). In order to properly assess the beneficial effect of any treatment of rheumatoid arthritis, it is extremely important to evaluate patients over an extended period of time (ideally, at least one year) as the condition is associated with ups and downs in symptom severity. Recently, a one-year study of fish oil supplementation in rheumatoid arthritis was completed. The results clearly indicated that supplementation with 2.6 grams per day of omega-3 oil (six 1-gram capsules of fish oil per day) resulted in significant clinical benefit and led to significant reductions in the need for drug therapy. The results of this long-term study provide further validation of the short-term studies.

Chiropractic Care

Chiropractic and Chiropractic Managed Massage, Chiropractic and chiropractic Touch For Health Applied Kinesiology Muscle Response Test managed massage, Acupuncture, Myofascial release and Neuro Muscle Skeletal Reeducation, Trigger Zone Therapy, Electrical Muscle Stimulation, Ultrasound have great potential in the management of patients with rheumatoid arthritis. While not curative, they have Wholistic abilities to improve patient comfort and preserve joint and muscle function. Heat is typically used to help relieve stiffness and pain, relax muscles, and increase range of motion.

Moist heat (e.g., moist packs, hot baths) is more effective than dry heat (e.g., heating pad), and paraffin baths are used if skin irritation from regular water immersion develops. Cold packs are of value during acute flare-ups. Strengthening and range-of-motion exercises are important for improving and maintaining joint function, as well as general health. Patients with well-developed disease and significant inflammation should begin with progressive, passive range-of-motion and isometric exercises. As inflammation is ameliorated, active range-of-motion and isotonic exercises are more appropriate.

Final Comments

Rheumatoid arthritis is an aggressive disease that needs aggressive treatment. If the patient has been taking corticosteroids or has taken them for more than three months in the past, take a formula containing herbs/nutrients which support the adrenal glands. If there is significant secondary osteoarthritis, recommend a glucosamine/chondroitin formulation such as Chondro-Relief™ Intensive Care.

The severity of rheumatoid arthritis varies from one person to the next. In severe cases, NSAIDs and other drugs may be necessary. However, encourage patients not to abandon the natural measures as they will actually enhance the effectiveness of the drugs, meaning lower dosages can be used. When the use of drugs is necessary, be sure to use deglycyrrhizinated licorice to protect against developing peptic ulcers.

Nutritional Supplementation Considerations for Rheumatoid Arthritis

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

As is our recommendation in thinking about ant diet and/or nutritional program one serves themselves bet by contacting a Doctor of Chiropractic who is known to have expertise in RA before embarking on any nutritional program.

•• **UltraInflamX® Plus 360.**

•• **UltraFlora™ Intensive Care.**

•• **UltraFlora™ Integrity**

•• **D3 10,000 with K2. Dietary Considerations**

•• An Anti-Antigen/Antibody Inflammatory Diet based on IgG and IgG4 and Applied Kinesiology Tests

•• Acute: range-of-motion exercise within limits of pain

•• Stretching, range-of-motion, and gentle resistive exercise

•• Water exercise

•• Strength training

•• Swimming, bicycling, low-impact aerobic exercise

•• Apply moist heat to affected joints 1-2 hours daily (use a wet towel folded and covered with plastic, place a heating pad on top; do not let heating pad get wet)

Nutritionnel Formula Description & Supplementation Rationale

UltraInflamX® Plus 360

UltraInflamX Plus 360 is a multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation. The overall outcome of 10 clinical observations utilizing the UltraInflamX Plus 360 suggest that a tailored adjunctive approach incorporating an inflammatory-modulating, RIAA, vitamin D, selenium, and zinc in conjunction with dietary changes and standard natural therapies may help to promote function and well-being in patients with underlying issues of immune system imbalance, thereby reducing the intensity of subjective symptoms in these patients.

UltraFlora™ Intensive Care

L. plantarum 299V (UltraFlora Intensive Care) is a strain-identified probiotic that has been specifically shown to be anti-inflammatory in nature and supports the integrity and healthy function of the mucosal lining.

UltraFlora™ Integrity

Lactobacillus salivarius UCC118 (UltraFlora Integrity) is a strain-identified probiotic that has been specifically shown to support intestinal barrier function via preventing the oxidative stress-induced internalization of tight junction proteins. Upon adhesion to intestinal epithelial cells (IEC), UCC118 also produces ABP-118, a bacteriocin that is effective at inactivating or killing several species of pathogenic bacteria, addressing inflammation at the gut wall, and supporting the integrity and healthy function of the intestinal mucosal lining. UCC118 represents a new trend in probiotic selection, utilizing a targeted approach to select probiotics with optimal strain-specific

characteristics for the intended benefits and outcomes, and with promising effects in human clinical studies.

References

- Miyauchi E., O'Callaghan J., & Butto L. F., et al. Mechanism of protection of transepithelial barrier function by *Lactobacillus salivarius*: Strain dependence and attenuation by bacteriocin production. *Am J Physiol Gastrointest Liver Physiol.* 2012;303:G1029-G1041.
- O'Mahony L., McCarthy J., & Feeney M., et al. Immunologic response to a novel probiotic organism in patients with active Crohn's disease. *Gastroenterology* 2000;118 (Issue4, Part 1), A853. [Abstract presented at Digestive Disease Week and the 101st Annual Meeting of the American Gastroenterological Association, May 21-24, 2000 in San Diego, CA].
Specialized Pro-resolving Mediators" (Lipoxins, Resolvins, Protectins & Maresins), derived from the precursor substances 17-HDHA and 18-HEPE from Omega-3 Fatty Acids.
- Inflammation is an immune response to insults such as injuries (cuts, with infections (bacterial, viral, or fungal), or unhealthy dietary patterns.
- Although acute inflammation is a normal, protective response, it can give rise to chronic inflammation if left unresolved.
- Research has discovered that SPMs are produced at the inflamed site after the initial inflammatory response, and function as "resolution agonists," orchestrating resolution to facilitate the return to homeostasis and tissue healing.
- An important key to controlling/resolving inflammation and subsequently preventing chronic inflammatory conditions lies in SPMs and their pro-resolving properties.
- SPMs are produced from long-chain polyunsaturated fatty acids—especially EPA and DHA—illustrating the importance of appropriate nutrition in the body's resolution of inflammation.
- Although EPA and DHA are metabolic precursors of SPMs, SPMs are directly responsible for resolution activities whereas EPA and DHA are involved in other beneficial biological activities. Therefore, SPM supplementation may represent an effective approach in supporting resolution.

POTENTIAL BENEFITS OF RESOLUTION-BASED NUTRITION

For decades, blocking initiation-phase pro-inflammatory mediators (e.g., prostaglandins) or enzymes (e.g., COX-2 enzyme) by pharmacological agents such as nonsteroidal anti-inflammatory drugs (NSAIDs) has been the go-to therapy for many acute and chronic inflammatory conditions. However, **anti-inflammation is not the same as pro-resolution.**

Because initiation phase activities are required to "jump start" resolution, traditional COX-2 and lipoxygenase inhibitors may delay resolution activities and undermine the body's attempt to return to homeostasis and tissue healing. Unresolved inflammation and unhealed tissue can lead to fibrosis that can impair organ function. Thus, an important key to controlling/resolving inflammation and subsequently preventing chronic inflammatory conditions lies in SPMs and their pro-resolving properties that switch an inflammatory response toward resolution and homeostasis. That SPMs

are enzymatically produced from long-chain PUFA (especially EPA and DHA) in tissue exudates indicates the indispensable role of nutrition in regulating inflammation and promoting resolution.

References

- Majno G, Joris I. *Cells, Tissues, and Disease: Principles of General Pathology*: Oxford University Press, USA; 2004.
- Giugliano D, Ceriello A, Esposito K. The effects of diet on inflammation: emphasis on the metabolic syndrome. *J Am Coll Cardiol.* 2006;48:677-685.

- *Recchiuti A. Immunoresolving Lipid Mediators and Resolution of Inflammation in Aging. J Gerontol Geriatr Res. 2014;3:151.*
- *Nathan C, Ding A. Nonresolving inflammation. Cell. 2010;140:871-882.*
- *Tabas I, Glass CK. Anti-inflammatory therapy in chronic disease: challenges and opportunities. Science. 2013;339:166-172.*
- *Libby P. Atherosclerosis: the new view. Sci Am. 2002;286:46-56*
- *Mushtaq G, Khan JA, Kumosani TA, Kamal MA. Alzheimer's disease and type 2 diabetes via chronic inflammatory mechanisms. Saudi J Biol Sci. 2015;22:4-13.*
- *Fuentes E, Fuentes F, Vilahur G, Badimon L, Palomo I. Mechanisms of chronic state of inflammation as mediators that obese adipose tissue and metabolic syndrome. Mediators Inflamm. 2013;2013:136584.*
- *Parmeggiani F, Romano MR, Costagliola C, et al. Mechanism of inflammation in age-related macular degeneration. Mediators Inflamm. 2012;2012:546786.*
- *Franceschi C. Inflammaging as a major characteristic of old people: can it be prevented or cured? Nutr Rev. 2007;65:S173-176.*
- *Lawrence T, Willoughby DA, Gilroy DW. Anti-inflammatory lipid mediators and insights into the resolution of inflammation. Nat Rev Immunol. 2002;2:787-795.*
- *Samuelsson B, Dahlen SE, Lindgren JA, Rouzer CA, Serhan CN. Leukotrienes and lipoxins: structures, biosynthesis, and biological effects. Science. 1987;237:1171-1176.*
- *Spite M, Claria J, Serhan CN. Resolvins, specialized proresolving lipid mediators, and their potential roles in metabolic diseases. Cell Metab. 2014;19:21-36.*
- *Serhan CN. Pro-resolving lipid mediators are leads for resolution physiology. Nature. 2014;510:92-101.*
- *Serhan CN, Brain SD, Buckley CD, et al. Resolution of inflammation: state of the art, definitions and terms. Faseb J. 2007;21:325-332.*
- *Serhan CN. A search for endogenous mechanisms of anti-inflammation uncovers novel chemical mediators: missing s to resolution. Histochem Cell Biol. 2004;122:305-321.*
- *Maddox JF, Hachicha M, Takano T, et al. Lipoxin A4 stable analogs are potent mimetics that stimulate human monocytes and THP-1 cells via a G-protein-coupled lipoxin A4 receptor. J Biol Chem. 1997;272:6972-6978.*
- *Ariel A, Fredman G, Sun YP, et al. Apoptotic neutrophils and T cells sequester chemokines during immune response resolution through modulation of CCR5 expression. Nat Immunol. 2006;7:1209-1216.*
- *Schwab JM, Chiang N, Arita M, Serhan CN. Resolvin E1 and protectin D1 activate inflammation-resolution programmes. Nature. 2007;447:869-874.*
- *Chiang N, Fredman G, Backhed F, et al. Infection regulates pro-resolving mediators that lower antibiotic requirements. Nature. 2012;484:524-528.*
- *Serhan CN, Savill J. Resolution of inflammation: the beginning programs the end. Nat Immunol. 2005;6:1191-1197.*
- *Levy BD, Clish CB, Schmidt B, Gronert K, Serhan CN. Lipid mediator class switching during acute inflammation: signals in resolution. Nat Immunol. 2001;2:612-619.*
- *Hong S, Gronert K, Devchand PR, Moussignac RL, Serhan CN. Novel docosatrienes and 17S-resolvins generated from docosahexaenoic acid in murine brain, human blood, and glial cells. Autacoids in anti-inflammation. J Biol Chem. 2003;278:14677-14687.*

- Serhan CN, Clish CB, Brannon J, et al. Novel functional sets of lipid-derived mediators with anti-inflammatory actions generated from omega-3 fatty acids via cyclooxygenase 2-nonsteroidal anti-inflammatory drugs and transcellular processing. *J Exp Med.* 2000;192:1197-1204.
- Serhan CN, Petasis NA. Resolvins and protectins in inflammation resolution. *Chem Rev.* 2011;111:5922-5943.
- Serhan CN. Lipoxins and aspirin-triggered 15-epi-lipoxins are the first lipid mediators of endogenous anti-inflammation and resolution. *Prostaglandins Leukot Essent Fatty Acids.* 2005;73:141-612.
- Serhan CN. Novel lipid mediators and resolution mechanisms in acute inflammation: to resolve or not? *Am J Pathol.* 2010;177:1576-1591.
- Serhan CN, Chiang N. Resolution phase lipid mediators of inflammation: agonists of resolution. *Curr Opin Pharmacol.* 2013;13:632-640.
- Navarro-Xavier RA, Newson J, Silveira VL, et al. A new strategy for the identification of novel molecules with targeted proresolution of inflammation properties. *J Immunol.* 2010;184:1516-1525.
- Chan MM, Moore AR. Resolution of inflammation in murine autoimmune arthritis is disrupted by cyclooxygenase-2 inhibition and restored by prostaglandin E2-mediated lipoxin A4 production. *J Immunol.* 2010;184:6418-6426. D3 10,000 with K2
- D3 10,000 with K2 provides 10,000 IU per softgel of vitamin D (as D3), designed for greater absorption. This high potency formula also includes bioavailable forms of vitamin K2 to complement vitamin D. Deficiency of vitamin D is common among patients with inflammatory and autoimmune disorders and those with prolonged critical illness. In addition, we see evidence of vitamin D insufficiency in a large percentage of patients with Grave's disease, ankylosing spondylitis, systemic lupus erythematosus, and rheumatoid arthritis. "The net effect of the vitamin D endocrine system on the immune response is an enhancement of innate immunity coupled with multifaceted regulation of adaptive immunity. Epidemiological evidence indicates a significant association between vitamin D deficiency and an increased incidence of autoimmune diseases," Adorini A., & Penna G. Control of autoimmune diseases by the vitamin D endocrine system. *Nat Clin Pract Rheumatol* 2008;4:404-12. "Vitamin D insufficiency is emerging as a clinical problem of global proportions and epidemiology has led vitamin D status with autoimmune disease susceptibility and severity." Adams J. S., & Hewison M. Unexpected actions of vitamin D: new perspectives on the regulation of innate and adaptive immunity. *Nat Clin Pract Endocrinol Metab.* 2008;4:80-90

Sciatica

Sciatica, a specific entity with many causes, involves inflammation of the great sciatic nerve and presents as acute or chronic pain down the back of the leg originating in the buttock and extending to the foot.

Pressure can originate in the nerve roots, as in Discopathy, facet syndrome, spinal curvature, and spinal subluxations or can be caused by the gluteal muscles or piriformis tightening over the nerve. Gluteal muscle spasm is often secondary to sacroiliac joint dysfunction (sacroiliac joint dysfunction is in turn secondary to short leg syndrome, sacroiliac sprain, lumbar sprain/strain causing tightening of the entire low back musculature, etc.). A rule of thumb to use in investigation is to remember that nerves are usually irritated by pressure, or gluteus Medius muscles gradually spasming to protect the joint which the body perceives as injured. The splinting spasms produce pressure on the sciatic nerve as it exits the pelvis, causing irritation.

Additionally, in a common anatomical variant, the sciatic nerve may pass through the piriformis muscle, which if it spasms, pressures the nerve. Sciatica is rarely a result of frank trauma, although stretch of the nerve can result from an injury to the leg or vertebral trauma. Practitioners of Chinese medicine have often noted that sciatica along the lateral thigh is often associated with a history of gallbladder problems since that is the path of the associated acupuncture channel. Onset is usually gradual as the nerve becomes inflamed. The key is finding the cause(s) then treat the cause. Sciatica is rarely a primary diagnosis. Sometimes ice often brings immediate, temporary relief. Sciatica usually causes splinting spasm of other muscles and may cause favoring of the opposite leg. The practitioner must work to make the person comfortable while seeking the underlying cause.

Symptoms

- Burning along the tract of the sciatic nerve, usually in the buttocks, and extending downward in the posterior leg.
- Spasm of the gluteal or piriformis muscles
- Burning pain increased by direct pressure to the nerve
- Straight leg raise causes worsening of sciatic nerve irritation
- Knee may buckle upon loading as long-standing pain causes weakening

Nutritional Supplementation Considerations for Sciatica

The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

- **Neurosol.**
- **Herbal Eze.**

– OR –

- **Inflavonoid Intensive Care®**
- **Meta Lipoate® 300.**

Dietary Considerations

- Anti-Inflammatory Diet

Exercise Considerations

- After relief of pain, strengthen gluteus Medius, abdominal, and lumbar muscles
- Stretching exercises for same muscles and hamstrings
- Stretching of piriformes

Nutritional Formula Description & Supplementation Rationale

Neurosol®

Neurosol is a unique, all-in-one combination of nutrients that directly supports peripheral nerve function.

- Promotes healthy nerve conduction, blood flow to the nerves, and nerve tissue integrity by featuring gamma-linolenic acid (GLA).
- Delivers the added benefits of vitamin C (Ultra Potent-C®) to synergistically enhance the effectiveness of GLA and, along with beta-carotene, protect delicate nerve tissue from oxidation.
- Supplies potent levels of folate and vitamins B12 and B6 to support methylation and homocysteine metabolism to support nervous system function.

Herbal Eze

Herbal Eze is formulated to provide relief from minor pain and support healthy joints, muscle, and nerve tissue. It is the perfect choice for patients whose joints and/or muscles are impacted by physical stressors, poor posture, and even inactivity. Herbal Eze is a unique blend of herbal

ingredients to address pain and inflammation. Recent studies indicate that 5-LOXIN® may do this by reducing pro-inflammatory modulators and enzymatic degradation of cartilage. Traditional medicine considers curcumin to be the most healing herb on earth and studies have shown that Bioperine® increases the bioavailability of curcumin by 2000%.

Potential Health Benefits

- A safe and effective pain reliever
- An anti-inflammatory
- Improvement in physical functioning
- A potent antioxidant

Inflavonoid Intensive Care®

Inflavonoid Intensive Care is formulated to provide relief from minor pain and support healthy joints and muscle tissue. It is the perfect choice for patients whose joints and/or muscles are impacted by physical stressors, poor posture, and even inactivity.

- Supports healthy eicosanoid synthesis such as prostaglandins, thromboxanes, and leukotrienes that can affect muscle, joint, and connective tissue.
- Provides Ayurvedic herbs traditionally used to support healthy joints and muscle tissue.
- Provides lemon bioflavonoids and vitamin C, which help to protect connective tissues from damaging free radicals.
- Features an extract of boswellia, as well as turmeric and ginger; all premium quality and standardized to key compounds to ensure effectiveness, reproducibility, and consistent results.
- Provides cayenne, an herb that has long been prized for its many health benefits such as the relief of minor pain, which complements the activity of the other herbs.
- Offers added antioxidant support from quercetin.
- Provides excellent muscle tissue support and relief of minor pain following intense exercise.

Meta Lipoate® 300

Meta Lipoate 300 is a premium-grade preparation of alpha-lipoic acid (ALA). Through proprietary technology, the potentially harmful chemical by-product, epilipoic acid, is removed and polymer residuals are kept at a minimum, resulting in a purity-controlled product that delivers maximum value and effectiveness with an excellent safety profile.

- Provides antioxidant activity in both aqueous and fatty regions of the cell, crosses the blood brain barrier, extends the functional capacities of vitamins C and E and coenzyme Q10, promotes accelerated glutathione synthesis, and directly scavenges free radicals.
- Supports glucose transport, metabolism, and utilization—which may promote healthy glucose clearance from the bloodstream.
- **Supports the health and function of neurological tissue, especially peripheral nerves.**
- Promotes the production of cellular energy (ATP).
- Offers clinically effective levels of alpha-lipoic acid in just two tablets daily.

Chiropractic Care

Chiropractic and Chiropractic Touch For Health Managed Massage, Chiropractic and chiropractic managed massage, Acupuncture, Trigger Zone Therapy, Myofascial Release and Neuro Muscle Skeletal Reeducation, Electro Muscle Stimulation, Ultrasound have great potential in the management of patients sciatic in that more often than not there are issues involving subluxations (spinal asymmetries) in the lumbar spine and sacroiliac articulations. Heat is typically used to help relieve stiffness and pain, relax muscles, and increase range of motion. Moist heat (e.g., moist packs, hot baths) is more effective than dry heat (e.g., heating pad), and paraffin baths are used if skin irritation from regular water immersion develops. Cold packs are of value during acute flare-

ups. Strengthening and range-of-motion exercises are important for improving and maintaining joint function, as well as general health. Patients with well-developed disease and significant inflammation should begin with progressive, passive range-of-motion and isometric exercises. As inflammation is ameliorated, active range-of-motion and isotonic exercises are more appropriate.

Sleep Disorders / Insomnia

The most common kinds of sleep disorders are:

- Insomnia — trouble falling asleep, staying asleep through the night, or waking up too early in the morning; episodes of insomnia may come and go or be long-lasting
- Sleep apnea — breathing interruptions during sleep
- Restless legs syndrome — a tingling or prickly sensation in the legs
- Narcolepsy — daytime “sleep attacks” **NOTE:** Nightmares, night terrors, sleepwalking, sleep talking, head banging, wetting the bed, and grinding your teeth are kinds of sleep problems called parasomnias. The quality of your sleep is as important as how much sleep you get.

Causes

Sleep habits we learned as children may affect our sleep behaviors as adults. Poor sleep or lifestyle habits that may cause insomnia or make it worse include:

- Going to bed at different times each night
- Daytime napping
- Poor sleeping environment, such as too much noise or light
- Spending too much time in bed while awake
- Working evenings or night shifts
- Not getting enough exercise
- Using the television, computer, or a mobile device in bed The use of some medications and drugs may also affect sleep, including:
 - Alcohol or other drugs
 - Heavy smoking
 - Too much caffeine throughout the day or drinking caffeine late in the day
 - Getting used to certain types of sleep medicines
 - Some cold medicines and diet pills
 - Other over-the-counter or prescription medicines

Physical, social, and mental health issues can affect sleep patterns, including:

- Bipolar disorder
- Overactive thyroid gland
- Waking up at night to use the bathroom
- Feeling sad or depressed; often, insomnia is the symptom that causes people with depression to seek medical help
- Physical pain or discomfort
- Stress and anxiety, whether it is short-term or long-term; for some people, the stress caused by insomnia makes it even harder to fall asleep, sleep patterns tend to change. Many people find that aging causes them to have a harder time falling asleep, and that they wake up more often.

Spinal Issues

Very often people with sleep issues have back problems including their upper cervical spine (Atlanto/Occipital articulation) which involves the interference in their spinal cord therefore interfering with the all the functions of the body. If for example a person has spinal issues it is going to interfere with one health and when that’s the situation the Innate Intelligence and Life

Force is going to try to keep the person awake all of which might be revealed in pursuing Touch For Health Applied Kinesology Muscle Response Test.

The most common complaints or symptoms in people with insomnia are:

- Trouble falling asleep on most nights
- Feeling tired during the day or falling asleep during the day
- Not feeling refreshed when they wake up
- Waking up several times during sleep

People who have insomnia are sometimes consumed by the thought of getting enough sleep. But the more they try to sleep, the more frustrated and upset they get, and the harder achieving sleep becomes.

Lack of restful sleep can:

- Make you tired and unfocused, so it is hard to do daily activities
- Put you at risk for auto accidents; if you are driving and feel sleepy, pull over and take a break

Treatment

Not getting 8 hours of sleep every night does not necessarily mean your health is at risk. Different people have different sleep needs. Some people do fine on 6 hours of sleep a night. Others only do well if they get 10 to 11 hours of sleep a night.

Treatment often begins by reviewing any drugs or medical conditions that may be causing or worsening insomnia, such as:

- Enlarged prostate gland, causing men to wake up at night
- Pain or discomfort from arthritis or nerve disorders

Promoting Sleep Hygiene

One should also think about lifestyle and sleep habits that may affect your sleep. This is called sleep hygiene. Making some changes in your sleep habits may improve or solve your insomnia. Like eating well and being physically active, getting a good night's sleep is vital to your well-being.

Here are tips to help you:

- **Stick to a sleep schedule.** Go to bed and wake up at the same time each day—even on the weekends.
- **Exercise** is great but not too late in the day. Avoid exercising closer than 5 or 6 hours before bedtime. - Yoga, Aerobics or other physical activities, such as walking, as well as aerobics/calisthenics, biking, gardening, golfing, running, weight-lifting, and yoga/Pilates, are associated with better sleep habits compared with no activity.” SLEEP 2015: Annual - Meeting of the Associated Professional Sleep Societies. Abstract 0246. Presented June 6, 2015
- **Avoid caffeine and nicotine.** The stimulating effects of caffeine in coffee, colas, teas, and chocolate can take as long as 8 hours to wear off fully. Nicotine is also a stimulant.
- **Avoid alcoholic drinks before bed.** A “nightcap” might help you get to sleep, but alcohol keeps you in the lighter stages of sleep. You also tend to wake up in the middle of the night when the sedating effects have worn off.
- **Avoid large meals and beverages late at night.** A large meal can cause indigestion that interferes with sleep. Drinking too many fluids at night can cause you to awaken frequently to urinate.
- **Avoid medicines that delay or disrupt your sleep, if possible.** Some commonly prescribed heart, blood pressure, or asthma medications, as well as some over-the-counter and herbal remedies for coughs, colds, or allergies, can disrupt sleep patterns.

- **Don't take naps after 3 p.m.** Naps can boost your brain power, but late afternoon naps can make it harder to fall asleep at night. Also, keep naps to under an hour.
- **Relax before bed.** Take time to unwind. A relaxing activity, such as reading or listening to music, should be part of your bedtime ritual.
- **Take a hot bath before bed.** The drop in body temperature after the bath may help you feel sleepy, and the bath can help relax you.
- **Have a good sleeping environment.** Get rid of anything that might distract you from sleep, such as noises, bright lights, an uncomfortable bed, or a TV or computer in the bedroom. Also, keeping the temperature in your bedroom on the cool side can help you sleep better.
- **Have the right sunlight exposure.** Daylight is key to regulating daily sleep patterns. Try to get outside in natural sunlight for at least 30 minutes each day.
- **Don't lie in bed awake.** If you find yourself still awake after staying in bed for more than 20 minutes, get up and do some relaxing activity until you feel sleepy. The anxiety of not being able to sleep can make it harder to fall asleep.
- Sometimes just having **regular sleep habits** can help. Using medications to treat insomnia can sometimes be useful, but there can be risks: "In 2010, approximately 6% to 10% of US adults used a hypnotic drug for sleep problems. Earlier studies have suggested an association between hypnotic use and excess mortality rates." Brooks, M. Hypnotic use ed with increased risk for early death. *BMJ Open*. Published online March 6, 2012. "Adults who use hypnotics to help them sleep have a greater than 3-fold increased risk for early death, according to results of a large matched cohort survival analysis." Brooks, M. Death, cancer increased with hypnotics. *Medscape Medical News*. Published online February 28, 2012. These are some of the more commonly utilized sedative-hypnotic medications:
 - Ambien®, Ambien CR® (zolpidem tartrate)
 - Butisol sodium®
 - Carbrital (pentobarbital and carbromal)
 - Dalmane® (flurazepam hydrochloride)
 - Doral® (quazepam)
 - Halcion® (triazolam)
 - Lunesta® (eszopiclone)
 - Placidyl® (ethchlorvynol)
 - Prosom™ (estazolam)
 - Restoril™ (temazepam)
 - Rozerem® (ramelteon)
 - Seconal® (secobarbital sodium)
 - Sonata® (zaleplon)

"The take-home from the study is that the risks associated with hypnotics are very high, and certainly these possible risks outweigh any benefits of hypnotics." —*First author Daniel F. Kripke, MD, co-director of research at the Scripps Clinic Viterbi Family Sleep Center in La Jolla, California.* As an example of the known risks associated with commonly utilized sedative-hypnotic medications consider the article below on Zolpidem (the medication approved by the U.S. Food and Drug Administration (FDA) for short-term treatment of insomnia and is the active ingredient in the drugs Ambien, Ambien CR, Edluar, and Zolpimist):

"Emergency Department Visits for Adverse Reactions Involving the Insomnia Medication Zolpidem" — In Brief:

- The number of zolpidem-related emergency department (ED) visits involving adverse reactions increased nearly 220 percent from 6,111 visits in 2005 to 19,487 visits in 2010
- Females accounted for two thirds (68 percent) of zolpidem-related ED visits involving adverse reactions in 2010
- Patients aged 45 or older represented about three quarters (74 percent) of zolpidem-related ED visits involving adverse reactions while those aged 65 or older represented about one third (32 percent) of such visits
- Half of visits (50 percent) involved other pharmaceuticals combined with zolpidem, including narcotic pain relievers (26 percent) and other anti-anxiety and insomnia medications (16 percent)
- Adverse reactions have occurred, including daytime drowsiness, dizziness, hallucinations, behavioral changes (e.g., bizarre behavior and agitation), and complex behaviors such as sleepwalking and “sleep driving” (i.e., driving while not fully awake)

Nutritional Supplementation Considerations for Sleep Disorders / Insomnia

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

•• **Benesom™**.

•• **Tran-Q®**.

If the patient exhibits signs of negative mood / depression / SAD (seasonal affective disorder), consider replacing the Benesom with SeroSyn to build sufficient serotonin levels appropriate and available for conversion to melatonin. Consider:

•• **SeroSyn™**

If there is a hypoglycemic connection to the patient not sleeping through the night (wakes up and eats), consider:

•• **Ultra Glucose Control™** — 1 serving before bedtime.

If the patient is under significant stress, consider stress induced (excess cortisol) sleep disruption:

•• **Serenagen®**

Benesom™

Benesom is formulated to promote a restful, relaxed state and relieve occasional sleeplessness by beneficially modulating the metabolism of melatonin and GABA. **NOTE:** Melatonin is a hormone synthesized endogenously in the pineal gland and released in response to light and dark on the retina. Melatonin is produced from tryptophan, which is converted to 5-hydroxytryptophan, then to serotonin, then to N-acetylserotonin, and finally to melatonin, which is then collected by the venous capillary system and secreted into the cerebrospinal fluid and the venous systemic circulation.

Tran-Q®

Tran-Q has been traditionally used to maintain a calm spirit, relax the body, and quiet the heart.

SeroSyn™

Scientifically formulated to promote a positive mood and provide support for restful sleep and relaxation in that it is formulated to supports healthy production of the neurotransmitters gamma-aminobutyric acid (GABA) and serotonin, with clinically effective levels of L-5-HTP and L-

Theanine, which is considered to have a calming effect. SeroSyn provides Asian ginseng, an herbal Adaptogen traditionally used to increase the body's resistance to stress and promote a sense of well-being. It also provides Chinese skullcap to help protect against oxidative stress, support healthy cytokine activity, and support central nervous system health. SeroSyn supports healthy methylation, homocysteine metabolism, and neurological function with targeted B vitamins—including biologically active L-5-methyltetrahydrofolate (L-5-MTHF) and methylcobalamin.

Ultra Glucose Control™

Ultra Glucose Control is formulated for the nutritional management of glucose response. It is designed for individuals who may need additional support in controlling their blood sugar levels. Ultra Glucose Control delivers a ratio-balanced combination of carbohydrates, protein, and fat (40-30-30) to manage glucose response, consistent with recommendations from clinical centers. Formulated with MetaRelease™—a proprietary blend of slow-release, complex proteins, branched-chain amino acids, and UCAN SuperStarch™ which contains more than 95% heat-moisture treated amylopectin, designed to digest slowly, leading to a sustained glucose and insulin response and prolonged satiety. Ultra Glucose Control supports a balanced glucose response and sustained energy release.

Serenagen®

Serenagen is a classic, comprehensive herbal stress management formula targeting individuals who are “stressed and wired.” It has been used throughout China since the Yuan Dynasty (1279-1368 A.D.).

According to traditional Chinese Herbology, living a demanding, hectic lifestyle deeply influences mood, mental function, cognitive processes, the cardiovascular system, the liver, and tolerance to change. Serenagen is expertly designed to help maintain equilibrium between body systems and promote a sense of inner calm. Serenagen provides herbal support for those who may be overworked, sleep too little, have exhausted physical reserves, and/or have difficulty resting.

References

- *Morgenthaler T., Kramer M., Alessi C., Friedman L., Boehlecke B., & Brown T., et al. Practice parameters for the psychological and behavioral treatment of insomnia: An update. An American Academy of Sleep Medicine report. Sleep. 2006;29:1415-1419.*
- *Morin C. M., & Benca R. Chronic insomnia. The Lancet. 2012 March 24; vol. 379 (9821):1129-1141.*
- *Vitiello M. V., Rybarczyk B., Von Korff M., & Stepanski E. J. Cognitive behavioral therapy for insomnia improves sleep and decreases pain in older adults with co-morbid insomnia and osteoarthritis. J Clin Sleep Med. 2009 Aug 15;5:355-362.*
- *Wickwire E. M., & Collop N. A. Insomnia and sleep-related breathing disorders. Chest. 2010;137:1449-1463.*
- *Brooks, M. Hypnotic use ed with increased risk for early death. BMJ Open. Published online February 28, 2012.*

Interventional Chiropractic Care – being that the brain, spinal cord and spinal column are interconnected their physiological status has relations to sleep therefore not only are nutrients vital for good sleep but so in the spine. That being the case a healthy spine can contribute to better sleep, rest and relaxation.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today
1. Go to www.nutri-dyn.com
2. Click on **Create Account**
3. Click on **Patients**
4. Complete the short form and type in the following **Account Number 100160**
5. Click **submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.**

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Smoking Cessation - Harms of Smoking & Health Benefits of Quitting

Does tobacco smoke contain harmful chemicals? Yes. Tobacco smoke contains chemicals that are harmful to both smokers and nonsmokers. Breathing even a little tobacco smoke can be harmful. Of the more than 7,000 chemicals in tobacco smoke, at least 250 are known to be harmful, including hydrogen cyanide, carbon monoxide, and ammonia. Among the 250 known harmful chemicals in tobacco smoke, at least 69 can cause cancer. Present known cancer-causing chemicals include the following:

- Arsenic
- Benzene
- Beryllium (a toxic metal)
- 1,3-Butadiene (a hazardous gas)

- Cadmium (a toxic metal)
- Chromium (a metallic element)
- Ethylene oxide
- Nickel (a metallic element)
- Polonium-210 (a radioactive chemical element)
- Vinyl chloride

Other toxic chemicals in tobacco smoke are suspected to cause cancer, including the following:

- Formaldehyde
- Benzo[α]pyrene
- Toluene

What are some of the health problems caused by smoking?

Smoking harms nearly every organ of the body and diminishes a person's overall health. Millions of Americans have health problems caused by smoking.

- **Smoking is a leading cause of cancer and death from cancer.** It causes cancers of the lung, esophagus, larynx, mouth, throat, kidney, bladder, pancreas, stomach, and cervix, as well as acute myeloid leukemia.
- **Smoking also causes heart disease, stroke, aortic aneurysm** (a balloon-like bulge in an artery in the chest), **chronic obstructive pulmonary disease (COPD) (chronic bronchitis and emphysema), asthma, hip fractures, and cataracts.**
- Smokers are at higher risk of developing **pneumonia** and other airway infections. A pregnant smoker is at higher risk of having her baby born too early and with an abnormally low birth weight. A woman who smokes during or after pregnancy increases her infant's risk of death from SIDS.
- **Sudden Infant Death Syndrome (SIDS).**
- Men who smoke are at greater risk of **erectile dysfunction.**
- **Cigarette smoking and exposure to tobacco smoke cause more than 440,000 premature deaths each year in the United States.** Of these premature deaths, about 40 percent are from cancer, 35 percent are from heart disease and stroke, and 25 percent are from lung disease. Smoking is the leading cause of premature, preventable death in this country.
- Regardless of their age, smokers can substantially reduce their risk of disease, including cancer, by quitting.

What are the risks of tobacco smoke to nonsmokers?

Secondhand smoke (also called environmental tobacco smoke, involuntary smoking, and passive smoking) is the combination of "side stream" smoke (the smoke given off by a burning tobacco product) and "mainstream" smoke (the smoke exhaled by a smoker).

The U.S. Environmental Protection Agency, the U.S. National Toxicology Program, the U.S. Surgeon General, and the International Agency for Research on Cancer have classified secondhand smoke as a known human carcinogen (cancer-causing agent). Inhaling secondhand smoke causes lung cancer in nonsmoking adults (1, 3). Approximately 3,000 lung cancer deaths occur each year among adult nonsmokers in the United States as a result of exposure to secondhand smoke. The U.S. Surgeon General estimates that living with a smoker increases a nonsmoker's chances of developing lung cancer by 20 to 30 percent. Secondhand smoke causes disease and premature death in nonsmoking adults and children. Exposure to secondhand smoke may increase the risk of heart disease by an estimated 25 to 30 percent. In the United States, exposure to secondhand smoke is thought to cause about 46,000 deaths from heart disease each year. Pregnant women exposed to secondhand smoke are at risk of having a baby with low birth

weight. Children exposed to secondhand smoke are at an increased risk of SIDS, ear infections, colds, pneumonia, bronchitis, and more severe asthma. Being exposed to secondhand /smoke slows the growth of children's lungs and can cause them to cough, wheeze, and feel breathless.

Is smoking addictive?

Yes. Nicotine is a drug that is naturally present in the tobacco plant and is primarily responsible for a person's addiction to tobacco products, including cigarettes. During smoking, nicotine enters the lungs and is absorbed quickly into the bloodstream and travels to the brain in a matter of seconds. Nicotine causes addiction to cigarettes and other tobacco products that is similar to the addiction produced by using drugs such as heroin and cocaine. *How much nicotine is in cigarettes and cigars?* Cigarettes, cigars, and other tobacco products vary widely in their content of nicotine, cancer-causing substances, and other toxicants. In a cigarette (which contains less than 1 gram of tobacco), the nicotine content can vary between 13.7 and 23.2 milligrams per gram of dry tobacco. In a cigar (which can contain as many as 20 grams of tobacco), the nicotine content can vary between 5.9 and 335.2 milligrams per gram of tobacco. The way a person smokes a tobacco product is more important than the nicotine content of the product in determining how much nicotine gets into the body. Nicotine is absorbed in the lungs and through the lining of the mouth. Increased levels of nicotine are absorbed by inhaling the smoke into the lungs and taking frequent and deep puffs.

Are other tobacco products, such as smokeless tobacco or pipe tobacco, harmful and

addictive? Yes. All forms of tobacco are harmful and addictive. There is no safe tobacco product. In addition to regular cigarettes and cigars, other forms of tobacco include smokeless tobacco (also called chewing tobacco, snuff, and snus), pipes, hookahs (water pipes), bidis, and creeks. Although most research has focused on the harms of cigarette smoking, all forms of tobacco are harmful. All tobacco products contain nicotine and cancer-causing substances. Both smokeless tobacco and smoking tobacco are known to cause cancer in humans. These products may also cause heart attacks, mouth problems, and other diseases.

- **Cigars:** Information about cigars and cancer is available in the NCI fact sheet Cigar Smoking and Cancer at <http://www.cancer.gov/cancer-topics/factsheet/Tobacco/cigars> on the Internet.

- **Smokeless tobacco:** Information about smokeless tobacco and cancer can be found in the NCI fact sheet Smokeless Tobacco and Cancer at <http://www.cancer.gov/cancertopics/factsheet/Tobacco/smokeless> on the Internet.

- **Pipes:** Pipe smoking causes lung cancer and increases the risk of cancers of the mouth, throat, larynx, and esophagus.

- **Hookahs or water pipes** (other names include argileh, ghelyoon, hubble bubble, shisha, boory, goza, and narghile): A hookah is a device used to smoke tobacco. The smoke passes through a partially filled water bowl before being inhaled by the smoker. Some people think hookah smoking is less harmful and addictive than smoking regular cigarettes, but all forms of tobacco smoking are harmful and addictive. Tobacco smoke, including the smoke produced by a hookah, contains harmful chemicals such as carbon monoxide and cancer-causing substances.

- **Bidis:** A bidi is a flavored cigarette made by rolling tobacco in a dried leaf from the tendu tree, which is native to India. Bidi use is associated with heart attacks and cancers of the mouth, throat, larynx, esophagus, and lung.

- **Kreteks:** A kretek is a cigarette made with a mixture of tobacco and cloves. Smoking kreteks is associated with lung cancer and other lung diseases.

Is there a tobacco product that is less hazardous than cigarettes?

All tobacco products are harmful and cause cancer, and the use of these products is strongly discouraged. There is no safe level of tobacco use. People who use any type of tobacco product should be urged to quit.

What are the immediate benefits of quitting smoking?

The immediate health benefits of quitting smoking are substantial:

- Heart rate and blood pressure, which are abnormally high while smoking, begin to return to normal.
- Within a few hours, the level of carbon monoxide in the blood begins to decline. (Carbon monoxide reduces the blood's ability to carry oxygen.)
- Within a few weeks, people who quit smoking have improved circulation, produce less phlegm, and don't cough or wheeze as often.
- Within several months of quitting, people can expect substantial improvements in lung function.
- In addition, people who quit smoking will have an improved sense of smell, and food will taste better.

What are the long-term benefits of quitting smoking?

Quitting smoking reduces the risk of cancer and other diseases, such as heart disease and COPD, caused by smoking. People who quit smoking, regardless of their age, are less likely than those who continue to smoke to die from smoking-related illness:

- **Quitting at age 30:** Studies have shown that smokers who quit at about age 30 reduce their chance of dying prematurely from smoking-related diseases by more than 90 percent.
- **Quitting at age 50:** People who quit at about age 50 reduce their risk of dying prematurely by 50 percent compared with those who continue to smoke.
- **Quitting at age 60:** Even people who quit at about age 60 or older live longer than those who continue to smoke.

Does quitting smoking lower the risk of cancer?

Yes. Quitting smoking reduces the risk of developing and dying from cancer. However, it takes a number of years after quitting for the risk of cancer to start to decline. This benefit increases the longer a person remains smoke free. The risk of premature death and the chance of developing cancer from smoking cigarettes depend on many factors, including the number of years a person smokes, the number of cigarettes he or she smokes per day, the age at which he or she began smoking, and whether or not he or she was already ill at the time of quitting. For people who have already developed cancer, quitting smoking reduces the risk of developing a second cancer.

Should someone already diagnosed with cancer bother to quit smoking?

Yes. There are many reasons that people diagnosed with cancer should quit smoking. For those having surgery, chemotherapy, or other treatments, quitting smoking helps improve the body's ability to heal and respond to therapy. It also lowers the risk of pneumonia and respiratory failure. Moreover, quitting smoking may lower the risk of the cancer returning or a second cancer developing.

Nutritional Support Strategies in Smoking Cessation

- 1) Supporting the body's ability to address the addiction of smoking / nicotine.
- 2) Supporting the body's ability to detoxify the known chemicals and metals such as cadmium that are associated with smoking.
- 3) Supporting the body's repair of damage to the lungs and vascular system, and regeneration of healthy lung tissue long-term.
- 4) Supporting the individual's ability to maintain their Smoking Cessation Program with diet.

5. Be taken to a hospital and walked through the rooms of people suffering with and/or dying of cancer.

Nutritional Supplementation Considerations for Smoking Cessation

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor are in anyway intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

To address the above goals, consider the following “Detox / Nutritional Support Program for Smoking Cessation.” Supporting the body’s ability to detoxify the known chemicals and metals such as cadmium that are associated with smoking:

Follow a detox protocol that would address chemical toxicity, along with Heavy Metal toxicity which is best supported when a blood and Hair Mineral and Toxic Metal Analysis and Applied Kinesiology. Individual Bio Identity Tests are first performed. (Areas that all smokers are exposed to and could use support in.)

•• Clear Change 10-Day Detoxification Program

Each Clear Change 10-Day Program kit consists of:

- 1 canister of **UltraClear RENEW™**
- 1 small size **AdvaClear®**
- 1 free shaker cup
- 1 10-Day Patient Program Guide
- 1 webinar invitation

See the Clear Change 10-Day Detoxification Patient Guide, which outlines the entire detoxification program and daily dietary considerations.

NOTE 1: The patient utilizes **UltraClear Renew** wherever the guide indicates “Nutritional Beverage.”

NOTE 2: The addition of **Dynamic Fruits & Greens®** to the outlined Clear Change 10-Day Detoxification Program not only improves the entire detoxification programs outcome (Dr. Rakowski’s experience), but also makes the detox shake much more palatable =better compliance! Supporting the body’s repair of damage to the lungs and vascular system, and regeneration of healthy lung tissue, long-term:

- Appropriate **Wellness Essentials®** Formula — 1 packet daily with food.
- **D3 5000** — 1 softgel daily; higher dosing if documented by serum analysis.

Specific nutritional support for the lungs and vascular system:

- **NAC-600** (N-Acetyl-Cysteine).
- **Pneumo-Carotene™**.

Supporting the individual’s ability to maintain their Smoking Cessation Program with a Mediterranean

Diet:

- Fruits and Veggies May Help Patients Quit Smoking

Cigarette smokers who eat more fruits and vegetables are more likely to quit smoking and stay off cigarettes over the long term, new research shows. Investigators from the University of Buffalo in New York found that smokers who ate fruits and vegetables an average of 4 or more times per

day were 3 times more likely to be abstinent from all tobacco products, including cigarettes, at 14-month follow-up. According to lead author Jeffrey P. Haibach, MPH, the study is the first to longitudinally evaluate the relationship between fruit and vegetable consumption and cigarette smoking cessation. According to Haibach, “Research on the diets of current smokers, former smokers, and persons who have never smoked (never smokers) indicates that dietary practices of current smokers are the least optimal and that the diets of former smokers begin to resemble those of never-smokers with increasing duration of abstinence.” The study was published online May 21, 2012 in *Nicotine and Tobacco Research*.

Nutritionnel Formula Description & Supplémentation Rationale UltraClear Renew™

- Use for the following conditions:
- Toxic symptoms
- Low energy
- Fibromyalgia
- Exposure to chemicals
- Exposure to toxic metals

The appropriate **Wellness Essentials** Formula for continued (on-going) base nutrition (multivitamin/mineral), phyto-nutrients, and fatty acids (omega-3 fatty acids) support in convenient daily packets. “Your body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When you have a lack in one part of the body, the whole body suffers. If there is a persistent lacking, your body will eventually suffer some form of degeneration or disease.”

D3 5000

Vitamin D is associated with almost all healthy functions in the body; immune function, lung function, bone health, cardiovascular health, hormone balance, positive mood, mental function, etc., the list goes on and on. Patients with chronic obstructive pulmonary disease (COPD) who received **high doses of vitamin D** supplementation during rehabilitation show significant improvements in respiratory muscle strength and exercise capacity, according to research presented at the American Thoracic Society 2011 International Conference. *Am J Respir Crit Care Med.* 2011;183:A2533

NAC-600 (NAC / N-ACETYL CYSTEINE)

“NAC” (N-Acetyl-Cysteine) is a form of the amino acid cysteine and is a direct precursor of, and the most cost effective way to systemically increase, the potent antioxidant glutathione. Orally, N-acetyl cysteine (NAC), is used as an antidote for acetaminophen and carbon monoxide poisoning. It is also used for unstable angina, common bile duct obstruction in infants, lysosomal storage disorders, amyotrophic lateral sclerosis (ALS, Lou Gehrig’s disease), Alzheimer’s disease, phenytoin-induced hypersensitivity, and keratoconjunctivitis. It is also used for reducing lipoprotein (a) levels, reducing homocysteine levels, reducing risk of cardiovascular events in patients with end-stage renal disease, **chronic bronchitis, chronic obstructive pulmonary disease (COPD), allergic rhinitis, fibrosing alveolitis**, head and neck cancer, and lung cancer. N-acetyl cysteine is also used orally for myoclonus epilepsy, otitis media, hemodialysis-related pseudoporphyria, chronic fatigue syndrome (CFS), Sjogren’s syndrome, preventing sports injury complications, radiation therapy, increasing immunity to flu and swine flu, and for detoxifying heavy metals such as mercury, lead, and cadmium. It is also used orally for preventing alcoholic liver damage, for protecting against environmental pollutants including carbon monoxide, chloroform, urethanes and certain herbicides; for reducing toxicity of ifosfamide and doxorubicin, as a hangover remedy, for preventing nonionic low-osmolality contrast agent-induced reduction of

renal function in patients with renal insufficiency, for human immunodeficiency virus (HIV), and for trichotillomania (hair pulling).

Pneumo-Carotene™

Pneumo-Carotene is a scientifically blended formulation that features a broad spectrum of antioxidant nutrients that protect and support lung tissue health.

- Provides balanced antioxidant protection with nutrients such as vitamins C and E and Caroxan™, a proprietary blend of betacarotene and Betatene® mixed carotenoids.
- Supplies pure, raw bovine lung concentrate (processed below 37 degrees C) that is guaranteed raw so the natural constituents remain intact.

References

- U.S. Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.
- U.S. Department of Health and Human Services. *The Health Consequences of Smoking: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.
- U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.
- National Toxicology Program. *Report on Carcinogens. Eleventh Edition*. U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, 2005.
- Austoni, E., Mirone, V., & Parazzini, F., et al. Smoking as a risk factor for erectile dysfunction: Data from the Andrology Prevention Weeks 2001–2002. A study of the Italian Society of Andrology (S.I.A.). *European Urology*. 2005; 48(5):810–818.
- Centers for Disease Control and Prevention. *Annual smoking-attributable mortality, years of potential life lost, and productivity losses—United States, 1997–2001*. *Morbidity and Mortality Weekly Report*. 2005; 54(25):625–628.
- National Cancer Institute. *Cancer Progress Report 2003*. U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, 2004.
- International Agency for Research on Cancer. *Tobacco Smoke and Involuntary Smoking*. Lyon, France: 2002. *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*, Vol. 83.
- U.S. Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking (Also Known as Exposure to Secondhand Smoke or Environmental Tobacco Smoke—ETS)*. U.S. Environmental Protection Agency, Office of Research and Development, Office of Health and Environmental Assessment, 1992.
- Hatsukami, D. K., Stead, L. F., & Gupta, P. C. Tobacco addiction. *Lancet*. 2008; 371(9629):2027–2038.
- Djordjevic, M. V., & Doran, K. A. Nicotine content and delivery across tobacco products. *Handbook of Experimental Pharmacology*. 2009; 192:61–82.

- Henningfield, J. E., ant, R. V., Radzius, A., & Frost, S. Nicotine concentration, smoke pH and whole tobacco aqueous pH of some cigar brands and types popular in the United States. *Nicotine Tobacco Research*. 1999; 1(2):163–168.
- Henley, S. J., Thun, M. J., Chao, A., & Calle, E. E. Association between exclusive pipe smoking and mortality from cancer and other diseases. *Journal of the National Cancer Institute*. 2004; 96(11):853–861.
- Smith-Simone, S., Maziak, W., Ward, K. D., & Eissenberg, T. Waterpipe tobacco smoking: Knowledge, attitudes, beliefs, and behavior in two U.S. samples. *Nicotine Tobacco Research*. 2008; 10(2):393–398.
- Cobb, C., Ward, K. D., Maziak, W., Shihadeh, A. L., & Eissenberg, T. Waterpipe tobacco smoking: An emerging health crisis in the United States. *American Journal of Health Behavior*. 2010; 34(3):275–285.
- Prignot, J. J., Sasco, A. J., Poulet, E., Gupta, P. C., & Aditama, T. Y. Alternative forms of tobacco use. *International Journal of Tuberculosis and Lung Disease*. 2008; 12(7):718–727.
- U.S. Department of Health and Human Services. *The Health Benefits of Smoking Cessation*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1990.
- Peto, R., Darby, S., & Deo, H., et al. Smoking, smoking cessation, and lung cancer in the U.K. since 1950: Combination of national statistics with two case-control studies. *British Medical Journal*. 2000; 321(7257):323–329.
- Doll, R., Peto, R., Boreham, J., & Sutherland, I. Mortality in relation to smoking: 50 years' observations on male British doctors. *British Medical Journal*. 2004; 328(7455):1519–1527.
- McBride, C. M., & Ostroff, J. S. Teachable moments for promoting smoking cessation: The context of cancer care and survivorship. *Cancer Control*. 2003; 10(4):325–333.
- Travis, L. B., Rabkin, C. S., & Brown, L. M., et al. Cancer survivorship—genetic susceptibility and second primary cancers: Research strategies and recommendations. *Journal of the National Cancer Institute*. 2006; 98(1):15–25.
- Parsons, A., Daley, A., Begh, R., & Aveyard, P. Influence of smoking cessation after diagnosis of early stage lung cancer on prognosis: Systematic review of observational studies with meta-analysis. *British Medical Journal*. 2010; 340:b5569.

Sprain / Strain

A sprain is a wrenching or twisting of a joint with partial rupture of its attaching ligaments. A strain is over-stretching a muscle. Invariably, both conditions are trauma-induced. Of the two, the sprain is the more serious in that there are varying degrees of tearing of the tissues involved. There are three classifications of a sprain:

- **Grade 1:** Mild/minimal sprain with no ligamentous tear. There may be pain, swelling, and tenderness.
- **Grade 2:** Moderate sprain with an incomplete or partial rupture of ligaments or tendons. There is marked pain, swelling, bruising, decreased range of motion, and minor instability of the joint.
- **Grade 3:** Joint injury with complete tearing of the associated ligament. Presents as severe pain, swelling, hemorrhage, significant joint instability, and little to no range of motion.

Symptoms

- History of trauma

- Pain
- Swelling
- Tenderness
- Bruising
- Decreased joint range of motion
- Degree of instability depends on grade.

Nutritional Supplementation Considerations for Sprain / Strain

Acute Management (first 72 hours of acute care)

•• Acute Phase

Recovery / Maintenance

•• Injury Rehab Packets.

Dietary Considerations

- Anti-Inflammatory Diet

Exercise Considerations

- Range of motion exercises for the involved joint, right away
- Strengthening exercises for affected part in beginning of subacute stage
- Ice pack first 24 hours
- Heating compress

Nutritional Formula Description & Supplementation Rationale

Acute Phase

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Acute Phase combines three recommended formulas to provide comprehensive nutritional support during the first 72 hours (Phase 1) of acute care. One canister contains 9 packets. Each packet contains:

- **Protrypsin®**— Proteolytic enzyme formula designed to support tissue health. Provides premium-grade chymotrypsin and trypsin. Every batch is independently assayed to assure maximum enzyme potency.
- **MyoCalm®**— May help relieve minor muscle pain associated with stress or physical exertion. Supplies bioavailable forms of magnesium and calcium, both involved in muscle contraction and relaxation. Features extracts of passion flower and venires for added relaxation support.
- **Inflavonoid Intensive Care®**. Provides muscle tissue support and relief of minor pain. Supports healthy eicosanoid synthesis that can affect muscle and connective tissue. Provides targeted antioxidants to help protect connective tissues from damaging free radicals.

Injury Rehab Packets

Injury Rehab Packets are a unique combination of nutrients which address the inflammatory response and support regeneration and healing of tissues.

Interventional Chiropractic Care

Chiropractic and chiropractic managed Touch For Health Applied Kinesiology Muscle Response Test massage, acupuncture, Myofascial Release, Neuro Muscle Skeletal Reeducation, Trigger Zone Therapy, Electro Muscle Stimulation or Ultrasound have great potential in the management of patients with sprains/strains. Heat is typically used to help relieve stiffness and pain, relax muscles, and increase range of motion. Moist heat (e.g., moist packs, hot baths) is more effective

than dry heat (e.g., heating pad), and paraffin baths are used if skin irritation from regular water immersion develops. Cold packs can be of value during acute flare-ups. Strengthening and range-of-motion exercises are important for improving and maintaining joint function, as well as general health. Patients with well-developed disease and significant inflammation should begin with progressive, passive range-of-motion and isometric exercises. As inflammation is ameliorated, active range-of-motion and isotonic exercises are more appropriate.

Stress

The many faces of stress in that it manifests differently depending on the individual, influencing many biological processes that begin in the brain and spread through nearly all body systems – including the adrenals, thyroid, neurotransmitter systems, digestive system, and heart. Consistent stress over long periods of time can become a serious threat to maintaining lifelong wellness as so much energy is channeled into coping, ultimately leading to exhaustion.

The Stress Response: A Coordinated Series of Events

Neurotransmitters (or chemical messengers) are released, triggering an increase in emotional response and influencing memory, concentration, inhibition, and rational thought. The **adrenal glands** pump out a group of hormones known as glucocorticoids—including the primary stress hormone cortisol—which marshal the heart, lungs, circulation, metabolism, and immune system. The **thyroid gland** when imbalanced, pumps out hormones that accelerate metabolism, producing symptoms such as occasional sleeplessness, nervousness, and exhaustion.

Sex hormone levels may be reduced with stress, thereby reducing libido and sexual function.

Acute stress may also cause a woman's menstrual cycle to be irregular.

Glucose metabolism may fluctuate with stress as the liver releases stores of glucose into the blood stream and the pancreas decreases insulin secretion, increasing blood sugar levels for needed energy.

Heart rate increases during stress as the heart pumps more blood throughout the body.

Respiratory function may be altered with stress. In some individuals breathing rate increases.

The coordinated activities involved in **digestion** can be slowed down as energy is diverted in the stress response, possibly resulting in stomach discomforts.

Chronically Stressed

Following the ancient and effective model of Ayurvedic medicine, Exhilarin® is designed to improve stress tolerance and is particularly suitable for the average, busy individual who is susceptible to mental strain and becoming “run down” due to a hectic lifestyle and poor diet. Featuring a blend of adaptogenic herbs, this formula assists the body's natural ability to adapt to stress. Exhilarin is a proprietary blend of Ayurvedic herbs that are traditionally used to relieve stress, and to help maintain mental acuity and support overall well-being by promoting nervous system function and optimal energy levels.

Potential Benefits

- Promotes healthy nervous system function and energy levels
- Supports the body's natural ability to adapt to stressful environmental conditions
- Supports the balance of body functions during periods of stress

Optional Uses

- Chronic stress due to a hectic lifestyle
- Stress tolerance support

Nutritional Supplementation Considerations for Chronically Stressed

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **Exhilarin®**.
- Appropriate **Wellness Essentials®** formula

Stressed and Tired

Adreset®. Is formulated to help people resist stress and enhance stamina, feeling weak and fatigued due to stress, this formula features highly valued adaptogenic herbs that support a healthy, balanced response to stress. Adreset features standardized extracts of the adaptogenic herbs ginseng, rhodiola, and cordyceps targeting individuals who are “stressed and tired.”

Potential Benefits

- Address mental and physical fatigue or exhaustion associated with elevated stress hormone levels
 - Designed to promote increased energy, restful sleep, and mental clarity and perception ••
- Formulated to help the body adapt to stressors of various kinds, such as heat, cold, exertion, trauma, sleep deprivation, illness, or psychological stress.
- Supports multiple body systems that can be impacted by stress—including the cardiovascular, immune, and nervous systems.

Optional Uses

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- Stress-related fatigue or exhaustion
- Feelings of mental or physical weakness

Nutritional Supplementation Considerations for Stress and Tired

- **Adreset®**
- Appropriate **Wellness Essentials®** formula.

Stressed and Tired

Serenagen® is designed to calm the spirit and nourish the heart. According to traditional Chinese herbology, a sustained, intense emotional state causes disharmony between the liver and heart energy, possibly manifesting in one of the two types of emotional states: a state of excess typically seen in an acute stress response or a state of deficiency that occurs over time and reflects dietary and lifestyle indiscretions. Serenagen is designed to target the “deficiency” type of emotional imbalance associated with a demanding, hectic lifestyle. Serenagen is a classic, comprehensive herbal stress management formula targeting individuals who are “stressed and wired.”

Potential Benefits

- Addresses multiple organs and systems involved in the stress response, helping to promote inner balance

Optional Uses

- Feelings of anxiety, forgetfulness, and disorientation
- Calming support for a hectic lifestyle

Nutritional Supplementation Considerations for Stressed and Wired

- **Serenagen®**.
- Appropriate **Wellness Essentials®** formula.

Stressed and Inflexible

Tran-Q® is designed to calm the spirit and relax the body. According to traditional Chinese herbology, a sustained, intense emotional state causes disharmony between the liver and heart energy, possibly manifesting in one of the two types of emotional states: a state of excess typically seen in an acute stress response or a state of deficiency that occurs over time and reflects dietary and lifestyle indiscretions.

Tran-Q is designed to target the “excess” type of emotional imbalance associated with feelings of being acutely overstressed and tense. Tran-Q has been traditionally used to maintain a calm spirit, relax the body, and quiet the heart.

- Polygala, the primary herb in Tran-Q, is traditionally used in combination with other herbs in the formula to calm the spirit in those who feel overstressed, bad tempered, and agitated
- Formulated to promote physical relaxation and a sense of well-being

Possible Uses

- Feelings of being overstressed, agitated, and physically tense
- Calming support for acute stress. Nutritional Supplementation Considerations for Stressed and Inflexible

- **Tran-Q®**.
- Appropriate **Wellness Essentials®** formula.

Stressed and Hot

The typical person who may benefit from **Licorice Plus®** has been exposed to prolonged stress and has difficulty achieving a vigorous adaptive response, which may result in physically exhausted reserves, minor aches or muscle stiffness, or difficulty performing routine tasks. Licorice Plus is a specially designed herbal adrenal support formula for individuals who are “burned out and exhausted.”

Possible Benefits

- May help support tissue health—such as muscles and joints
- Support healthy immune function, which can be affected by stress
- Designed to help maintain healthy levels of circulating cortisol and support healthy hypothalamus/pituitary-adrenal function

Possible Uses

- Difficulty adapting to stress
- Physical “burn out” due to prolonged stress
- Stress-related aches and muscle stiffness

Nutritional Supplementation Considerations for Stressed and Tired

- **Licorice Plus®**.
- Appropriate **Wellness Essentials®** formula.

Stressed and Cold

Thyroid health is negatively affected by stress, and many people may benefit from this all-natural formula to support thyroid hormone synthesis and metabolism. Many aspects of health—including metabolic rate, body composition, cardiovascular health, hair and skin condition, energy level, libido, and cognitive function—are impacted by thyroid hormone activity.

Thyrosol®

Is designed to support the optimal activity of thyroid hormones to help maintain good health and vitality. Thyrosol is an exciting multi-faceted formula featuring targeted nutrients and herbs that promote healthy thyroid function.

Possible Benefits

- Designed to help stressed patients maintain healthy thyroid hormone activity by supplying nutrients that support hormone synthesis and metabolism—activities influenced by stress
- Provide three-in-one support for thyroid hormone activity by nutritionally supporting: thyroid hormone synthesis, the conversion of T4 to T3, and the expression of T3 responsive genes

Possible Uses

- Stress-related thyroid issues
- Thyroid hormone activity maintenance

Nutritional Supplementation Considerations for Stressed and Cold

- **Thyrosol®**.
- Appropriate **Wellness Essentials®** formula.

Stressed and Depleted

Consistent levels of stress can deplete the function of the adrenal glands, which secrete the hormone dehydroepiandrosterone (DHEA) and its sulfated metabolite (DHEA-S). DHEA and DHEA-S serve as precursors to a number of other hormones—including insulin-like growth factor (IGF-1), testosterone, androstenedione, and estrogen—that influence well-being and support a healthy mood.

BioSom® provides dehydroepiandrosterone (DHEA) encapsulated in liposomes—microscopic, multi-layered spheres delivered via a pleasant-tasting liquid spray.

Potential Benefits

- Delivers liposomal DHEA to help promote DHEA and DHEA-S levels associated with healthy adrenal function
- May support a healthy mood and sense of well-being
- May enhance healthy hormone levels—including IGF-1—which may help to promote healthy immune function, body composition, and bone mass.

Possible Uses

- Adrenal gland support
- Concerns with levels of DHEA and other hormones

Nutritional Supplementation Considerations for Stressed and Depleted

- **BioSom®**
- Appropriate **Wellness Essentials®** formula.

Stressed and Immune Challenged

Mycotaki™ is ideal for the young and old who have immune concerns due to emotional or physical stress. Featuring a concentrated water extract of seven nourishing mushrooms, this formula is designed to modulate immune system function and enhance health when used long-term. The broad health benefits of Mycotaki can be largely attributed to a unique water extraction process. This process instills each capsule with the full range of plant constituents in the balanced proportions consistent with traditional Chinese medicine, the medical system that perfected the use of nourishing mushrooms. Mycotaki is a powerful formula that features a concentrated water

extract of seven nourishing mushrooms recognized for their ability to enhance human health when used long-term.

When we list food supplement options/considerations we are not in any way attempting to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.

Potential Benefits

- Promotes healthy T helper cell production and overall immune system function
- Provides multifunctional support to maintain overall health

Possible Uses

- Daily immune support for those under stress
- Long-term health maintenance Nutritional Supplementation Considerations for Stressed and Immune Challenged
- **Mycotaki™**.
- Appropriate **Wellness Essentials®** formula.

Melatonin & Resistant “High Cortisol Levels / High Stress Individuals” Protocol.” (See below.)

Cortisol is an adrenal hormone that should start out with high levels in the morning and taper down through the day, being replaced by rising melatonin in the evening. Cortisol should peak by about 8 am to get you going and then slowly drop off to reach their lowest at about 8-10 pm so that you can fall asleep. The hormone melatonin should be on the rise after 5 in the evening and peak around 8-10 pm to put you to sleep. Cortisol wakes you up and melatonin makes you sleepy. (Stress causes cortisol levels to elevate instead of drop at night.) A common finding in patients with autoimmune disease is high cortisol. Patients with severe rheumatoid arthritis also have high cortisol and a loss of circadian rhythms. High cortisol levels help bring on stress and hormone-related cancer, but melatonin blocks the effects of estrogen upon cancer cells in hormonally-influenced cancers such as breast, endometrial, ovarian, and uterine cancers. Large amounts of alcohol deplete hormones and increases cortisol levels, and smoking has been found to reduce melatonin levels.

Stress Protocol: To ingest, disperse one half-dropper (0.5 ml) of Tonic Sea’s Melatonin Liquid throughout the mouth, hold for 30 seconds, and swallow. Repeat this dose once every waking hour for 7 total days.

Example: Wake at 7 am and take one dose of Melatonin Liquid. Take one dose of Melatonin Liquid every subsequent hour of the day until bed.

Warning: If you are pregnant, nursing, or think you may become pregnant, do not participate in the Stress Protocol. Not intended for use by individuals under the age of 18.

Caution: If taking medication, consult your healthcare practitioner before use. Do not drive, operate heavy machinery, or do other dangerous activities until you know how the Stress Protocol affects you. Avoid drinking alcohol while participating in the Stress Protocol. Do not participate in the Stress Protocol for longer than a 7-day period, unless otherwise instructed by your healthcare practitioner.

The Identi-T™ Personalized Stress Relief Program

Can you name your stress type? People respond to stress in unique ways. The Identi-T™ Program will help to develop a personalized stress relief program based on your patient’s “stress type.”

Identi- T™ Stress Assessment

Name _____ Age _____

Sex _____ Date _____

Stress is a normal part of life. Every day, we're faced with stimuli, called stressors, which can elicit the body's "fight or flight" response, setting off a cascade of physiological reactions and resulting in emotions ranging from mild to intense. But while occasional stress is natural and even healthy, chronic or acute stress can be harmful. Please take a few moments to discover your body's response to situations you perceive as stressful. By honestly assessing how you feel, your healthcare provider can create a natural stress relief program for your individual needs.

Directions:

Please read each statement and circle the number 0, 1, 2, or 3 that best describes your feelings or reactions throughout the course of the day. Determine the subtotal score for each section, then determine the total scores for sections A-C and C-E. Some questions may appear redundant between sections. There's a reason for each question. Don't spend much time on any one question. 0 = Never true 1= Seldom true 2= Sometimes true 3= Often true

When under stress for two weeks or longer, I...

Section A:

1. Get wound up when I get tired and have trouble calming down 0 1 2 3
2. Feel driven, appear energetic but feel "burned out" and exhausted 0 1 2 3 33. Feel restless, agitated, anxious, and uneasy 0 1 2 3
4. Feel easily overwhelmed by emotion 0 1 2 3
5. Feel emotional — cry easily or laugh inappropriately 0 1 2 3
6. Experience heart palpitations or a pounding in my chest 0 1 2 3
7. Am short of breath 0 1 2 3
8. Am constipated 0 1 2 3
9. Feel warm, over-heated, and dry all over 0 1 2 3
10. Get mouth sores or sore tongue 0 1 2 3
11. Get hot flashes 0 1 2 3
12. Sleep less than seven hours a night. 0 1 2 3
13. Have trouble falling asleep and staying asleep 0 1 2 3
14. Worry about high blood pressure, cholesterol, and triglycerides 0 1 2 3
15. Forget to eat and feel little hunger. 0 1 2 3

Total points: _____

Section B:

1. Find myself worrying about things big and small 0 1 2 3
2. Feel like I can't stop worrying, even though I want to 0 1 2 3
3. Feel impulsive, pent up, and ready to explode . 0 1 2 3
4. Get muscle spasms 0 1 2 3
5. Feel aggressive, unyielding, or inflexible when pressed for time 0 1 2 3
6. See, hear, and smell things that others do not 0 1 2 3
7. Stay awake replaying the events of the day or planning for tomorrow 0 1 2 3
8. Have upsetting thoughts or images enter my mind again and again 0 1 2 3
9. Have a hard time stopping myself from doing things again and again, like checking on things or rearranging objects over and over 0 1 2 3
10. Worry a lot about terrible things that could happen if I'm not careful 0 1 2 3

Total points: _____

Section C:

1. Have muscle and joint pains 0 1 2 3

2. Have muscle weakness 0 1 2 3
3. Crave salt or salty things. 0 1 2 3
4. Have multiple points on my body that when touched are tender or painful 0 1 2 3
5. Have dark circles under my eyes 0 1 2 3
6. Feel a sudden sense of anxiety when I get hungry. 0 1 2 3
7. Use medications to manage pain 0 1 2 3
8. Get dizzy when rising or standing up from a kneeling or sitting position 0 1 2 3
9. Have diarrhea or bouts of nausea with or without vomiting for no apparent reason 0 1 2 3
10. Have headaches 0 1 2 3

Total points: _____

Section D:

1. Have trouble organizing my thoughts.0 1 2 3
2. Get easily distracted and lose focus.0 1 2 3
3. Have difficulty making decisions and mistrust my judgment 0 1 2 3
4. Feel depressed and apathetic.0 1 2 3
5. Lack the motivation and energy to stay on task and pay attention 0 1 2 3
6. Am forgetful ..0 1 2 3
7. Feel unsettled, restless, and anxious.0 1 2 3
8. Wake up tired and unrefreshed..0 1 2 3
9. Experience heartburn and indigestion 0 1 2 3
10. Catch colds or infections easily.0 1 2 3

Total points: _____

Section E:

1. Feel tired for no apparent reason.0 1 2 3
2. Experience lingering mild fatigue after exertion or physical activity..0 1 2 3
3. Find it difficult to concentrate and complete tasks.0 1 2 3
4. Feel depressed and apathetic..0 1 2 3
5. Feel cold or chilled – hands, feet, or all over – for no apparent reason.0 1 2 3
6. Have little or no interest in sex.0 1 2 3
7. Sweat spontaneously during the day 0 1 2 3
8. Feel puffy and retain fluids 0 1 2 3
9. Sleep more than nine hours a night 0 1 2 3
10. Have poor muscle tone.0 1 2 3
11. Have trouble losing weight.0 1 2 3
12. Wake up tired even though I seem to get plenty of sleep.0 1 2 3
13. Have no energy and feel physically weak 0 1 2 3
14. Am susceptible to colds and the flu..0 1 2 3
15. Feel dragged down by multiple symptoms, such as poor digestion and body aches 0 1 2 3

Total points: _____

Add points from sections A, B & C Total for A, B & C: _____

Add points from sections C, D & E Total for C, D & E: _____

Lifestyle and Health Status:

1. Circle the level of stress you experience on the scale of 1-10, 10 being the worst: 1 2 3 4 5 6 7 8 9 10
2. What do you consider to be the major causes of your stress (for example — spouse, family, friends, work, finances, wedding, pregnancy, legal, commute):

3. I eat breakfast _____ times a week. My typical breakfast is:

4. I take a multiple vitamin/mineral _____ days per week. I take a fish oil supplement _____ days per week.

5. I participate in 30 minutes of physical activity such as walking, aerobics (e.g., running), resistance training (e.g., weights, Pilates), sports (e.g. biking), or yoga:

Daily q 5-6 times per week q 3-4 times per week q 1-2 times per week q Less than once a week

6. I smoke _____ cigarettes daily.

7. I drink two or more 8 ounce cups of caffeinated coffee or other caffeinated beverages like energy/diet drinks, colas, or black or green teas:

Daily q 5-6 times per week q 3-4 times per week q 1-2 times per week q Less than once a week

8. I drink two or more ounces of alcoholic beverages:

Daily q 5-6 times per week q 3-4 times per week q 1-2 times per week q Less than once a week

9. List your current health problems and any over-the-counter or prescription medications that you are now taking:

Current health problem(s) Date of onset List all current medication(s)

Interpreting the Identi-T™ Stress Assessment

This personalized, psychological questionnaire assists you in evaluating perceived emotional and cognitive distress /by tracking symptom frequency. Use this subjective data, along with your other health evaluation tools, to distinguish between stress response types and make successful lifestyle and nutritional recommendations to help restore balance and increase resilience to stress.*

STEP 3. Recommend nutritional support for stress relief based on each patient's Stress Response Type(s).*

- Each stress response type may be addressed with specific **Metagenics formulas** featuring novel combinations of nutrients and herbal adaptogens.*

- Formula ingredients have targeted calming or invigorating properties to support balanced HPA activity. Adaptogens also possess broad effects to promote balanced physiology and nonspecific resistance to stress.*

- Additional support: HPA path scores over 63 (ALBIC or CEDE) warrant consideration of targeted nutritional support.*

- Additional support: Adrenal response (C) scores over 21 may also indicate need for targeted nutritional support.*

STEP 1. Distinguish between Eustress or Prolonged Stress, and independently evaluate if Adrenal Stress is present with either.

Eustress (ALBIC ≤ 35 and CEDE ≤ 35)

- The anticipated, normal response to life challenges.

- These patients experience milder, less frequent *mood and cognitive-related symptoms* typical of situational stress.

- Stress response type: **OCCASIONALLY STRESSED.**

Adrenal Stress (C > 10)

- Displays physical and psychological changes that are tied with fluctuations in cortisol output.
- Frequently associated with Prolonged Stress, but a person may show adrenal stress symptoms (e.g., minor pain) when in Eustress or if physically unwell.
- Also refer to MSQ Detox, HAQ, and health for other factors that influence adrenal function and stress tolerance.
- Stress response type: **HOT.**

Prolonged Stress (A+B+C > 35 or C+D+E > 35)

- Frequent or more intense psychological changes related to the continual activation of the HPA axis.
- This type of stress affects sleep and daily living.
- Stress response types (see Step 2): **WIRED, WORRIED, MENTALLY FATIGUED, or TIRED.**

STEP 2. Distinguish between 2 paths of Prolonged Stress.

Overactive HPA Response (A+B+C > 35)

- Results in excess exposure to acute stress hormones (e.g., cortisol, ACTH, CRH).
- May manifest as mental restlessness (**WORRIED**) or anxiety (**WIRED**). Often experience occasional sleep difficulties.

Inadequate HPA Response (C+D+E > 35)

- Results in “burnout” or an underproduction of stress hormones that prevents the body from reacting appropriately to stressors.
- Manifests as poor concentration (**MENTALLY FATIGUED**) or low energy (**TIRED**). Oversleeping is also common.

TIRED

PROLONGED STRESS EUSTRESS

Situational Acute Stress Response

$A+B+C \leq 35$ and $C+D+E \leq 35$

$A+B+C > 35$ or $C+D+E > 35$

Inadequate HPA Response

$A+B+C+D+E >$

Overactive HPA Response

$A+B+C +D+E$

Adrenal Cortisol Response

ADRENAL STRESS

$A+B+C +D+ E > 10$

MENTALLY FATIGUED WORRIED WIRED HOT OCCASIONALLY STRESSED

OTHER CONSIDERATIONS

Sleep Patterns & Lifestyle Habits. Review sleep and lifestyle questions to determine need for further evaluations and additional protocols to bolster stress resilience.*

- This is not a comprehensive sleep evaluation or lifestyle assessment, but it helps you quickly identify if eating habits, lifestyle choices, and sleep patterns are contributing to the ongoing HPA axis activation.
- Stress protocols often help improve sleep quality without additional support.*
- There may be a need for foundation supplementation and/or nutritional support for sleep.*

- Some patients may benefit from a more comprehensive program (“Program Guide: Stress Management”).

Mentally Fatigued

If $D > E$ _ Tired

If $E > D$

Identi-T™ Stress Assessment Score Card

Patient Name: _____ Assessment

Date: _____

_ EUSTRESS

If $A+B+C \leq 35$

and $C+D+E \leq 35$

_ OVERACTIVE

HPA

Response

If $A+B+C >$

$C+D+E$

Occasionally Stressed

Licorice

Plus®

Tran-Q®

Exhilarin®

Adreset®

Use this form for each patient that completes an Identi-T Stress Assessment.

Repeat assessment regularly to evaluate progress.

OVERACTIVE HPA

RESPONSE TYPES

A = _____

B = _____

SLEEPLESS

A12 = ____

A13 = ____ B7 = ____ _ Evaluate sleep further to

assess need for nutritional

support.*

INADEQUATE HPA

RESPONSE TYPES

D = _____

E = _____

PROLONGED STRESS:

HPA RESPONSE

Difference between

$A+B+C$ & $C+D+E$

= _____

_ ADRENAL STRESS

If $C > 10$

_ INADEQUATE

HPA

Response

If C+D+E >

A+B+C

STRESS RESPONSE STRESS RESPONSE RELIEF TYPE SUPPORT*
EUSTRESS OR PROLONGED STRESS

A+B+C = _____

C+D+E = _____

ADRENAL STRESS

C = _____

OVERSLEEPS

D8 = _____

E9 = _____ E12 = _____

NuSera®

Hot _ Worried

If B > A

OR

_ Initial

_ Follow-up

Record requested data from assessment to the appropriate spaces below. Add or subtract where indicated. Continue existing sleep support regimen.*

STRESS RESPONSE

- Review sums for symptom frequency to distinguish if eustress or prolonged stress.
- Adrenal stress may also be present with eustress or prolonged stress.
- For prolonged stress only, determine if HPA response path is overactive (A+B+C) or inadequate (C+D+E) based on higher sum.
- If difference between A+B+C and C+D+E is less than 5, then look for higher number of 3 responses within A+B or D+E to help determine HPA path.
- Select appropriate stress response type (A,B,D, or E) within the higher HPA path.
- Identify sleep response possibly related to stress (if any “3” responses are present).
- Review lifestyle questions and make recommendations.

OR _ Wired

If A > B **Serenagen®**

OR _ PROLONGED STRESS

If A+B+C > 35

or C+D+E > 35

SLEEP RECOMMENDATIONS WELLNESS RECOMMENDATIONS

_ Multivitamin: _____

_ Omega-3: _____

_ Lifestyle/Stress Program: _____

_ Other: _____

_ If C > 21, then consider adding:

Cortico B5B6®

and/or

BioSōm®

If A+B+C > 63, consider adding (to either at left):

Trancor®

CONSIDER ADDITIONAL SUPPORT*

If C+D+E > 63, consider adding
(to either at left):

BioSōm®

Other: _____

Notes: _____

MET1673B 06162011 © 2011 Metagenics, Inc. All Rights Reserved.

Avoid foods that are packaged, high in sugar, and/or fried. There are many reliable sources on the Internet that list the GI/GL of foods to help you redefine your eating habits. A low-GL diet has also been recommended to help prevent chronic conditions.

3. Eat Small, Frequent Meals. Keep your brain happy by eating 3 meals and 2 snacks daily. Eating every 3-4 hours also helps maintain blood sugar levels. Blood sugar drops when you're hungry, which can signal unhealthy cravings or cause you to overeat. Plus, smaller portions mean fewer excess calories at meals that can potentially be stored as fat. Eating low-GL foods in small portions throughout the day also helps those with "oral fidgets" who need something in their mouth to stay pacified. Plus it prevents late night snacking.

4. Don't Feed Emotions with Junk Food. Ask yourself if you're really hungry when you're reaching for food. Eating to feed emotional hunger rather than your physical needs can wreak havoc on an otherwise healthy diet. Emotional eaters may eat when bored (for entertainment), when upset or stressed (instead of facing difficult emotions), or when generally dissatisfied with life (to fill a void). All these extra calories add up, especially with unhealthy food choices. Take a few minutes to explore the feelings behind the pangs. Journaling may help. Once you address the underlying issues, food won't have the same pull on you.

5. Find New "Comfort" Foods. Your favorite indulgence foods—or the ones you crave in times of stress—may be the worst for you (high in saturated fat/salt/sugar). If this sounds familiar, try to substitute your usual comfort foods with low-GL foods you like to eat (and keep them on hand). If you suddenly really crave a soda, go with a bubbly mineral water—plain or sweetened with a small amount of fruit juice. If you crave cookies, consider eating a piece of fruit with a nut butter spread.

Reducing Stress can be as Simple as changing Your Eating habits

Chew on this—you're not only what you eat but also how you eat it. And both may be adding unnecessary stress to your life—or keeping you stressed. These considerations for potential help you manage stress better, but also reduce your risk to chronic diseases.

For more help with feeling less stressed, ask your healthcare provider for a list of tips to quickly relax in times of stress. do you...

- Overeat or mindlessly munch?
- Eat late at night?
- Eat when you're not even hungry?
- Eat when you're nervous, sad, or mad?
- Get "orally fidgety" and need a food pacifier?
- Live on fast foods due to lack of time?
- Crave sweets?
- Eat too much fat and salt?
- E• Skip meals or forget to eat?

- Delay eating until you're starving?

Stress and a hectic lifestyle can affect your eating patterns and food choices. The stress hormone cortisol depletes your blood sugar and makes you hungry. All of which can make you crave “bad” carbohydrates that give you an energy rush followed by a crash...leaving you “hungry” for more “bad” foods (like sweets and fatty/salty food). It’s a vicious cycle fueled by stress. The results? Stress-related weight gain (especially belly fat). Poor sleep quality. Slow healing. Not to mention increased risk to chronic health conditions like metabolic syndrome, heart disease, and diabetes. Try these eating considerations to help break the stress cycle.

1. Eat a Protein-Rich Breakfast Every Morning. Your brain and body run on fuel in the form of protein, fats, and complex sugars called carbohydrates. The brain’s energy comes primarily from sugar, and skipping breakfast causes an “alarm” that releases stress hormones. This in turn releases your body’s stored sugar in the liver and muscles to feed your “starving” brain—and makes you crave sugary foods and feed the stress cycle. Your first meal of the day really is important—so eat well. Protein also helps you curb hunger longer, and won’t give you the “crash” that sugary foods like sweetened cereal or donuts do. Your healthcare provider may recommend a low-glycemic nutritional beverage or bar to help you get a great start on your day.

2. Eat Low-Glycemic, Whole Foods. The glycemic index (GI) measures the rise in blood sugar after consuming a food—a higher GI food causes a greater spike in blood sugar that can feed the stress cycle. The glycemic load (GL) also considers the amount consumed in the carbohydrate, and is considered a better guideline for choosing foods that have less impact on blood sugar levels (higher fiber=lower GL and a lower rise in blood sugar). As a general rule, stick with whole foods (nuts, whole grains, raw fruits, and vegetables) that are minimally processed—most of which have a lower GL and are also higher in nutritional value.

MET1676 081409 © 2009 Metagenics, Inc. All Rights Reserved.

Are Your Eating Habits Causing MORE Stress? Identi- T™

Personalized Stress /Relief Program

We all experience stress from time to time. The release of stress hormones (like adrenaline and cortisol) help you cope with immediate challenges. But when your level of stress becomes chronic or goes beyond what your body can handle, it can compromise your physical, emotional, and mental health—which can make it even harder for you to cope with future stress. Did you know you can control how your body reacts to friendly and not so-friendly stressors? Finding quick and effective “tension tamers” that turn off the alarm response and turn on the relaxation response—helps your body return to normal functioning following a stressful event. Try several of these techniques and find out what works best for you in times of stress. You’ll feel calmer within minutes!

1. Breathe from Your Belly. Sit in a comfortable position and take a few deep breaths by expanding your belly (rather than lifting your shoulders). Releasing physical tension and increasing oxygen intake calms you quickly—even if stressful events continue.

2. Take a Short Walk. Change your scenery and change your perspective—indoors or outdoors. Walking gets your blood circulating and helps you “blow off” steam so you can return to a new frame of mind.

3. Spring into Action. Even a short burst of exercise (like running up several flights of stairs, or several sets of push-ups or abdominal crunches) can reduce stress. Exercise helps deliver more oxygen to your brain and distracts you from stress to give you a fresh perspective on things. Even simple stretching can help bring a little relief.

4. Listen to Music. Softer music can help relax tense muscles or get you “in the zone” when practicing other stress reduction activities—yoga, guided imagery, or soaking in the tub. And upbeat music can help lift your mood or keep you energized.
5. Dance or Sing. Start moving to your favorite tunes—or just sing along. Bursting into song or a silly dance move can transport you to a stress-free zone.
6. Take a Mental Break. Steal a few minutes of peace to gaze out your window or visualize yourself in your favorite space, doing your favorite things, or being with your favorite people. It renews the spirit and breaks the stress response quickly.
7. Laugh. Maintaining a sense of humor reminds us that our stressors may not be as menacing as they seem. Purchase or download a laugh track, cartoons, jokes, or your favorite comedy TV show or movies to enjoy when you’re feeling overwhelmed.
8. Write in Your Journal. If you like to write, journaling clarifies your thoughts and feelings for increased self-knowledge. Putting the experience on paper gets it off your mind and helps you refocus—and teaches you how to cope the next time it happens.
9. Take a Power Nap. Mid-day sleep gives you more patience, better reaction time, increased learning, more efficiency, and better health. If you only have 5 minutes to spare, just close your eyes. Even brief rest reduces stress and helps you relax.

Don’t Change Your Life—Change Your response to stress

You don’t have to make big changes in your life to reduce your stress—just lessen the impact that stressful occurrences can have on you. These quick and simple tips make it easy for you to change your response to stressors—and live a more positive, fulfilling life!

For more help with living a lower-stress lifestyle, ask your healthcare provider for a list of eating habits that can help you break the stress cycle.

Learning to Breathe...to relax!

For simple and effective breathing techniques, listen to the CD

“Stress Relief Through Guided Imagery” by Martin Ross man, PhD. Learn progressive muscle relaxation (PMR), belly breathing, and visualization techniques to quickly turn on the relaxation response. You can practice these techniques anywhere, at any time, to feel calm quickly.

MET1677 081409 © 2009 Metagenics, Inc. All Rights Reserved.

Need Quick Relief When Stress Hits? Identi- T™ Personalized Stress Relief Program

Interventional Chiropractic Care

Chiropractic and chiropractic managed Touch For Health massage, acupuncture, Myofascial Release, Neuro Muscle Skeletal Reeducation Trigger Zone Therapy, and Electro Muscle Stimulation have great potential in the management of patients with stress in that all stress involves the brain, spinal cord and nervous systems therefore every organ, tissue and cell. One way or the other all stress ends up in the spine which is the switchboard of the nervous system therefore chiropractic care is a major component in helping the person handle stress and minimize the adverse effects of it.

Sty / Eye Infection

An acute localized pus-forming infection of either the Meibomian glands (internal sty) or the glands of Zeiss or Moll (external sty). Medical term is “hordeolum.” The usual bacterial agent is Staphylococcus. Hordeoli are associated with blepharitis. Sties normally resolve quickly, but recurrences are common.

Symptoms

Internal sty: Occurs on the underside of the lid next to the conjunctiva and can include:

- Pain

- Redness
- Edema
- Small yellow area or elevation of the lid on the conjunctival side (usually an abscess develops at that spot, though it rarely spontaneously suppurates)

External sty: Occurs on the lid margin and can include:

- Pain
- Redness
- Tenderness
- Formation of a small area of induration
- Develops a yellow spot (pointing) that eventually is the area through which the abscess ruptures, bringing relief of pain, local edema, occasional photophobia, and/or lacrimation

Nutritional Supplementation Considerations for Sty / Eye Infection

- **Coryza Forte.**
- **Hyaluronic Acid** etc.
- **Colloidal Silver, ASAP Solution** — once or twice daily, wash/rinse the infected eye(s) with a small amount of colloidal silver in an eye cup (can be purchased at most pharmacies) to topically address the infection.

Dietary Options

- FirstLine Therapy® Diet / Mediterranean Diet

Drug caution: Drugs that can damage the optic nerve, retina and other vital parts are ACTH, allopurinol (gout); anti-coagulants; aspirin; corticosteroids, Diabinese, diuretics, antihistamines, digitals, indomethcin, streptomycin, sulfur drugs, tetracycline, diazepam, haloperidol, quinine.

Nutritional Formula Description & Supplémentation Rationale

Coryza Forte

Coryza Forte is a “high potency vitamin A & C complex immune system support” formula, possibly effective for treating infections. It contains raw trachea, thymus, spleen, lymph, and RNA to promote drainage of congested tissue and to support the immune system. Raw adrenal is present as is vitamin C to stimulate the adrenals and the body’s defense mechanisms. Bee pollen is believed to support the cell’s production of interferon, the body’s anti-viral substance by absorbing the deoxyribosides contained in pollen. Bioflavonoid assists vitamin C in the immune response and maintaining capillary integrity and regulating vascular permeability. Pantothenic acid plays an important role in the body’s immunity mechanisms. Calcium is necessary for maintenance of membranes, and zinc is important in the synthesis of antibodies.

Hyaluronic Acid

Hyaluronic acid (HA) is highly concentrated inside the eyeball. Research indicates that HA is essential for healthy eye function, promotes healthy eye lubrication, is anti-viral, and may have a positive effect in individuals with “floaters” in the eye. The fluid inside the eye called the vitreous humor is composed almost completely of hyaluronic acid. The HA gives the fluid inside the eye a viscous gel-like property. This gel acts as a shock absorber for the eye and also serves to transport nutrients into the eye. HA has been directly injected into the eye during procedures to help maintain the shape of the eye during surgery. It has been said that after the 5th decade of life, our eyes stop producing the much needed hyaluronic acid resulting in various eye needs.

Colloidal Silver, ASAP Solution

Colloidal silver is considered by people to be the most universal natural antibiotic substance that for all practical purposes is non-toxic to humans in its micro-concentrations. There is no known

disease-causing organism that can live in the presence of even minute traces of the chemical element of simple metallic silver. Based on laboratory tests with colloidal silver, destructive bacteria, virus, and fungus organisms are killed within minutes of contact. **NOTE:** All of the negative side effects associated with colloidal silver are a result of long-term, high-dose oral administration. That being a possibility it is good advice to consider consulting with a licensed health care provider who has proven scientific expertise before entertaining the use of colloidal silver.

Systemic Lupus Erythematosus (SLE)

Systemic lupus erythematosus (SLE) is an autoimmune disease in which the body's immune system mistakenly attacks healthy tissue. It can affect the skin, joints, kidneys, brain, and other organs.

Causes

The underlying cause of autoimmune diseases is not fully known. SLE is much more common in women than men. It may occur at any age, but appears most often in people between the ages of 10 and 50. African Americans and Asians are affected more often than people from other races. SLE may also be caused by certain drugs.

Symptoms

Symptoms vary from person to person, and may come and go. Almost everyone with SLE has joint pain and swelling. Some develop arthritis. The joints of the fingers, hands, wrists, and knees are often affected.

Other common symptoms include:

- Chest pain when taking a deep breath
- Fatigue
- Fever with no other cause
- General discomfort, uneasiness, or ill feeling (malaise)
- Hair loss
- Mouth sores
- Sensitivity to sunlight
- Skin rash—a “butterfly” rash in about half of people with SLE; most often seen over the cheeks and bridge of the nose, but can be widespread and worse in sunlight
- Swollen lymph nodes

Other symptoms depend on which part of the body is affected:

- Brain and nervous system: headaches, back problems, numbness, tingling, seizures, vision problems, personality changes
- Digestive tract: abdominal pain, nausea, and vomiting
- Heart: abnormal heart rhythms (arrhythmias)
- Lung: coughing up blood and difficulty breathing
- Skin: patchy skin color, fingers that change color when cold (Raynaud's phenomenon)
- Kidney: swelling in the legs, weight gain
- Some people have only skin symptoms—this is called discoid lupus

From a Nutritional Support Perspective:

The term Autoimmune Disease refers to a varied group of more than 80 distinct, chronic illnesses in which the underlying problem is similar—the body's immune system is misdirected, attacking the body tissues it was designed to protect. Autoimmune disease can affect any system, organ, or tissue in the body, including the gastrointestinal (GI), nervous, and endocrine systems as well as the eyes, blood, blood vessels, and skin and other connective tissues.

Examples of autoimmune conditions include the following:

- Rheumatoid arthritis (RA)
- **Lupus (e.g., systemic lupus erythematosus [SLE])**
- Sjögren's Syndrome
- Type 1 diabetes
- Inflammatory bowel disease (IBD) (e.g., Crohn's disease, ulcerative colitis)
- Hashimoto's thyroiditis & Grave's disease
- Raynaud's phenomenon
- Neurological diseases (e.g., myasthenia gravis, multiple sclerosis [MS])

Core Nutritional Support Protocol Considerations for Systemic Lupus Erythematosus (SLE)

/

Autoimmune Syndrome

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) nor in any way The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), nor make a diagnosis, treatment or imply prevention or cure.. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. **Note:** As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel. They are not in any way intended to make a diagnosis, treatment promote cure or prevention.

- **UltraInflamX®.**
- **UltraFlora™ Intensive Care.**
- **UltraFlora™ Integrity.**
- **D3 10,000 with K2.**

Dietary Options

- Anti-Inflammatory Diet Program

Nutritionnel Formula Description & Supplémentation Rationale

UltraInflamX® Plus 360

UltraInflamX Plus 360 is a multi-mechanistic support with key nutrients, phytonutrients, and selective kinase response modulators (SKRMs) to address underlying inflammation, along with specific gastrointestinal tract repair factors to help address leaky gut syndrome associated with autoimmune syndromes. Doing so at minimum should consist of a Chem Screen, CBC, IgG and IgG4 Food Sensitivity Test, 24 Hour Urine Hormone Analysis, Hair Mineral Toxic Metal Analysis and Applied Kinesiology Tests.

- Miyauchi, E., O'Callaghan, J., Butto, L. F., et al. Mechanism of protection of transepithelial barrier function by Lactobacillus salivarius:

Strain dependence and attenuation by bacteriocin production. Am J Physiol Gastrointest Liver Physiol. 2012;303:G1029-G1041.

- O'Mahony, L., McCarthy, J., Feeney, M., et al. Immunologic response to a novel probiotic organism in patients with active Crohn's disease. Gastroenterology 2000;118(Issue 4, Part 1),

A853. Abstract presented at Digestive Disease Week and the 101st Annual Meeting of the American Gastroenterological Association, May 21-24, 2000 in San Diego, CA.

D3 10,000 with K2

“Vitamin D deficiency is associated with certain immune abnormalities in SLE, suggests that vitamin D plays an important role in autoantibody production and SLE pathogenesis.” Ann Rheum Dis. 2011;70(9):1569-1574 Deficiency of vitamin D is common among patients with inflammatory and autoimmune disorders and those with prolonged critical illness. In addition, “we see evidence of vitamin D insufficiency in a large percentage of patients with Myasthenia Gravis, Grave’s disease, ankylosing spondylitis, systemic lupus erythematosus, and rheumatoid arthritis.” Toubi, E., & Shoenfeld, Y. The role of vitamin D in regulating immune responses. Isr Med Assoc J 2010;12:174–5 D3 10,000 with K2 provides 10,000 IU per softgel of vitamin D (as D3), designed for greater absorption. This high potency formula also includes bioavailable forms of vitamin K2 to complement vitamin D.

Interventional Chiropractic Care

Chiropractic and chiropractic managed Touch For Health massage, acupuncture, Trigger Zone Therapy, Myofascial release and Neuro Muscle Skeletal Reeduction have great potential in the management of patients SLE in that all any deviation from normal health involves the brain, spinal cord and nervous systems therefore every organ, tissue and cell. One way or the other all stress ends up in the spine which is the switchboard of the nervous system therefore chiropractic care is a major component in helping the person handle SLE and minimize the adverse effects of it.

Tendinitis

Inflammation of the tendon and the lining of the tendon sheath. The sheath is typically the focus of the involvement, but the body’s inflammatory response usually involves the tendon, too. The etiology is unknown, although repetitive or forceful trauma, exercise or strain, systemic diseases (rheumatoid arthritis, gout, Reiter’s syndrome), and hypercholesterolemia are implicated.

What is tendinitis?

Tendinitis happens when a tendon—which attaches muscle to bone—gets inflamed. You feel pain and tenderness right outside a joint. It often happens as a result of repetitive movements. Acute or sudden tendinitis may become chronic or long-lasting if it is not treated. People get tendinitis most often in the shoulder (rotator cuff tendinitis), elbow (tennis elbow or golfer’s elbow), wrist and thumb (de Quervain’s disease), knee (jumper’s knee), ankle (Achilles tendinitis), and hip.

What causes it?

- Overuse, undertraining, or poor technique in sports
- Repetitive movement in some jobs, such as typing
- Falling
- Lifting or carrying heavy objects
- Extreme or repeated injury

People who are overweight have a higher risk of tendinitis because of the increased pressure on tendons, ligaments, and bones. People with some inflammatory conditions, such as Reiter syndrome or ankylosing spondylitis; autoimmune disorders, such as type 1 diabetes; and some infections may also get tendinitis.

How is it treated? Interventional Chiropractic Care

Chiropractic and chiropractic Touch For Health Applied Kinesiology Muscle Response Test managed massage, acupuncture, Myofascial Release, Neuro Muscle Skeletal Reeduction, Electro Muscle Stimulation, Ultrasound have great potential in the management of patients with tendonitis

in that all stress involves the brain, spinal cord and nervous systems therefore every organ, tissue and cell. One way or the other all stress ends up in the spine which is the switchboard of the nervous system therefore chiropractic care is a major component in helping the person handle stress and minimize the adverse effects of it.

Treatment includes rest, ice, medicines to reduce pain and swelling, and gentle range of motion exercises. In most cases, the pain of a flare-up will go away after one to two months. If you're in a lot of pain, your doctor may inject steroid medicine into the area. If your doctor suggests removing the calcium deposit, you have a few options:

- A specialist can numb the area and use ultrasound imaging to guide needles to the deposit. The deposit is loosened, and most of it is sucked out with the needle. Your body may absorb some of the rest of the calcium.
- Shock wave therapy uses sound waves from outside your shoulder focused on the calcium deposit. The sound waves break up the deposit. Your body may then absorb some of the calcium.
- The calcium deposits can be removed with an arthroscopic surgery called debridement.

Drug Therapies

- Nonsteroidal anti-inflammatory drugs (NSAIDs) — such as ibuprofen (Advil®, Motrin®) and naxprofen (Aleve®), reduce pain and inflammation. There are also prescription NSAIDs. NSAIDs may increase the risk of stomach bleeding.
- Lidocaine or corticosteroid injections into the tendon — cannot be used for weight-bearing tendons because of risk of rupture.
- Colchicine — for calcific tendinitis, when calcium builds up in the joint.

Complementary & Alternative Therapies

- Ice, especially right after the injury
- Rest
- Immobilizing the affected limb (slings, splints)
- Flexibility and strengthening exercises after the inflammation goes down
- Physical therapy, such as range-of-motion exercises
- Ultrasonography — high-frequency sound used to heat an area and increase circulation
- Transcutaneous electrical nerve stimulation (TENS) — electricity used to help relieve pain

Nutritional Supplementation Considerations for Tendinitis

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- EC Matrixx® — (acute)
- EZ Flex™.
- Wellness Essentials® Active

Dietary Options

- Anti-Inflammatory Diet

Increase foods rich in calcium, zinc, selenium, bioflavonoids, vitamins A and C. (Mediterranean-type diet program.)

- Supervised Chiropractic spinal manipulation, range of motion exercises for affected area to begin with strengthening exercises for affected area after inflammation subsides

- Water exercises for specific affected area
- Paraffin bath of affected joint
- Ice bag
- Chiropractic supervised massage: deep friction massage perpendicular to tendon, follow with ice massage 10 minutes; repeat every 3-7 days (as tolerated) for 3-5 weeks, or until healed

Nutritionnel Formula Description & Supplémentation Rationale

EC Matrixx®

EC Matrixx is designed to support connective tissues, tendons, ligaments, and cartilage by modulating the expression of Matrix.

Metalloproteinases (MMPs).

EC Matrixx is a mechanism-specific formula designed to support healthy connective tissues by supporting the extracellular matrix, a key structural component of connective tissues such as tendons, ligaments, and cartilage.

- Features berberine and tetrahydro iso-alpha acids (THIAA), which have been shown in laboratory research to influence MMP-13, an enzyme involved in the maintenance of connective tissue structure.
- THIAA has also been shown to beneficially influence multiple cellular signaling processes related to connective tissue health.
- Supports biochemical processes that influence the health of the extracellular matrix.

EZ Flex™

Formulated for nutritional support for tendon, nerve, and muscle function. EZ Flex features niacinamide with B vitamins, magnesium, and turmeric concentrate and is designed to support soft tissue health.

- Nutritional factors for support of tendon, nerve, and muscle tissues.
- Features a ratio-balanced combination of vitamins B6 and B12 to nutritionally support soft tissue.

Wellness Essentials® Active

Wellness Essentials Active is formulated to help people stay active and vital, and maintain overall health.

- Multifaceted health support: **PhytoMulti™** is the “smart multi” with essential nutrients and a proprietary blend of 13 concentrated extracts and phytonutrients to help protect cells and maintain DNA stability—activating health potential like no other supplement.
- Joint relief: **Kaprex®** provides a safer option for effective joint relief with a proprietary combination of selected plant components.
- Joint health support: **ChondroCare®** is a comprehensive formula designed to provide broad connective tissue support with glucosamine, chondroitin, methylsulfonylmethane (MSM), and other nutrients.
- Healthy cartilage support: **Glucosamine Sulfate 750™** is designed to help support healthy joints and other connective tissues by providing additional glucosamine, a naturally occurring compound in all connective tissues.

Tennis Elbow (Lateral Epicondylitis)

Tennis Elbow is also referred to as Epitrochlear bursitis; Lateral epicondylitis; Epicondylitis - lateral and is soreness or pain on the outside (lateral) side of the upper arm near the elbow.

Causes

The part of the muscle that attaches to a bone is called a tendon. Some of the muscles in your forearm attach to the bone on the outside of your elbow. When you use these muscles over and

over again, small tears develop in the tendon. Over time, this leads to irritation and pain where the tendon is attached to the bone. This injury is common in people who play a lot of tennis or other racquet sports, hence the name “tennis elbow.” Backhand is the most common stroke to cause symptoms. However, any activity that involves repetitive twisting of the wrist (like using a screwdriver) can lead to this condition. Therefore, painters, plumbers, construction workers, cooks, and butchers are all more likely to develop tennis elbow. This condition may also be due to constant computer keyboard and mouse use.

Interventional Chiropractic Care

Chiropractic intervention based on Touch For Health Applied Kinesiology Muscle Response Test as very often there are unrecognized subluxations involving the cervical thoracic spine, glenohumeral, ulna and radius that if neglected will prolong the healing processes.

Symptoms

- Elbow pain that gradually worsens
- Pain radiating from the outside of the elbow to the forearm and back of the hand when grasping or twisting
- Weak grasp

Nutritional Supplementation Options for Tennis Elbow (Lateral Epicondylitis)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Based on recommendations from the seminar series Musculoskeletal Nutrition: Proven Protocols for Clinical Success by Robert G. Silverman, DC, DACBN, DC, BSCN, MS, CCN, CNS, CSCS, CIISN, CKTP, CES, HKC:

- **EC Matrixx™**
- **EZ Flex™**
- **Wellness Essentials™ Active.**

Considerations

- Paraffin bath of affected joint
- Ice bag
- Massage: deep friction Chiropractic supervised massage perpendicular to tendon, follow with ice massage 10 minutes; repeat every 3-7 days (as tolerated) for 3-5 week, or until healed
- Low level laser therapy: the application of low level laser therapy (LLLT) reduces short-term inflammation. Additionally, laser therapy significantly lowers the risk of arthritis, which frequently arises from sports injuries. Laser therapy is used by professional sports teams and athletes to treat inflammation, provide deep tissue therapy, and accelerate pain relief to help minimize downtime.

Dietary Considerations

- Anti-Inflammatory Diet
- Mediterranean type diet; with foods rich in calcium, zinc, selenium, bioflavonoids, vitamins A and C.

Nutritionnel Formula Description & Supplémentation Rationale

EC Matrixx™

EC Matrixx is designed to support connective tissues, tendons, ligaments, and cartilage by modulating the expression of Matrix. **Metalloproteinases (MMPs)**. **EC Matrixx®** is a mechanism-specific formula designed to support healthy connective tissues by supporting the extracellular matrix, a key structural component of connective tissues such as tendons, ligaments, and cartilage.

- Features berberine and tetrahydro iso-alpha acids (THIAA), which have been shown in laboratory research to influence MMP-13, an enzyme involved in the maintenance of connective tissue structure.
- THIAA has also been shown to beneficially influence multiple cellular signaling processes related to connective tissue health. Supports biochemical processes that influence the health of the extracellular matrix.

EZ Flex™

Nutritional Support for Tendon, Nerve, and Muscle Function. Nutritional support for tendon, nerve, and muscle function featuring niacinamide with B vitamins, magnesium, and turmeric concentrate. EZ Flex™ features niacinamide with B vitamins, magnesium, and turmeric concentrate and is designed to support soft tissue health. An expertly formulated, balanced combination of nutritional factors for support of tendon, nerve, and muscle tissues. Features a ratio-balanced combination of vitamins B6 and B12 to nutritionally support soft tissue.

Wellness Essentials™ Active

Wellness Essentials Active is formulated to target your unique nutritional needs to help you stay active and vital and maintain overall health. Each once-daily packet provides:

- Multifaceted health support: **PhytoMulti™** is the “smart multi” with essential nutrients and a proprietary blend of 13 concentrated extracts and phytonutrients to help protect cells and maintain DNA stability—activating health potential like no other supplement.
- Joint relief: **Kaprex®** provides a safer option for effective joint relief with a proprietary combination of selected plant components.
- Joint health support: **ChondroCare®** is a comprehensive formula designed to provide broad connective tissue support with glucosamine, chondroitin, methylsulfonylmethane (MSM), and other nutrients.
- Healthy cartilage support: **Glucosamine Sulfate 750™** (1 tablet) helps support healthy joints and other connective tissues by providing additional glucosamine, a naturally occurring compound in all connective tissues.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

- 1. Go to www.nutri-dyn.com**
- 2. Click on Create Account**
- 3. Click on Patients**
- 4. Complete the short form and type in the following Account Number 100160**
- 5. Click submit**

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive **On orders of \$200.00 or more there will be a 10 % discount** and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

Thyroid Conditions

The thyroid is a butterfly-shaped gland in your neck, just above your collarbone. It is one of your endocrine glands, which synthesize hormones. The thyroid helps set metabolism—how the body gets energy from the foods you eat. Millions of people in the U.S. have thyroid diseases. Most of them are women. If you have a thyroid disease, your body uses energy more slowly or quickly than it should. A thyroid gland that is not active enough, called hypothyroidism, is far more common (which should not be confused with Parathyroidism).

Hypothyroidism can predispose people to weight gain, feel fatigued, and have difficulty dealing with cold temperatures. If your thyroid is too active, it makes more thyroid hormones than your body needs. That condition is **hyperthyroidism**. Too much thyroid hormone can make you lose weight, speed up your heart rate, and make you very sensitive to heat. There are many causes for both conditions. Treatment involves trying to reset your body's metabolism to a normal rate.

Thyroid Disorders Overview

The thyroid is a small butterfly-shaped gland inside the neck, located in front of the trachea (windpipe) and below the larynx (voice box). It produces two thyroid hormones—triiodothyronine (T3) and thyroxine (T4)—that travel through the blood to all tissues of the body. Thyroid hormones regulate how the body breaks down food and either uses that energy immediately or stores it for the future. In other words, our thyroid hormones regulate our body's metabolism. Another gland, called the pituitary gland, actually controls how well the thyroid works. The pituitary gland is located at the base of the brain and produces thyroid-stimulating hormone (TSH). The bloodstream carries TSH to the thyroid gland, where it tells the thyroid to produce more thyroid hormones, as needed. Thyroid hormones influence virtually every organ system in the body. They tell organs how fast or slow they should work. Thyroid hormones also regulate the consumption of oxygen.

Hypothyroidism

Hypothyroidism, which occurs when an underactive thyroid does not produce enough hormones, can be a dangerous condition if untreated. Instead of the bodily systems speeding up and overheating, they slow down in a variety of ways.

Symptoms

- Fatigue • Mental depression
- Sluggishness • Feeling cold
- Weight gain • Dry skin and hair
- Constipation • Menstrual irregularities

NOTE: The most severe expression of hypothyroidism may be referred to as myxedema. If you have severe hypothyroidism, a significant injury, infection, or exposure to cold or certain medications may trigger a life-threatening condition called myxedema coma. This condition may

cause a patient to lose consciousness and to develop hypothermia, a life-threateningly low body temperature.

Causes

Autoimmunity and Hypothyroidism. Hypothyroidism can be induced by various diseases. An autoimmune cause accounts for approximately 90% of adult hypothyroidism, mostly due to Hashimoto's disease. The majority of Hashimoto patients are women between the ages of 20 and 60 years old, and nearly 10% show overt hypothyroidism. With time, euthyroid patients progress to hypothyroidism (PMID: 3066320).

Hashimoto's disease is the most common cause of hypothyroidism in the United States. It occurs when the immune system produces antibodies that attack the thyroid gland, creating chronic inflammation that damages the gland and interferes with its ability to make enough thyroid hormone. It occurs more often in women than men, and tends to run in families.

Hypothyroidism can be traced to several other conditions as well, including:

- Subacute, lymphocytic, or postpartum thyroiditis. These inflammations of the thyroid gland often start as hyperthyroidism, as stored thyroid hormone leaks out of the gland and raises hormone levels in the blood. Most people then develop temporary or, very rarely, permanent hypothyroidism.
- Drugs that affect thyroid function, such as amiodarone, which is used to treat heart rhythm abnormalities.

- A pituitary gland that does not make enough thyroid-stimulating hormone (TSH).

- Treatment for hyperthyroidism (too much thyroid hormone) with radioactive iodine or surgery.

Thyroid Nodules: More than 90% of thyroid nodules are not harmful or cancerous. An individual may not be aware of the nodule's presence until it starts to grow, resulting in an enlarged thyroid. A doctor may feel it, however, when he or she carefully examines the thyroid gland. Nodules should be checked by a doctor. Tests can usually tell if a nodule is harmless or harmful and which treatment would be best. A nodule may be cancerous if the lymph nodes under the jaw are swollen and if it grows quickly, feels hard, and causes pain. Cancerous nodules also tend to cause hoarseness or difficulty with swallowing or breathing. If a patient has had radiation treatment around the head or neck areas, he or she should tell his or her doctor because this can increase an individual's chances of having nodules and cancer. Among people who have thyroid nodules, thyroid cancer is found in about 8% of men and 4% of women.

To determine whether a nodule may be harmful and whether the patient should undergo thyroid cancer treatment, the doctor may perform any number of tests. These include the following:

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **Ultrasound** (sonogram). Technicians use a machine to show sound waves that map out a picture of the thyroid gland and any nodules contained within it.

- **Fine-needle aspiration biopsy.** In this test, a thin needle is inserted into the nodule to remove cells and/or fluid samples from the nodule for examination under a microscope.

- **Thyroid scan.** This is a radiation detector that scans over the neck, after a tiny amount of radioactive substance is administered, to reveal whether the nodule is functioning (producing hormones).

•• **Blood and other laboratory tests.** Tests include those that measure levels of thyroid-stimulating hormone, as well as antibodies and possibly calcitonin. Calcitonin is a hormone known to participate in calcium and phosphorus metabolism. The major source of calcitonin is from the parafollicular cells in the thyroid gland. High calcitonin levels may indicate medullary thyroid cancer, a cancer originating from the parafollicular cells.

NOTE: Dr. Schuler suggests that any thyroid antibodies are indicative of an autoimmune relationship (even if well under laboratory range).

Spinal Issues: As strange as it initially might seem very often in thyroid problems there also exist subluxations in the cervical and upper thoracic spine which contribute to the thyroid gland receiving the proper nerve, blood supply.

Hyperthyroidism

Hyperthyroidism, the result of an overactive thyroid, more commonly affects women between the ages of 20 and 40, but men can also develop this condition. The symptoms of this thyroid condition can be frightening.

Symptoms

- Neck, back and muscle weakness • Trembling hands
- Rapid heartbeat • Fatigue
- Weight loss • Diarrhea or frequent bowel movements
- Irritability and anxiety • Vision problems (irritated eyes or difficulty seeing)
- Menstrual irregularities • Intolerance to heat and increased sweating
- Infertility

Causes

Graves' disease is the most common cause of hyperthyroidism. It occurs when the immune system produces antibodies that attack the thyroid gland, making it produce too much thyroid hormone and creating a hormone imbalance. This condition happens often in people with a family history of thyroid disease. In some patients with Graves' disease, one of the noticeable symptoms may be swelling behind the eyes, causing discomfort or increased tearing or causing the eyes to push forward or bulge.

Other causes of hyperthyroidism include the following:

- Thyroid nodules.
- Taking too much thyroid hormone medication to treat other conditions.
- Subacute thyroiditis. This painful inflammation of the thyroid is usually caused by a virus.

When the infection leaves, the condition improves.

- Lymphocytic thyroiditis and postpartum thyroiditis. These related autoimmune disorders cause a temporary painless inflammation of the gland. Thyroiditis is marked by lymphocytes (white blood cells) inside the thyroid and leads to leakage of thyroid hormone from the inflamed gland, raising hormone levels in the bloodstream.

Thyroiditis

Thyroiditis is an inflammation of the thyroid gland. There are several types of thyroiditis. Most result in three phases: overactive thyroid (hyperthyroidism), underactive thyroid (hypothyroidism), and return to normal. When the thyroid is inflamed, it often releases an excess of thyroid hormone, resulting in hyperthyroidism. As the supply of thyroid hormone is depleted, the body has too little, and hypothyroidism results. Young to middle-aged women seem most at risk, although some forms of thyroiditis occur in both men and women of all ages. With some forms, hypothyroidism may develop years later even if the thyroiditis has resolved.

Immune disorders, viruses, and fever disorders can cause thyroiditis. Sometimes thyroiditis develops if you have Graves' disease (an autoimmune disorder that causes hyperthyroidism). In some cases, there is no identifiable cause.

Signs & Symptoms

Depending on the type of thyroiditis, the thyroid gland can have one of the following characteristics:

- Firm and enlarged, but not tender
- Enlarged and painful, with pain extending to the jaw or ears
- Enlarged but not painful
- Enlarged on only one side, hard like a stone, and sticking to other neck structures You may also have one or more of the following symptoms:
- Cool, dry skin, slow pulse rate (less than 60 beats per minute), swelling around the eyes, hoarseness, or slow reflexes.
- No desire to eat, feeling tired and unenergetic, and a slight fever
- A rapid heartbeat, slight nervousness, anxiety, weight loss of 5-10 pounds, and increased sweating

Thyroid Function Tests

The major thyroid hormone secreted by the thyroid gland is thyroxine, also called T4 because it contains four iodine atoms. To exert its effects, T4 is converted to triiodothyronine (T3) by the removal of an iodine atom. This occurs mainly in the liver and in certain tissues where T3 acts, such as in the brain. The amount of T4 produced by the thyroid gland is controlled by another hormone, which is made in the pituitary gland located at the base of the brain, called thyroid stimulating hormone (abbreviated TSH). The amount of TSH that the pituitary sends into the blood stream depends on the amount of T4 that the pituitary sees. If the pituitary sees very little T4, then it produces more TSH to tell the thyroid gland to produce more T4. Once the T4 in the blood stream goes above a certain level, the pituitary's production of TSH is shut off. In fact, the thyroid and pituitary act in many ways like a heater and a thermostat. When the heater is off and it becomes cold, the thermostat reads the temperature and turns on the heater. When the heat rises to an appropriate level, the thermostat senses this and turns off the heater. Thus, the thyroid and the pituitary, like a heater and thermostat, turn on and off.

Tests to Evaluate Thyroid Function

Blood tests to measure TSH, T4, and T3 are readily available and widely used.

TSH Tests

Laboratory range for TSH is .04 to 6.0, but recently has been narrowed (2003) to .03 to 3.0. Under .4 can indicate possible hyperthyroidism. Over 6 is considered indicative of hypothyroidism.

NOTE: The American Association of Clinical Endocrinologists has revised these guidelines as of early 2003, narrowing the range to .3 to 3.0. Many labs and practitioners are not, however, aware of these revised guidelines. The best way to initially test thyroid function is to measure the TSH level in a blood sample. A high TSH level indicates that the thyroid gland is failing because of a problem that is directly affecting the thyroid (primary hypothyroidism). The opposite situation, in which the TSH level is low, usually indicates that the person has an overactive thyroid that is producing too much thyroid hormone (hyperthyroidism). Occasionally, a low TSH may result from an abnormality in the pituitary gland, which prevents it from making enough TSH to stimulate the thyroid (secondary hypothyroidism). In most healthy individuals, a normal TSH value means that the thyroid is functioning normally.

T4 Tests

T4 circulates in the blood in two forms:

1) T4 (Total T4/Serum thyroxine) bound to proteins that prevent the T4 from entering the various tissues that need thyroid hormone. (Laboratory range for T4 [Total T4/Serum thyroxine] is 4.5 to 12.5.) Less than 4.5 can be indicative of an under functioning thyroid with TSH is also elevated. Over 12.5 can indicate hyperthyroidism. Low T4 with low TSH can sometimes indicate a pituitary problem.

2) Free T4 (Free T4/Free Thyroxine—FT4) does enter the various target tissues to exert its effects. (Laboratory range for Free T4 [Free T4/Free Thyroxine—FT4] is 0.7 to 2.0.) The Free T4 fraction is the most important to determine how the thyroid is functioning, and tests to measure this are called the Free T4 (FT4) and the Free T4 Index (FT4I or FTI). (Free T4 Index [FT4I or FTI] has a laboratory range of 2.6 to 3.6.) Less than 0.7 is considered indicative of possible hypothyroidism. Individuals who have hyperthyroidism will have an elevated FT4 or FTI, whereas patients with hypothyroidism will have a low level of FT4 or FTI. Combining the TSH test with the FT4 or FTI accurately determines how the thyroid gland is functioning. The finding of an elevated TSH and low FT4 or FTI indicates primary hypothyroidism due to disease in the thyroid gland. A low TSH and low FT4 or FTI indicates hypothyroidism due to a problem involving the pituitary gland. A low TSH with an elevated FT4 or FTI is found in individuals who have hyperthyroidism. T3 (T3 / Serum Triiodothyronine) Test

Laboratory range for T3 (T3/Serum Triiodothyronine) is 36.0 to 40.0). Less than 80 can indicate hypothyroidism. T3 tests are often useful to diagnosis hyperthyroidism or to determine the severity of the hyperthyroidism. Patients who are hyperthyroid will have an elevated T3 level. In some individuals with a low TSH, only the T3 is elevated and the FT4 or FTI is normal. T3 testing may be helpful in the hypothyroid patient. Thyroid hormone secreted from the thyroid gland is about 80-90% T4 and about 10-20% T3. It is primarily the liver (and to a small extent, the skeletal muscle), that is responsible for approximately 70 to 90% of the conversion of T4 to the more active T3 (4 or more times more potent/more active, very little is actually converted by the thyroid itself). T3 testing may be a good indicator of a liver-based dysfunction that is manifesting in hypothyroid symptoms (especially if the TSH and T4 are normal, with a low T3 and the associated hypothyroid-type symptoms are present).

References

•• *Nomura, S., et al. Reduced peripheral conversion of thyroxine to triiodothyronine in patients with hepatic cirrhosis. J Clin Invest. 1975 September; 56(3): 643–652. PMID: 108134. doi: 10.1172/JCI108134. NOTE: According to Dr. Schuler, the best laboratory test for thyroid function is the “Ratio of Free T3 (FT3) to Reverse T3 (RT3).” The ratio should be FT3: RT3 > 2.0.*

Inflammation is associated with:

- T3 receptor site resistance
- Decreased T3 and increased reverse T3
- Increased TSH Higher circulating levels of inflammatory markers were associated with lower levels of free serum triiodothyronine (T3) and increased levels of reverse T3 (PMID: 21350816).

Thyroid Antibody Tests

The immune system of the body normally protects us from foreign invaders such as bacteria and viruses by destroying these invaders with substances called antibodies produced by blood cells known as lymphocytes. In many patients with hypothyroidism or hyperthyroidism, lymphocytes make antibodies against their thyroid that either stimulate or damage the gland. Two common antibodies that cause thyroid problems are directed against thyroid cell proteins: thyroid

peroxidase and thyroglobulin. Measuring levels of thyroid antibodies may help diagnose the cause of the thyroid problems. For example, positive anti-thyroid peroxidase and/or anti-thyroglobulin antibodies in a patient with hypothyroidism make a diagnosis of Hashimoto's thyroiditis. If the antibodies are positive in a hyperthyroid patient, the most likely diagnosis is autoimmune thyroid disease. Chem Screen and CBC blood tests in that they give a scan of the major blood makers that in one way or another can influence the function of the thyroid gland.

Non-blood Thyroid Function Tests

Radioactive Iodine Uptake. Because T4 contains much iodine, the thyroid gland must pull a large amount of iodine out from the blood stream in order for the gland to make an appropriate amount of T4. The thyroid has developed a very active mechanism for doing this. Therefore, this activity can be measured by having an individual swallow a small amount of iodine, which is radioactive. The radioactivity allows the doctor to track where the iodine molecules go. By measuring the amount of radioactivity that is taken up by the thyroid gland (radioactive iodine uptake, RAIU), doctors may determine whether the gland is functioning normally. A very high RAIU is seen in individuals whose thyroid gland is overactive (hyperthyroidism), while a low RAIU is seen when the thyroid gland is underactive (hypothyroidism). In addition to the radioactive iodine uptake, a thyroid scan may be obtained, which shows a picture of the thyroid gland.

Axillary Temperature Test

The Axillary Temperature Test developed by Broda Barnes, M.D. is a functional assessment of thyroid function based on a measurement of basal temperature as a functional indication of either hyper or hypo functioning of the thyroid.

Vitamin D's Connection to Healthy Thyroid Function

Vitamin D deficiency (extremely common), has been documented to have a negative impact on healthy thyroid function. According to Richard Shames, MD: "Vitamin D is so crucial to thyroid function that its status has now been elevated by researchers to co-hormone. We now know that the variability of thyroid to work or not work in the body is dependent upon the presence of Vitamin D, making it not just of benefit, but absolutely essential." Dr. Richard Shames is co-author of two books on thyroid disease: *Thyroid Power and Fat, Fuzzy, Frazzled?* Richard Shames, MD graduated Harvard and University of Pennsylvania, did research at the National Institutes of Health with Nobel Prize winner Marshall Nirenberg, and has been in private practice for more than twenty-five years. He practices holistic medicine practice and offers health coaching, with a focus on thyroid, autoimmune, and hormonal balance issues. Regarding Vitamin D in general: Vitamin D deficiency could be considered a pandemic in our country, with even people in the sun belt having less than optimal levels. In a recent study reported in the *Am J Clin Nutr* 2008, only 22% of the 637 residents of southern Arizona had optimal vitamin D levels. Considered optimal was any 25-hydroxy vitamin D blood levels over 30 ng/ml, which is considered low by many researchers/practitioners. According to Dr. Michael Hollick (considered one of the top experts in the world on Vitamin D), and a number of other researchers in the field, "Dosages of vitamin D must reflect physiologic requirements and natural endogenous production and should therefore be in the range of 3,000-10,000 IU per day." Also, supplementation should be performed with D3 rather than D2, and if supplementation is going to be above the 10,000 IU upper limit per day, it should be done only when the serum 25(OH)D levels are below the proposed optimal range of 40-100 ng/ mL (100-250 nmol/L), and the vitamin D supplementation must be continued for at least 5-9 months for maximum benefit. Regarding the serum test for vitamin D, the best serum analysis is the "25-(OH)D." The safety range of the 25-(OH)D is 20-150 ng/ ml and the proposed ideal range is 60-100 ng/ml, with possible intoxication at >150

ng/ml. (If after vitamin D3 supplementation symptom improvement is “non-responsive,” consider checking the vitamin D hormone 1,25(OH)2D for actual tissue saturation in ratio to the 25-(OH)D level.)

Nutritional Supplementation Options for Thyroid Conditions

Note: Again as we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) and are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Hypothyroidism. But before anyone embarks on a nutritional supplementation they should seek the counsel of a physician who has expertise in that subject and if they are taking a prescribed medication they should never go off that medication(s) before consulting with the physician who prescribes it.

- **Thyroid Pro.**
- **Thyrosol®.**
- **D3 5000™.**
- Appropriate **Wellness Essentials®** Formula.

Dietary Consideration

- Anti-Inflammatory Diet or Mediterranean Diet
- Autoimmune-Associated Hyperthyroidism / Thyroiditis / Chronic Thyroiditis (Hashimoto’s disease)

- **UltraInflamX® Plus 360**
- **Kaprex® AI**
- **D3 5000™ .**
- **Acetyl-L-Carnitine.**

Dietary Considerations

- Anti-Inflammatory Diet or Mediterranean Diet

For Patients on Thyroid Prescription Medication Whether it is prescription desiccated thyroid or prescription synthetic hormones such as Synthroid® / Levoxyl® / Levothyroid® (levothyroxine): Thyroid hormone secreted from the thyroid gland is about 80-90% T4 and about 10-20% T3. The ratio for prescription thyroid medications usually mimic that ratio (including all brands of prescription desiccated thyroid, which contain a mixture of thyroid hormones T4 [thyroxine] and T3 [triiodothyronine]) in the proportions usually present in pig thyroids (approximately 80% T4 and 20% T3). It is primarily the liver (and to a small extent, the skeletal muscle), that are responsible for approximately 70-90% of the conversion of T4 to the (4 or more times more potent/more active) T3 as very little is actually converted by the thyroid itself. The ideal nutritional support formula to assist thyroid function normalization would be one that supports the liver (and to a small extent, the neck and back and skeletal muscle issues therefore very often Chiropractic spinal care assists in eliminating or minimizing those issues).

- **Thyrosol®.**
- **D3 10,000 with K2.**

Dietary Considerations

- Anti-Inflammatory Diet or Mediterranean Diet

Nutritional Formula Description & Supplementation Rationale

Thyroid Pro

Comprehensive thyroid glandular, herb, and nutrient complex support formula. Thyroid hormones are manufactured from iodine and tyrosine. With the advent of iodized salt, the incidents of iodine deficiency has been greatly reduced in the United States. However, deficiency is still possible in those individuals that use salt substitutes, sea salt preparations, or choose not to use salt at all. It has been estimated that 25–40% of the general adult population suffers from moderate to severe hypothyroidism. This may be due to the poor nutrient value in the foods eaten, or eating foods that block the synthesis of thyroid hormone. Tyrosine, which is synthesized in the body from the amino acid phenylalanine, is a precursor of thyroid hormones. It is associated with low blood pressure and low body temperature, which are both indicative of hypothyroid condition. Receiving sufficient amounts of tyrosine from the standard American diet is very difficult, thus supplementation is usually indicated.

Thyrosol®

Thyrosol contains nutrients and herbs that are formulated to support conversion of T4 to the more active T3, and promotes overall healthy thyroid function. Many aspects of health, including body composition, energy level, and cognitive function are impacted by thyroid hormone activity including:

- Supporting the healthy synthesis of thyroid hormones
- Support the steps in hormone metabolism negatively affected by stress
- Support the conversion of thyroxine (T4) to the more bioactive triiodothyronine (T3)
- May enhance the binding of T3 receptors to DNA, thereby supporting the expression of thyroid hormone-responsive genes

D3 5000™

D3 5000 features 5000 IU of vitamin D3—the most bioavailable form of vitamin D crucial to healthy thyroid function. **NOTE:** According to Richard Shames, MD: “Vitamin D is so crucial to thyroid function that its status has now been elevated by researchers to co-hormone. We now know that the variability of thyroid to work or not work in the body is dependent upon the presence of vitamin D, making it not just of benefit, but absolutely essential.”

Appropriate **Wellness Essentials®** Formula

Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help people eliminate the guesswork and confusion regarding daily foundation nutrition. “The body requires a good balance of a wide variety of nutrients as more than one nutrient is required to support good health. When a person has a lack in one part of the body, the whole body suffers. If there is a persistent lacking it predisposes the body suffer some form of degeneration or disease.”

UltraInflamX® Plus 360

UltraInflamX Plus 360 is for inflammation and biotransformation support, formulated to provide specialized nutritional support—including reduced iso-alpha acids (RIAA, from hops), L-glutamine, and easily digestible rice protein—for people experiencing inflammation associated with autoimmune-related disorders.

Kaprex® AI

Selective Kinase Response Modulators for Balanced Immune Function. Kaprex AI targets underlying issues—such as eicosanoid, cytokine, and white blood cell activity and vitamin D levels—that have been associated with immune system response concerns.

Acetyl-L-Carnitine

L-carnitine is thought to play a critical role in thyroid disease. Acetyl-L-carnitine occurs naturally in the body. Endogenous carnitines exist as a “carnitine pool” consisting of L-carnitine and several acetyl-carnitine esters. Intracellular enzymes and cell membrane transporters can rapidly interconvert the carnitines to the needed form and transport them between the tissues and extracellular space. Acetyl-L-carnitine, the most important carnitine ester, is converted to L-carnitine in the body by carnitine acetyltransferase. L-carnitine plays an important role in lipid metabolism and energy production. It is essential for normal mitochondrial function, acting as a transporter of long-chain fatty acids into the mitochondria for beta-oxidation. Increased thyroid activity may increase cells’ need for carnitine, while increasing carnitine loss in the urine. Individuals suffering from hyperthyroidism may therefore require supplemental L-carnitine. In clinical studies, L-carnitine supplementation is designed to help prevent or reverse muscle weakness and other symptoms in individuals suffering from hyperthyroidism. In a case report, L-carnitine showed promise in helping prevent the possible lethal outcome of thyroid storm. According to research published in the journal *Thyroid* (2000 Dec; 10(12); 1043-1050): “L-carnitine can block thyroid hormone action on the cells. It actually appears to prevent both triiodothyronine (T3) and thyroxine (T4) entry into the cell nuclei.” While L-carnitine in itself does not suppress TSH, it does seem to reduce the impact of (out of control) thyroid hormone. According to research published in *J Clin Endocrinol Metab* (2001 Aug; 86(8):3579-3594): “L-carnitine is effective in both reversing and preventing symptoms of hyperthyroidism and has a beneficial effect on bone mineralization.” According to research published in *Ann N Y Acad Sci*. (2004 Nov; 1033: 158-167): “2 to 4 g per day of oral L-carnitine is capable of reversing hyperthyroid symptoms (and biochemical changes in the hyperthyroid direction).”

Tics / Tremors / Seizures / Epilepsy / Tourette Syndrome

Tics, or Muscle Twitches

Tics, or muscle twitches, are a common occurrence in children. According to the American Academy of Pediatrics (AAP), about 20% of children suffer from tics. Tics usually affect children between seven and nine years of age, but may occur in children as young as two. Tics are usually a benign condition and typically resolve within a few months. However, you may need to talk to your physician if the tics interfere with your child’s daily activities or persist for longer than a year.

Definition

A tic is an involuntary movement or sound that is done repetitively. Tics most commonly occur in the face and neck, but can occur in any part of the body. Motor tics include repetitive movements such as blinking the eyes, raising the eyebrows, grimacing, biting the lips, twisting the neck, shrugging the shoulders, thrusting the arms, kicking the legs, and jumping. Vocal tics include sounds or speech such as coughing, clearing the throat, grunting, snorting, moaning, humming, and even speaking words or sentences.

Transient Tic Disorder

Transient Tic Disorder is the most common tic disorder, according to the American Academy of Child and Adolescent Psychiatry. It is a benign condition and usually resolves within three months. Vocal or motor tics that persist longer than one year are classified as chronic and should be evaluated by your pediatrician.

Cause

The cause of tics is not well understood. They may be due to stress, anxiety, genetics, and certain medications, such as Adderall®, Ritalin®, and Dexedrine®. They can also be caused by

infections, although that is rare. For unknown reasons, males are more likely to suffer from tics. There are two types of tics: simple and complex. Simple motor tics are brief, sudden movements that usually involve only one group of muscles, such as shoulder shrugging or eye blinking. Simple vocal tics are sounds such as sniffing or clearing the throat. Complex motor tics, such as touching or throwing objects, last longer than simple tics and occur in more than one group of muscles. Complex vocal tics are spoken words that are usually said suddenly.

References

- *American Academy of Pediatrics: Tics*
- *American Academy of Child and Adolescent Psychiatry: Tic Disorders*

Tremors

Tremors are unintentional trembling or shaking movements in one or more parts of your body. Most tremors occur in the hands. You can also have arm, head, face, vocal cord, trunk, and leg tremors. Tremors are most common in middle-aged and older people, but anyone can have them. The cause of tremors is a problem in the parts of the brain that control muscles in the body or in specific parts of the body, such as the hands. They commonly occur in otherwise healthy people. They may also be caused by problems such as:

- Parkinson's disease
- Dystonia
- Multiple sclerosis
- Stroke
- Traumatic brain injury
- Alcohol abuse and withdrawal
- Certain medicines
- Some forms are inherited and run in families. Others have no known cause.

References

- NIH: National Institute of Neurological Disorders and Stroke
502 Tics / Tremors / Seizures / Epilepsy / Tourette Syndrome

Seizures

A seizure is the physical findings or changes in behavior that occur after an episode of abnormal electrical activity in the brain. The term "seizure" is often used interchangeably with "convulsion." Convulsions are when a person's body shakes rapidly and uncontrollably. During convulsions, the person's muscles contract and relax repeatedly. There are many different types of seizures. Some have mild symptoms and no body shaking.

Interventional Chiropractic Care

Because the spine houses and protects the spinal cord and regulates the transmission of nerve energy to every cell and organ in the body including the brain thus if there is some interference with the flow of nerve energy in the spine and nervous system it can be a causative factor of **Tics / Tremors / Seizures / Epilepsy / Tourette Syndrome, Tics, or Muscle Twitches**. At minimum chiropractic manipulation of the spine column (particularly the cervical spine).

References • National Institutes of Health (NIH)

Epilepsy (Temporal Lobe Epilepsy)

Epilepsy is a brain disorder in which a person has repeated seizures (convulsions) over time. Seizures are episodes of disturbed brain activity that cause changes in attention or behavior.

Causes

Epilepsy occurs when permanent changes in brain tissue cause the brain to be too excitable or jumpy. The brain sends out abnormal signals. This results in repeated, unpredictable seizures. (A single seizure that does not happen again is not epilepsy.) Epilepsy may be due to a medical condition or injury that affects the brain, or the cause may be unknown (idiopathic).

Common causes of epilepsy include:

- Stroke or transient ischemic attack (TIA)
- Dementia, such as Alzheimer's disease
- Traumatic brain injury not just involving the brain but spine and spinal cord. This brings forth the possibility that in part the epileptic seizures could be related to issues with in the spine (upper cervical) that are interfering with the transmission of nerves as well as blood circulation in the brain. That being a possibility it makes sense to see a Doctor of Chiropractic for evaluation of the cervical spine and if any subluxations, or other mechanical issues are found to receive corrective manipulation of them.
- Infections, including brain abscess, meningitis, encephalitis, and AIDS
- Brain problems that are present at birth (congenital brain defect)
- Brain injury that occurs during or near birth
- Metabolism disorders that a child may be born with (such as phenylketonuria)
- Brain tumor
- Abnormal blood vessels in the brain
- Other illness or toxicity that damage or destroy brain tissue

Epilepsy seizures usually begin between ages 5 and 20, but they can happen at any age. There may be a family history of seizures or epilepsy.

Reference

- *National Institutes of Health (NIH)*

Tourette Syndrome (TS)

Tourette syndrome is a neurological disorder in which you display unusual movements or make sounds over which you may have little or no control (tics). For instance, you may repeatedly b your eyes, shrug your shoulders, or jerk your head. In some cases, you might blurt obscenities. Signs and symptoms of Tourette syndrome usually begin in childhood, typically showing up between ages 7 and 10. Males are about three to four times more likely than females to develop Tourette syndrome.

Reference

- *National Institutes of Health (NIH)*

From a nutritional support perspective, there are seven primary areas to be considered/addressed:

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor nor The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure or in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

1) General Nerve Support:

Omega-3 Fatty Acids

The Omega-3 Fatty Acids are the primary fatty acid that make up the structure of the brain and nervous system, so it would make sense that any “malfunctioning” of the brain/nervous system would benefit by the addition of Omega-3 Fatty Acids (numerous research studies seem to document that theory). The Tourette Syndrome Association suggests consuming supplements of omega-3 essential fatty acids. This healthy fat seems to improve irritability and depression in TS patients, which can help them better manage the stress that can trigger tics. The University of Maryland Medical Center (UMMC) adds that omega-3 essential fatty acids are crucial for behavioral and brain functions, and can improve the hyperactivity and concentration levels in TS patients who also suffer from ADHD. Fish oil capsules contain omega-3 fatty acids, but UMMC recommends that you buy supplements made only by reputable manufacturers who certify that their supplements contain no heavy metals, hormones, microbes, pesticide, herbicides thus are GMP certified.

B-Complex and Antioxidants

The Henry Spink Foundation suggests taking B-complex supplements to help treat tics because these vitamins work together to naturally tranquilize your nervous system. The UMMC, explains that niacin, also called vitamin B3, is reported to help nerves function properly, while the folic acid, also called folate and vitamin B9, promotes nervous system, emotional, and mental health. There is a growing evidence that diets that are high in antioxidants may help to confer some degree of protection against the neurodegenerative processes involved in the progression of Parkinson’s disease. De Rijk, M.C., et al. Dietary antioxidants and Parkinson’s disease: The Rotterdam Study. *Arch Neurol* 54(6): 762-765, 1997. “Cerebral folate deficiency is associated with seizure activity in children up to 18 years of age and is also associated with autistic spectrum disorder.” - Michael Stone, MD - Great Lakes Conference, Sept. 2013

Magnesium

“Magnesium deficiency is well known to produce neuropathologies.” Magnesium is reported to assist the body in protecting against glutamate and seizures. *Medical Hypotheses* - 2006 (Vol. 67, Issue 2, Pages 362-370) MedlinePlus notes that magnesium is an essential nutrient responsible for the contraction and relaxation of your muscles. According to an article published in the *Medicina Clinica* journal in November 2008, scientists discovered that magnesium supplements that also contain vitamin B6 significantly reduces the number and intensity of tics in children with Tourette’s without any adverse side effects. Garcia-Lopez, R, et al. An Open Study Evaluating the Efficacy and Security of Magnesium and Vitamin B6 as a Treatment of Tourette Syndrome in Children. *Medicina Clinica*, November 2008 Evidences suggests that a localized reduction in the caudate nucleus occurs in patients who are suffering from Parkinson’s and other neurodegenerative diseases a cellular magnesium level test may provide a more accurate benchmark for checking magnesium supplementation efficacy. Utti, R.J., et al. Regional metal concentrations in Parkinson’s disease, other chronic neurological diseases and control brains. *Can J Neurol Sci* 16(3): 310-314, 1989

2) Toxicity Concerns:

There is a distinct possibility that toxicity (whether chemical and/or metal toxicity) may be playing a significant role in Neurodegenerative Disorders—remember that the brain and nervous system are approximately 65% plus fat...all toxins that the body is unable to excrete, are stored the fat...toxic storage that is stored in the fat portions of the brain and nervous system can significantly impact brain and nerve function, resulting in or contributing to Neurodegenerative Disorders. **NOTE:** The need for a “stored toxin detoxification program” (UltraClear® Renew and AdvaClear®) can be assessed by the Detoxification Questionnaire.

3) GABA & Glutamate Balance Support:

GABA/Glutamate imbalances...low folic acid...low magnesium...low levels of niacin, thiamine, B6, and taurine have all been associated with tics/seizures/epilepsy. “Taurine increased the onset latency and reduced the occurrence of tonic seizures. Taurine also reduced the duration of tonic-clonic convulsions and mortality rate” Adv Exp Med Biol. 2003;526:515-25. PMID: 12908638 “CNS glutamic acid decarboxylase with a low affinity for pyridoxine results in pyridoxine-dependent seizures by causing low GABA and high glutamate levels.”

<http://emedicine.medscape.com/article/124947-overview> In pediatric seizure disorder/epilepsy...vaccines increase seizures...seizure is a glutamate mediated process...excess glutamate can cause catastrophic neuron degeneration. NEJM Volume 345:656-661 August 30, 2001 Number 9 [PMID: 11547719] The more vaccines that are given in combination, the more seizures MMRV. Pediatrics. 2010 Jul;126(1):e1-8. Epub 2010 Jun 29. PMID: 20587679

4) Vitamin D Deficiency:

“Moreover, several evidences in the literature suggest an association between low vitamin D and seizures, indicating the possibility of anticonvulsant properties of this hormone.” Med Hypotheses. 2010 Jan;74(1):158-61. PMID: 19666211, Epub 2009 Aug 8 “Recommend doses as high as 10,000 IU/day or more for adults (aged 19 years and older) which may be necessary to correct, treat, and prevent vitamin D deficiency, and some patients require higher doses for longer periods of time to maintain adequate 25-hydroxyvitamin D levels.” “Obese children and adults and children and adults on anticonvulsant medications, glucocorticoids, antifungals such as ketoconazole, and medications for AIDS need at least two to three times more vitamin D for their age group to satisfy their body’s vitamin D requirement.” Vitamin D supplementation must be continued for at least 5-9 months for maximum benefit. Regarding the serum test for Vitamin D, the best serum analysis is the “25-(OH)D.” The safety range of the “25-(OH)D” is 20 to 150 ng/ml and the “proposed” ideal range is 40 to 100 ng/ml; and possible intoxication is >150 ng/ml. (But, if after Vitamin D3 supplementation, symptom improvement is “non-responsive,” consider checking the vitamin D hormone (“1,25(OH)2D”) for actual tissue saturation in ratio to the “25-(OH)D” level.) As evidence of widespread vitamin D deficiency grows, some scientists are wondering whether the sunshine vitamin—once only considered important in bone health—may *actually play a role in some of neurology’s most vexing conditions.*

Reference

•• Vasquez, A, DC, ND, Manso, G., MD, & Cannell, J., MD. (Sep/Oct 2004). *The clinical importance of vitamin D (cholecalciferol): A paradigm shift with implications for all healthcare providers. Alternative Therapies, 10(5).*

5) Neuroprotection, Synaptogenesis, & Neural Restoration Support:

Myricetin Inhibits “glutamate-mediated excitotoxicity” in the neuron and reduces (destabilizes) both endogenous and over-expressed tau protein levels in cells.

Rosmarinic Acid

Formulated To Reduce:

- AB-induced neurotoxicity
- Reactive oxygen species (induced by AB)
- DNA fragmentation
- Tau protein hyper phosphorylation

Curcumin

Designed to Inhibit activation of NF-kB and Abeta-induced cell death, inhibits Abeta formation, extension, and destabilizes preformed Abetas. Curcumin also inhibits acetylcholinesterase (AChE) activity.

Ferulic Acid

Formulated to restores glutathione, is reported to prevent amyloid-beta induced neurotoxicity, protects against MSG excitotoxicity in brain.

Grape Seed Proanthocyanidins

Neuroprotective against Abeta and tau proteins, reduced cerebral amyloid deposition, and attenuated AD-type cognitive deterioration.

Green Tea Epigallocatechin 3-gallate

Selectively is believed to play roles in protecting neurons from apoptosis induced by mitochondrial oxidative stress.

Cellular Rejuvenation & Restoration for Neurological Conditions:

GlyceroPhosphatidylCholine (GPC) is formulated to improve focus, concentration, achieves better memory, and maintains healthy brain function during aging.

Acetyl-L-Carnitine (ALC) is designed to assist the body in the transportation of fatty acids into the inner mitochondrial matrix for beta-oxidation and ATP production. It also is believed to possibly facilitate the removal from the inner mitochondria of the excess short- and medium-chain fatty acids that accumulate during fat metabolism.

Phosphatidyl Serine (PS) is highly concentrated in the cell membranes of brain neurons.

Optimally functioning it can play roles in stimulating the release of dopamine (mood, physical movement), increases the production of acetylcholine (learning, memory), enhances neuronal glucose metabolism, reduces cortisol levels, and boosts the activity of nerve growth factor.

N-acetyl-cysteine (NAC) is believed to have roles in replenishing intracellular levels of glutathione, helping to restore cells' ability to fight damage from reactive oxygen species. Improving neuronal glutathione to reduce oxidative stress and inflammation is a primary necessity. NAC is also believed to play roles in suppressing the "master signaling molecule" nuclear factor kappaB (NF-kB), which in turn prevents activation of multiple inflammatory mediators.

Gamma-tocopherol is the most abundant form of vitamin E. It is documented to inhibit the pro-inflammatory COX-2 enzyme, and quench reactive oxygen species that occurs in oxidative stress. Glutamate-cysteine ligase, the rate-limiting enzyme in glutathione synthesis, is increased by gamma-tocopherol, not alpha-tocopherol.

Pyridoxine

Vitamin B6 levels are often low in Alzheimer's patients and this raised scientific interest in B6's role in supporting cognitive health beginning in 2004. The neuroendocrinology of vitamin B6 interaction has multiple molecular mechanisms.

Niacinamide

Vitamin B3 has a successful clinical history with neurological conditions including depression, anxiety, schizophrenia, and obsessive compulsive disorder to name a few. Niacinamide does enhance tryptophan conversion to serotonin. We also know that vitamin B3 has a vital role in neuron mitochondria. It stabilizes the mitochondria by protecting against reactive oxygen species, and is also involved in cellular energy processes. The coenzyme nicotinamide adenine dinucleotide (NAD+) is derived from vitamin B3, and is required for reactions in all three phases of energy production: glycolysis, the Krebs's cycle, and Complex I of the electron transport chain. There are also emerging animal studies demonstrating how vitamin B3 enhances NAD+, NADH,

and NADPH levels in brain regions. A depletion of NAD⁺ is associated with DNA fragmentation, and thus neuronal degeneration.

5-methyltetrahydrofolate

The bioactive form of folate is believed to support methylation and homocysteine metabolism. The synthesis of S-adenosylmethionine (SAME) is intimately tied with folate and vitamin B12 metabolism, and deficiencies of both these vitamins have been found to reduce brain SAME concentrations. Both folate and vitamin B12 deficiency may cause similar neurological and psychiatric disturbances including depression, dementia, myelopathy, and peripheral neuropathy. Brain S-adenosylmethionine levels are severely decreased in Alzheimer's disease. Up to half of all Americans may carry a genetic variation that prevents the body, including the brain, from optimally using folic acid. Scientists believe that this genetic polymorphism may be tied with an increased risk of dementia. 5-MTHF can cross the blood-brain barrier and effectively reduce homocysteine. Elevated homocysteine has been tied with cognitive decline and Alzheimer's disease. In a New England J Med discussion the following summary was stated: "An increased plasma homocysteine level is a strong, independent risk factor for the development of dementia and Alzheimer's disease."

Methylcobalamin

Cobalamin deficiency principally affects the peripheral nerves, and in later stages may target the spinal cord. Impaired mental function is the usual result, often first manifesting as "slower thinking," confusion, and memory lapses. Even a blood level of vitamin B12 that is moderately below the optimum can result in considerable damage to the brain and nervous system. Low vitamin B12 status can be a modifiable cause of atrophy, and of likely subsequent cognitive impairment in the elderly. Methylcobalamin is the molecular state that neurons utilize. Vitamin B12 is one of the primary methylating agents that are needed to enhance methylation chemistry that can be impaired due to gene polymorphisms.

Dietary Considerations:

Ketogenic Diet

The Henry Spink Foundation mentions that many Tourette's patients find that their tics worsen when they eat certain foods. Some foods that seem to trigger tics in TS patients include chocolate, caffeine, synthetic food additives, and sugar. Foods that contain salicylates also cause tics in some patients. Consider getting tests run for food allergies and sensitivities. "About a third of children who try the ketogenic diet (80 percent of calories from fat) become seizure free, or almost seizure free. Another third improve but still have some seizures. The rest either do not respond at all or find it too hard to continue with the diet."

<http://www.epilepsyfoundation.org/about/treatment/ketogenicdiet/> Ketogenic Foods:
<http://www.keto.org/foods.htm>.

The ketogenic diet has been effectively used for 50 years to control seizures, promote weight loss, and most recently it has been effectively used to treat cancer. The general ketogenic diet guidelines include lean meats, green vegetables, and non-caloric natural beverages like coffee and tea.

Safe Foods (No Carbs/Trace Carbs): Beef, Steak, Hamburger, Prime Rib, Filet Mignon, Roast Beef, Chicken, Duck, Any Fish (Tuna, Salmon, Trout, Halibut, etc.), Lamb, Eggs, Shrimp, Crab, Lobster, Butter, Oils (Olive Oil, Flaxseed oil, etc.), Mustard, Salt, Pepper, Soy Sauce, Tea, Coffee, Cream

Minimal Carb Foods (Limited Quantities Only, Check Carb Content!): Broccoli, Spinach, Lettuce, Cabbage, Bok Choy, Kale, Asparagus, Mustard Greens, Mushrooms, Cucumbers, Pickles,

Olives, Celery, Green Beans, Brussel Sprouts, Cauliflower, Artichokes, Peppers (Red, Green, Jalapeno, Habanero), Onions, Nuts, Flaxseeds, Oysters, Abalone, Protein Powders.

Higher Carb Foods (Very Limited Quantities!): Grapefruit, Lemons, Limes, Strawberries, Olives, Raspberries, Blackberries, Kiwis, and Half-N-Half

Coconut Oil

The dietary addition of a quality, non-hydrogenated coconut oil is being touted as a Alzheimer's/Dementia/Parkinson's Disease/ Neurodegenerative Disorder Remedy. "Researchers say the ketones (medium chain triglycerides), found in coconut oil have slowed the progression of neurodegenerative disorders/disease in some people and may actually prevent it."

http://www.cbn.com/media/player/index.aspx?s=/mp4/LJO190v1_WS

Nutritional Supplementation Considerations for Tics / Tremors / Seizures / Epilepsy

Tourette Syndrome

General Nerve Support:

- **Neurosol®.**
- **Ceralin® Forte.**
- Appropriate **Wellness Essentials®** Formula.

GABA & Glutamate Balance Support:

- **Trancor™.**

Vitamin D Deficiency:

- **D3 5000™.**

Neuroprotection, Synaptogenesis, & Neural Restoration Support:

•• **Brain Support** —

Mild conditions: Moderate conditions

Cellular Rejuvenation & Restoration for Neurological Conditions:

•• **Brain Restore** —

Mild conditions.

Moderate conditions

Severe conditions:

Dietary Considerations

Ketogenic Foods/Ketogenic Diet

- Coconut Oil
- Check for food allergy/sensitivities

NOTE: Regarding dosing for children

The general recommendations are dosed for an average 150 pound adult. For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc.

Interventional Chiropractic Care

Because the spine houses and protects the spinal cord and regulates the transmission of nerve energy to every cell and organ in the body including the , if there is some interference with the flow of nerve energy in the spine and nervous system it can be a causative factor of Tourette Syndrome. At minimum chiropractic manipulation of the spine column (particularly the cervical and thoracic spine would be a contributing factor to Tourette's Syndrome.

Tinnitus / Meniere's Syndrome

The disease was first diagnosed in 1861 by Prosper Meniere. Meniere's syndrome is an illness that afflicts more than seven million Americans, according to the Journal of the American Medical

Association (July 25, 1990). It is generally believed to be caused by a buildup of fluid in the inner ear. The resulting pressure can manifest the following list of symptoms:

- Ringing or buzzing in the ears (tinnitus)
- Pain and pressure in the head, ears and base of the skull and back of the neck
- Intermittent deafness
- Dizziness
- Nausea, vomiting
- Vertigo and balance problems

The afflicted may suffer from all or only a portion of these symptoms. Fluid retention during the premenstrual period in women, allergies, and spasms of blood vessels to the inner ear may cause this disorder. Current medical management of Meniere's syndrome includes use of prescription diuretics to relieve excess fluid within the inner ear. Potassium should be prescribed with them as diuretics can radically deplete the body of this important mineral.

Tinnitus

Tinnitus is noise or ringing in the ears. A common problem, tinnitus affects about 1 in 5 people. Tinnitus isn't a condition itself—it's a symptom of an underlying condition, such as age-related hearing loss, ear injury, or a circulatory system disorder. Although bothersome, tinnitus usually isn't a sign of something serious. Although it can worsen with age, for many people, tinnitus can improve with treatment. Treating an identified underlying cause sometimes helps. Other treatments reduce or mask the noise, making tinnitus less noticeable. A common cause of tinnitus is inner ear cell damage. Tiny, delicate hairs in your inner ear move in relation to the pressure of sound waves. This triggers ear cells to release an electrical signal through a nerve from your ear (auditory nerve) to your brain of which the spine has relationships with. Your brain interprets these signals as sound. If the hairs inside your inner ear are bent or broken, they can "leak" random electrical impulses to your brain, causing tinnitus. Other causes of tinnitus include other ear problems, chronic health conditions, and injuries or conditions that affect your auditory nerves or the hearing center in your brain. In many people, tinnitus is caused by one of these conditions:

- **Age-related hearing loss.** For many people, hearing worsens with age—usually starting around age 60. Hearing loss can cause tinnitus. The medical term for this type of hearing loss is presbycusis.
- **Exposure to loud noise.** Loud noises, such as those from heavy equipment, chain saws, and firearms are common sources of noise-related hearing loss. Portable music devices, such as MP3 players or iPods, also can cause noise-related hearing loss if played loudly for long periods. Tinnitus caused by short-term exposure such as attending a loud concert, usually goes away; long-term exposure to loud sound can cause permanent damage.
- **Earwax blockage.** Earwax protects your ear canal by trapping dirt and slowing the growth of bacteria. When too much earwax accumulates, it becomes too hard to wash away naturally (cerumenal impaction), causing hearing loss or irritation of the eardrum, which can lead to tinnitus.
- **Ear bone changes.** Stiffening of the bones in your middle ear (otosclerosis) may affect your hearing and cause tinnitus. This condition, caused by abnormal bone growth, runs in families. Some causes of tinnitus are less common:
- **Meniere's disease.** Doctors think this inner ear disorder is caused by abnormal inner ear fluid pressure or composition.
- **Stress and depression.** These conditions are commonly associated with tinnitus and seem to aggravate it.

- **TMJ disorders.** Problems with the temporomandibular joint, the joint on each side of your head in front of your ears, where your lower jawbone meets your skull, can cause tinnitus. Interestingly that jaw is attached to the skull therefore very often TMJ problems are related to issues involving the occipital bone and cervical spine and who is better qualified to assess those possibilities than a Chiropractic Physician.

- **Head injuries or neck injuries.** These neurological disorders can affect the inner ear, hearing nerves, or brain function ed to hearing. Head or neck injuries generally cause tinnitus in only one ear.

Interventional Chiropractic Care

Because the spine houses and protects the spinal cord and regulates the transmission of nerve energy to every cell and organ in the body including the middle ear. If there is some interference with the flow of nerve energy in the spine and nervous system it can be a causative factor of Tinnitus. At minimum chiropractic manipulation of the spine column (particularly the cervical spine) would aid in contributing to expansion of the nerve supply to the middle ear.

- **Acoustic neuroma.** This noncancerous (benign) tumor develops on the cranial nerve that runs from your brain to your inner ear and controls balance and hearing. Also called vestibular schwannoma, this condition generally causes tinnitus in only one ear. In rare cases, tinnitus is caused by a blood vessel disorder. This type of tinnitus is called *pulsatile tinnitus*.

Causes include:

- **Head and neck tumors.** A tumor that presses on blood vessels in your head or neck (vascular neoplasm) can cause tinnitus and other symptoms.

- **Atherosclerosis.** With age and buildup of cholesterol and other deposits, major blood vessels close to your middle and inner ear lose some of their elasticity—the ability to flex or expand slightly with each heartbeat. That causes blood flow to become more forceful and sometimes more turbulent, making it easier for your ear to detect the beats. You can generally hear this type of tinnitus in both ears.

- **High blood pressure.** Hypertension and factors that increase blood pressure, such as stress, alcohol, and caffeine can make tinnitus more noticeable.

- **Turbulent blood flow.** Narrowing or kinking in a neck artery (carotid artery) or vein in your neck (jugular vein) can cause turbulent blood flow, leading to tinnitus.

- **Malformation of capillaries.** A condition called arteriovenous malformation (AVM), which occurs in the connections between arteries and veins, can result in tinnitus. This type of tinnitus generally occurs in only one ear.

Medications That Can Cause Tinnitus

A number of medications may cause or worsen tinnitus. Generally, the higher the dose of medication, the worse tinnitus becomes. Often the unwanted noise disappears when you stop using these drugs. Medications known to cause or worsen tinnitus include:

- **Antibiotics,** including chloramphenicol, erythromycin, gentamicin, vancomycin, and bleomycin

- **Cancer medications,** including mechlorethamine and vincristine

- **Diuretics (water pills),** such as bumetanide, ethacrynic acid, furosemide

- **Quinine medications** used for malaria or other health conditions

- **Chloroquine,** a malaria medication

- **Aspirin / Acetaminophen / NSAIDs**

Contributing Factors

“Dietary, nutritional, chemical, hormonal, immunological, and stress factors are involved directly in neurootological problems and must be evaluated and considered in designing the treatment regimen for patients complaining of tinnitus.”

- Rubin, W. Nutrition, biochemistry, and tinnitus. *Int Tinnitus J.* 1999;5(2):144-5.
- **Poor Diet / Stress.** Many nutritionally-oriented physicians believe that Meniere’s patients lack B-vitamins. This is not uncommon; stress, general lifestyle, poor diet, and the environment can deplete B vitamins.
- **Food Sensitivities (especially Salicylates)** should be assessed in inner ear dysfunction management. That being a possibility one might want to consider having a IgG, IgG4 and Applied Kinesiology Tests
- **Antibiotic Use.** Adding acidophilus to the diet is recommended to increase the intestines’ capability of digesting these nutrients properly. It has been speculated that episodes of Meniere’s syndrome may occur after the sufferer has ingested large quantities of antibiotics. Antibiotics disrupt the beneficial intestinal bacteria.
- **Hyperlipidemia.** Impaired blood flow to the brain from clogged arteries and poor circulation may be a cause.
- **Lead / Aluminum Toxicity** may indirectly affect the ear by causing malfunction in the brain and/or sympathetic nervous system. That being a possibility one might want to consider having a blood and hair Mineral Toxic Metal Analysis.
- **Analgesics Increase Risk of Hearing Loss.** Men who take aspirin, acetaminophen (Tylenol), and/or NSAIDs (Advil®, Motrin®, etc.) at least twice a week increase their risk of experiencing hearing loss.

% Increased Risk of Hearing Loss:

- Aspirin – 33% • NSAIDs – 61% • Acetaminophen – 99%

Reference: Curhan, S. G., Eavey, R., Shargorodsky, J., & Curhan, G. C. Analgesic use and the risk of hearing loss in men. Am J Med. March 2010;123(3):231-7.

Nutritional Supplementation Considerations for Tinnitus / Meniere’s Syndrome

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) in any way. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- Appropriate **Wellness Essentials®** Formula — 1 packet daily.
- **CoQ-10 100mg**
- **NAC-600.**

If Severe, consider the addition of:

- **Ginkgo-Rose™.**
- **Melatonin Pro.**
- **Niacin Sustained Release**
- **Ultra Flora™ Spectrum:**
- **MG/K Aspartate™.**

Dietary Considerations

- FirstLine® Therapy Diet / Mediterranean-type diet

- Avoid Alcohol and Tobacco; these substances have been shown to be especially unhealthy in this condition.
- Avoid Sugar; sugar is said to cause inner ear dysfunction by promoting Dysglycemia and consequent adrenaline release, which in turn causes vasoconstriction.

Nutritional Formula Description & Supplementation Rationale

Appropriate **Wellness Essentials®** Formula

Key Vitamins & Minerals, Essential Fatty Acids, PLUS Patient-Specific Nutrition. Wellness Essentials is a combination of popular Metagenics products conveniently packaged together in single-serving packets for enhanced compliance and ease of use. By providing formulas that target specific functional areas, Wellness Essentials offers an excellent way to help your patients eliminate the guesswork and confusion regarding daily foundation nutrition.

Poor Diet / Stress — Many nutritionally-oriented physicians believe that tinnitus/Meniere’s patients lack B vitamins. This is not uncommon; stress, general lifestyle, poor diet, and the environment can deplete B vitamins.

B Vitamins. According to Michael Seidman, M.D. (Tinnitus Center in Bloomfield, Michigan), there are specific nutrients that have been suggested to benefit persons with tinnitus. B-complex supplements lead this category because deficiencies in the B vitamins have been shown to result in tinnitus. The B vitamin complex stabilizes nerves and appears to have a beneficial effect on some tinnitus patients. However, only anecdotal evidence is available on this therapy. Some patients say vitamin B1 (thiamine) supplemented at 100-500 mg daily has provided them with relief from symptoms.

Vitamin B3 (niacin) is the subject of numerous anecdotal reports that purport it to help reduce symptoms. Dr. Seidman usually recommends a starting dosage of 50 mg twice a day of niacin, up to a maximum of 500 mg twice a day, but he believes that if there is no improvement within 3-4 months, it is unlikely to occur. There may also be some correlation between the decline in vitamin B12 levels and the increasing prevalence of tinnitus in the elderly. A study by Shemesh et al. (1993) showed that there was a high prevalence (47%) of vitamin B12 deficiency in patients with chronic tinnitus. This deficiency was more widespread and severe in the tinnitus group that was associated with noise exposure, suggesting a relationship between vitamin B12 deficiency and dysfunction of the auditory pathway. Supplemental cobalamin was found to provide some relief in several patients with severe tinnitus.

CoQ-10 100mg

Formulated to assist the body in stabilizing health. Is highly absorbable form of Coenzyme Q10. According to a German study published in *Otolaryngol Head Neck Surg.* (2007 Jan; 136(1):72-7), “For a Subgroup of people, CoQ-10 may provide relief from the symptoms of tinnitus.” The test group was administered 100mg of CoQ-10 three times daily for 12 weeks.

NAC-600

Published research studies indicate promise in using N-acetyl cysteine (NAC) for prevention and treatment of drug- and noise induced hearing loss, Meniere’s syndrome/Tinnitus. It is suggested that N-acetyl cysteine’s effects on increasing glutathione may reduce cochlear and hair cell damage in the ear.

References:

- *Kopke, R. D., Jackson, R. L., & Coleman, J. K. M., et al. NAC for noise: From the bench top to the clinic. Hear Res. 2007;226:114-25.*

- *Lorito, G., Giordano, P., & Prosser, S., et al. Noise-induced hearing loss: A study on the pharmacological protection in the Sprague Dawley rat with N-acetyl-cysteine. Acta Otorhinolaryngol Ital. 2006;26:133-9.*
- *Dickey, D. T., Muldoon, L. L., Kraemer, D. F., & Neuwelt, E. A. Protection against cisplatin-induced ototoxicity by N-acetylcysteine in a rat model. Hear Res. 2004;193:25-30.*
- *Duan, M., Qiu, J., & Laurell, G., et al. Dose and time-dependent protection of the antioxidant N-L-acetylcysteine against impulse noise trauma. Hear Res. 2004;192:1-9.* •• *Kopke, R. D., Weisskopf, P. A., & Boone, J. L., et al. Reduction of noise-induced hearing loss using L-NAC and salicylate in the chinchilla. Hear Res. 2000;149:138-146.*

Ginkgo-Rose™

A Ginkgo Leaf Extract / Rosemary Leaf Extract combination designed for improved circulation and healthy brain function. Promotes mental clarity and may improve tinnitus. Ginkgo biloba extract was found to be superior to placebo in the treatment of tinnitus.

- von Boetticher, A. Ginkgo biloba extract in the treatment of tinnitus: A systematic review. *Neuropsychiatric Dis Treat. v.7; 2011*

PMC3157487. Rosemary is one of the natural treatment for tinnitus that is widely used by tinnitus sufferers, especially tinnitus sufferers with the high blood pressure. Rosemary has efficacy to strengthen and dilate the blood vessels, so it is well used by the tinnitus sufferers.

<http://complementerhealing.com/natural-treatment-fortinnitus/.U1lll5mqbI> Ginkgo Biloba, a plant extract used to reduce the symptoms of cognitive deficits such as decreased memory function, poor concentration, and reduced alertness, has been shown to have positive results in the treatment of tinnitus and dizziness in the scientific literature (Stange et al. 1975; Jung et al. 1998). Studies have shown that 120-240 mg a day of pharmaceutical-grade ginkgo biloba extract can alleviate tinnitus, although some earlier studies failed to show benefits (Burschka et al. 2001). The therapeutic effect of ginkgo biloba is attributed to several active constituents with vasoactive and free-radical-scavenging properties. In a study conducted in Denmark, tinnitus and dizziness were reduced after a treatment of 4-6 weeks with ginkgo biloba. Researchers also noted that there were minimal side effects in patients who followed the recommended dosage (Soholm 1998). Another controlled study showed that ginkgo extract caused a statistically significant decrease in behavioral manifestation in the animal model of tinnitus (Jastreboff et al. 1997). In human studies, it was shown in patients who had cerebrovascular insufficiency (a common condition associated with normal aging) that ginkgo extract produced a significant improvement in the symptoms of vertigo, tinnitus, headache, and forgetfulness. Holstein 2001; Morgenstern et al. 2002

Melatonin

Rosenberg et al. (1998) evaluated a treatment for subjective tinnitus at the Ear Research Foundation in Sarasota, Florida. Patients were given 3 mg of melatonin nightly for 30 days. In patients with difficulty sleeping due to the symptoms of tinnitus, an overall improvement was seen in 46% of the study group as opposed to 20% in the group given placebo. The researchers also concluded that patients with bilateral (two-sided) tinnitus showed significant improvement over those with unilateral (one-sided) tinnitus. Because of the minimal side effects associated with melatonin, it is considered a safe alternative treatment for chronic tinnitus.

Niacin Sustained Release

Niacin (vitamin B3) is widely used by the tinnitus sufferers. Niacin has efficacy to dilate the blood vessels and helps more nutrient and oxygen into the inner ear. **NOTE:** Consider combing Niacin with Zinc

Studies have shown that there is a high content of zinc in the inner ear. Ochi et al. (1997) demonstrated that patients who had tinnitus had significantly decreased zinc levels and that supplementation with doses of 34-68 mg of zinc for more than 2 weeks significantly improved their tinnitus. Excellent results were also found by combining niacin with 25 mg zinc gluconate twice daily.

Ultra Flora™ Spectrum

UltraFlora Spectrum provides multidimensional support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of seven beneficial probiotic strains.

MG/K Aspartate™

Magnesium and potassium combination designed to optimally replace lost potassium levels.

Urinary Tract Infection (UTI) / Bladder Infection (Cystitis)

Symptoms

- Urinary urgency
- Urinary frequency
- Painful urination

These are relatively common symptoms of a urinary tract infection (UTI), although only about half of those who acquire a UTI are symptomatic. People most prone to UTIs are women of childbearing age. The major components of the urinary tract include the following: kidneys, bladder, urethra, and prostate (in males). A UTI may involve any of the above structures. If it involves the kidneys, it is termed an upper UTI; if it involves the others, it is a lower UTI.

Common Symptoms and Causes

Also called bladder infections or cystitis, UTIs usually cause telltale symptoms: burning upon urination and urinary urgency, where you feel like you have to go to the bathroom, but then not much comes out. And, a few minutes later, it happens again. Bladder infections can also cause lower abdominal pain, fever, chills, or visible drops of blood in your urine. In 90% of cases, UTIs are caused by the *Escheichia coli* (*E. Coli*) bacterium, a certain number of which are necessary in our intestines for proper digestion. *E. coli* doesn't belong in the urethra or bladder. Normally, the bug lives at the end of the digestive tract. It can get easily swiped forward to the opening of the urethra, which is the tube that goes up to the bladder. In women, this tube is much shorter and closer to the rectum. Inadequate sexual hygiene is responsible for many UTIs. Women who suffer from recurrent bladder infections, however, should be tested for the presence of other bugs, especially *Chlamydia trachomatis*, a sexually transmitted disease that typically doesn't cause any symptoms in men. Another common irritant to the urinary tract is synthetic estrogen, in the form of birth control pills or postmenopausal hormone support. If you are on the pill and suffer from frequent UTIs, you need to find another form of birth control. Other factors that can increase your chances of getting a bladder infection include pregnancy, diaphragm use, and diabetes.

Avoiding an Infection

As always, disease prevention is the best approach to health management. Since many UTIs flare up after sex, especially with a new partner, good sexual hygiene is the first step toward prevention. Here are some basic tips to remember:

- Wipe from front to back every time you use the toilet.
- Try to avoid using perfumed soaps or lotions on your genital area because they may irritate your skin and make you more susceptible to a bladder infection.

- Make sure your partner has clean hands, fingernails, mouth, private parts, etc., before engaging in sexual activity.
- Try to empty your bladder before and after sex to help wash bacteria away from the bladder.
- Drink plenty of fluids, especially pure water, which helps encourage frequent urination. Fluids also help dilute the urine, which makes it less attractive to bacteria, and keep the mucous membranes (which includes the bladder) moist and healthy. Try to drink a cup (8 oz.) of water for every 25 lbs. of body weight daily, ideally between meals so as not to dilute digestive enzymes.
- Wear loose clothing that isn't too tight around your genital area and choose 100% cotton underpants, or at least lingerie with a cotton crotch.

Nutritional Supplementation Considerations for Urinary Tract Infection (UTI)

Options/Bladder Infection (Cystitis)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Acute

- **Water** — preferably 8 ounces per hour.
- **UltraFlora™ Women's.**
- **PACRAN® Cranberry Fruit Powder.**
- **U-Tract® Complex Caps.**

Note: If male:

- Replace the **UltraFlora™ Women's** with **UltraFlora™ Spectrum.**

Note: Regarding dosing for children

These are doses for an average adult (150 pounds). For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc.

Preemptive Nutritional Support Considerations:

If the patient is taking preemptive action, review the “Avoiding an Infection” section above and supplement with:

- **UltraFlora™ Women's.**
- **PACRAN® Cranberry Fruit Powder.**

Note: If male:

- Replace the **UltraFlora™ Women's** with **UltraFlora™ Spectrum.**

Dietary Considerations

- Low glycemic index Mediterranean Diet
- FirstLine Therapy® Diet Program

Nutritional Formula Description & Supplementation Rationale

UltraFlora™ Women's

Ultra Flora Women's features the concentrated probiotic strains GR-1® and RC-14®. (GR-1 was isolated in 1980 from the urethra of a healthy woman and identified as *L. rhamnosus*. RC-14 was isolated in 1985 from the vagina of a healthy woman and identified as *L. reuteri*.) These unique strains of probiotics have been documented to support urogenital health and maintain healthy vaginal microflora. Both strains have been tested in numerous clinical studies with female subjects and with no reported side effects. Since 2004, both strains have been used as a food supplement worldwide with no reported side effects.

The Potential Benefits of RC-14® and GR-1®

Human studies indicate that strains GR-1 and RC-14 have a beneficial effect within women's flora:

- Designed to help maintain a healthy vaginal microbiota by increasing the number of beneficial Lactobacilli
 - May lower the risk of bacterial vaginosis and yeast vaginitis.
 - May lower the risk of recurrent urinary tract infections (UTI) with no resulting antibiotic resistance
- “The use of oral probiotics *Lactobacillus rhamnosus* GR-1® and *Lactobacillus reuteri* RC-14® (GR-1® and RC-14®) for improvement of vaginal health, as adjunctive treatment in symptomatic disease and as stand-alone treatment for restoring and maintaining a healthy vaginal microbiota. “In vitro experiments demonstrate that strains GR-1® and RC-14® are able to adhere to epithelial cells, and to inhibit pathogens particularly uropathogens – by producing bacteriocin-like substance and displacing biofilms. Moreover, GR-1® and RC-14® show immunomodulatory properties by down-regulating pro-inflammatory and up-regulating anti-inflammatory cytokines. “Data from use in humans reveals that both strains are able to survive gastrointestinal passage and translocate to the vagina (from the gut via the perineum) as viable bacteria. “GR-1® has been shown to produce a bacteriocin-like substance different from lactic acid and H₂O₂ which inhibits growth of uropathogenic **E. coli strains** (UPEC). GR-1® has also been shown to co-aggregate with *E. coli*, and this ability to interact closely with pathogens constitutes an important host defense mechanism against disease...Both GR-1® and RC-14® have been shown to secrete surface active compounds named surlactins.” Tarnow, Inge, DVM. Efficacy of oral probiotics *Lactobacillus rhamnosus* GR-1® and *Lactobacillus reuteri* RC-14® for treatment and prevention of vaginal infection. PhD, 2011

“The results of the present study confirm that the probiotic strains *L. rhamnosus* GR-1 and *L. reuteri* RC-14 are able to suppress the growth of VVC-causing *C. albicans* and can even kill the fungus. The probiotics were effective at low pH levels, similar to those found in a healthy vaginal environment.” Köhler, G. A., et al. Probiotic interference of *Lactobacillus rhamnosus* GR-1 and *Lactobacillus reuteri* RC-14 with the opportunistic fungal pathogen *Candida albicans*. *Infectious Diseases in Obstetrics and Gynecology* Volume 2012, Article ID 636474, 14 pages doi:10.1155/2012/636474 “Supplementation with probiotics could be a potential strategy to reduce gastrointestinal *Candida* colonization and candiduria in critically ill children receiving broad spectrum antibiotics.” Kumar, S., et al. Evaluation of efficacy of probiotics in prevention of candida colonization in a PICU-a randomized controlled trial. *Crit Care Med*, 2013; 41:565–572. “The combination of probiotic *L. rhamnosus* GR-1 and *L. fermentum* RC-14 is not only safe for daily use in healthy women, but it tt.” Reid G, et al. Oral use of *Lactobacillus rhamnosus* GR-1 and *L. fermentum* RC-14 significantly alters vaginal flora: randomized, placebo-controlled trial in 64 healthy women. *FEMS Immunology and Medical Microbiology* 35 (2003) 131-134 “Our findings indicate that compounds secreted by lactobacilli likely protect the urogenital tract from *Escherichia coli* (UPEC) colonization and infection by inhibiting growth, inducing stress and down-regulating proteins critical for host attachment.” Cadieux, P. A., et al. *Lactobacillus* by-products inhibit the growth and virulence of uropathogenic *Escherichia coli*. *Journal of Physiology and Pharmacology* 2009, 60, Suppl 6, 13-18

UltraFlora™ Spectrum

UltraFlora Spectrum provides multidimensional support for both the upper and lower GI for digestive and immune health. This concentrated formula supplies a proprietary blend of seven beneficial probiotic strains.

- Formulated to assist the body in promoting a healthy intestinal environment and immune response.
- Help relieve recurring functional bowel discomforts and intestinal irritation.
- Contains NCFM®, one of the most well-researched probiotic strains.
- Designed for reliable outcomes with a concentrated dose of *S. boulardii*.

PACRAN® Cranberry Fruit Powder

Each PACRAN 2-capsule serving provides the equivalent of 25 grams of fresh cranberries. Cranberry juice has long been recognized as one of the best remedies for both the treatment and prevention of UTIs. Recent studies have demonstrated that cranberry juice contains substances that prevent bacteria from adhering to the urethra, and that it decreases UTI recurrence rates among those who drink it. Wang et. al. Cranberry products prevent urinary tract infections.

References

Arch Intern Med. 2012;172:988-996 *Cranberry-containing products protect against urinary tract infections (UTIs), according to a recent meta-analysis reports Chih-Hung Wang, MD, from the Department of Emergency Medicine at National Taiwan University Hospital and National Taiwan University College of Medicine in Taipei and colleagues report their findings in the July 9, 2012 issue of the Archives of Internal Medicine.*

One of the most common bacterial infections, UTIs affect up to 40% to 50% of women at least once in their lifetimes, the authors report. Pregnant women, the elderly, and patients with neuropathic bladder are also at increased risk for developing UTIs. Cranberry (genus *Vaccinium*, including the species *V. oxycoccus*, *V. macrocarpon*, *V. microcarpum*, and *V. erythrocarpum*) is a folk remedy that has been used for years to relieve UTI symptoms. Cranberry was originally thought to work by acidifying the urine, but its effects are now known to be due to its interference with the attachment of bacteria to uroepithelial cells. In fact, A-type proanthocyanidins were identified in cranberry in 1989 as compounds with the potential to inhibit the adherence of P-fimbriated *E. coli* to the urogenital mucosa.

U-Tract® Complex Caps

Over 90% of all bladder infections are caused by *E. coli*, which is found as part of the normal microflora in every intestinal tract. In most cases, bacteria enter the urinary tract through the urethral opening. Many bacteria are simply washed away by the down flow of urine. *E. coli*, however, are covered with tiny finger-like projections. At the top of these projections are amino acid/sugar complexes called lectins, which allow the bacteria to stick to the inside walls of the urinary tract and even work their way upward. D-mannose, a naturally occurring simple sugar, sticks to the *E. coli* lectins even better than the lectins stick to human cells. When a large quantity of this sugar is present in the urine, it literally coats any *E. coli* present. They can no longer stick to urinary tract walls and are washed away with normal urination. Only very small amounts of d-mannose are metabolized by the body. Most is excreted through the kidneys into the urine and bladder, so it doesn't interfere with blood/sugar regulation, even in diabetics. Also, since it is absorbed in the upper gastro-intestinal tract, it does not relocate "friendly" *E. coli* or other beneficial bacteria normally present in the colon. Another possible explanation for the efficacy of d-mannose is its relationship to the Tamm-Horsfall protein. This glycoprotein, produced by the renal cells and excreted in the urine, plays a key role in the body's defense against UTIs. Tamm-Horsfall protein contains a large number of high-mannose structures, which appeared to account for its infection fighting activity. Serafini-Cessi F. et al. N-Glycans carried by Tamm-Horsfall glycoprotein have a crucial role in the defense against urinary tract diseases. Glycoconj J.

2005;22:383-394 A published study titled, “Use of d-mannose in prophylaxis of recurrent urinary tract infections (UTIs), in women” (BJU Int. 2014;113:9- 10), documented the efficacy of utilizing d-mannose for the treatment and prevention of urinary tract infections and the minimal side effects of the utilization of d-mannose as compared to the normal allopathic treatment.

Other ingredients have been added to the U-Tract Complex Caps for these reasons:

- Swedish Pollen Extract: is believed to work on the smooth muscle tissue lining in the bladder and urethra to allow for more complete elimination of urine.

- **Cratavin: is designed to** provides nutritional support for the cases of chronic urinary tract infections, prevention of urinary stone formation, and as a nutritional adjunct to treatment of benign prostatic hypertrophy (BPH).

- **White Willow Bark:** provides pain relieving salicin, an anti-inflammatory agent that is converted by the liver to acetyl-salicylic acid (natural aspirin).

Additional considerations:

Consider doing a kidney flush for 24-48 hours depending on severity. This comprises buying pure, organic, unsweetened cranberry juice and distilled water. Mix the juice and water 50/50 and drink only that for 24 hours and eat nothing.

Consider avoid the following foods:

- Red meat

- Dairy products

- Beer and other alcoholic beverages

- Coffee

- Acidic and effervescent beverages (e.g., soda pop) and other commercial-grade beverages (e.g., orange juice, unless fresh squeezed)

Consider the addition of Uva Ursi and/or juniper berries, depending on what you can find at your local health food store. They are available in capsules, powder, or tea forms.

Nettle tea is also beneficial, but remember it is also high in Iron.

Juice the following (and get as much of it in a day as possible—minimum of 8 ounces):

Cucumber, celery, and parsley juices are great for the kidneys and bladder (you can add a half an apple (green) to soften the taste).

- **Dynamic Fruits & Greens®** — 2-3 glasses a day, if you do not juice.

Visual Disturbances

Any type of abnormal visual problem.

For example:

Spots (floaters): These are a common adult complaint. The spots are believed to be a result of vitreous debris from the degeneration of the membranous attachment of the vitreous body to the optic nerve and retina early in life. The spots are worse in bright light and with Valsalva straining. Although potentially bothersome, they are without pathological significance.

Retinal detachment: Usually occurs from trauma to the head or eye, it is typically preceded by a shower of sparks in one quadrant of the visual field, followed by the sensation of a curtain falling over the eye. Also manifests as a degenerative problem with aging.

Scotomas: A (-) scotoma is a blind spot in the visual field. It can often be unnoticed by the patient unless it occurs in the central vision. A (+) scotoma is described as a light spot or scintillating flash and occurs as a response to abnormal stimulation of some portion of the visual system (e.g., during a migraine syndrome).

Myopia (near-sightedness): This occurs as the visual image strikes in front of the retina due to an elongated eyeball or excessive refractive power. The patient can see near objects but not far ones.

Hyperopia (far-sightedness): This occurs as the visual image strikes behind the retina due to a shortened eyeball or weak refractive power. It is the most common refractive error, and permits patients to see far objects but not objects that are near. Presbyopia is a hyperopia that occurs with advancing age as the lens becomes less pliable.

Astigmatism: Refraction of the eyeball is unequal in its different meridians.

Anisometropia: A different refractive error in each eye.

Strabismus (cross-eyes): Deviation of one eye from parallel view. If the condition is congenital, there is no diplopia, as the vision in the deviated eye is suppressed by the brain. This suppression results in amblyopia, which is reduced visual acuity. Correctable if caught early.

Diplopia (double-vision): This can occur for a variety of reasons. It is often seen in acute ophthalmoplegia and extraocular muscle palsies. Refractive errors and astigmatism are treated with either corrective lenses or eye exercises to compensate. In almost all cases but the most severe (those who are considered “legally blind”), 20/20 vision can be recovered. Retinal detachment is a medical emergency. Prompt surgery markedly improves prognosis.

Nutritional Supplementation Considerations for Visual Disturbances

Visio Plex®

Hyaluronic Acid (adult).

Itchy Eyes Due to Contacts:

Glycogenics®.

Dietary Considerations

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s). Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

•• *FirstLine Therapy®* Diet (See “Fighting Vision Loss with Food — The Impact of Vision Loss” below.)

Nutritionnel Formula Description & Supplémentation Rationale

Visio Plex®

Nutrients and Herbs to Nourish the Eyes. Visio Plex is formulated to provide key nutrients that may be lost with aging, which are potentially beneficial and/or necessary for proper functioning of the eyes.

Vitamin A, besides being beneficial to mucous membranes, is essential to the formation of visual purple pigment which is necessary for proper night vision.

Raw eye concentrate is added to assist in cellular repair.

Lecithin provides lipotropic factors, and the herb eyebright has been used for many years to benefit vision. Lutein and Zeaxanthin are found naturally in the lens and retina. The amino acids are precursors of Glutathione, which is found abundantly in the lens, but its concentration diminishes with age. Antioxidant minerals are added to retard progression of cataracts and macular degeneration.

Hyaluronic Acid

Hyaluronic acid (HA) is highly concentrated inside the eyeball. Research indicates that HA is essential for healthy eye function, promotes healthy eye lubrication, is anti-viral, and may have a positive effect in individuals with “floaters” in the eye. The fluid inside the eye called the vitreous

humor is composed almost completely of hyaluronic acid. The HA gives the fluid inside the eye a viscous gel like property. This gel acts as a shock absorber for the eye and also serves to transport nutrients into the eye. HA has been directly injected into the eye during procedures to help maintain the shape of the eye during surgery. It has been said that after the 5th decade of life, our eyes stop producing the much needed hyaluronic acid resulting in various eye needs.

Glycogenics®

Glycogenics is an advanced balanced B-complex formula that features a blend of B vitamins and complementary nutrients. Promotes healthy homocysteine metabolism, energy levels, and a healthy stress response. Supports normal growth and development.

Fighting Vision Loss with Food — The Impact of Vision Loss

Vision loss on a grand scale would have a far-reaching impact on society. Yet, if we continue in the direction we are headed now, we could be facing a future in which a large segment of the population suffers vision loss from diseases such as age-related macular degeneration (AMD), cataracts, glaucoma, and diabetic retinopathy. Vision loss, in turn, is a key reason for loss of independence in the elderly. Certainly, improved methods of diagnosing and treating age-related eye disease can obviate some of the vision loss that would otherwise cripple millions of older adults. Prevention, however, is not only cheaper but likely to be far more effective in averting such a tragedy.

Prevention Is the Key

How can healthcare providers motivate patients to take steps to prevent age-related eye disease? A recent survey[1] found that baby boomers (born between 1945 and 1964) fear vision loss almost as much as they fear heart disease or cancer. Still, almost half do not receive an annual eye exam, and few are knowledgeable about how dietary factors influence eye health.[2] Furthermore, supplement use to promote eye health is low, even in patients already diagnosed with age-related eye disease.[2] Eye care providers, primary care providers, and specialists in diabetes can point to a burgeoning body of research to convince their patients to increase their dietary intake of key nutrients.

Weak Bladder, Stress Incontinence, Enuresis (Bedwetting)

Loss of control of the bladder by day, by night, or both. Not limited to young children. Many adolescents and adults are afflicted in this way, either constantly or in times of stress or anxiety. Dr. John W. Gerard, Professor of Pediatrics at the University of Saskatchewan, presents evidence that bedwetting is sometimes the result of an allergy. “The prime problem is that the bedwetting youngster has a small bladder capacity and the bladder capacity has shrunk because the detrusor muscle is in spasm, which is often a manifestation of an allergy. Certain foods such as milk, chocolate, and eggs can cause bladder hypersensitivity which, in turn, causes bedwetting. Removal of offender foods results in cessation of wetting. **NOTE:** Addressing food sensitivities, along with nutritional and structural support of the nervous system, have been a most effective approach for weak bladder, stress incontinence, enuresis (bedwetting).

Consider the following:

1. Address the possibility of food allergy/sensitivity connection to weak bladder, stress incontinence, enuresis (bedwetting) which could include having a IgG, IG4and Individual Bio Identity Tests.
2. Chiropractic care with the purpose of correcting any muscle skeletal issues particularly in the pelvis, ileums, symphysis, sacrum, and (rarely) the coccyx, if needed—take a good history.

3. Pelvic floor integrity—Kegel Exercises. Imagine that you need to hold back gas. Squeeze and lift the rectal area—and for women also the vaginal area—without tightening the buttocks or belly (abdomen). When you first begin your exercise program, check yourself frequently by looking in a mirror or by placing your hands on your abdomen and buttocks to ensure that you do not feel your belly, thighs, or buttocks move. If there is movement, continue to experiment until you have isolated the correct muscles of the pelvic floor. Another technique used only to help you identifying the correct pelvic muscles is to attempt to stop or slow the flow of urine.

4. Trigger/Acupuncture points may be helpful.

Note: As we review the possible nutritional food supplements considerations please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Nutritional Considerations:

St. John's Wort is reported to contribute to assisting the body in improving both serotonin and dopamine, Trancor has the possibility of contributing to improving glutamate balance. Central neurotransmitters, such as glutamate, serotonin, and dopamine are thought to have a role in urination.

Glutamate is an excitatory neurotransmitter in pathways that control the lower urinary tract. Serotonergic pathways facilitate urine storage. Dopaminergic pathways may have both inhibitory and excitatory effects on urination. <http://emedicine.medscape.com/article/459502-overviewaw2aab6b4>.

Neurotransmitter Support Formulas

St. John's Wort with Folate and B12

Contains 450 mg of a premium extract of St. John's Wort standardized to 0.3% hypericins, combined with folates and vitamin B12. Designed to delivers nutrients that may play a role in the synthesis of serotonin—a neurotransmitter involved in the regulation of mood, sleep, memory, and learning. Features L-5-methyl tetrahydrofolate, a body-ready, nature-identical folate that crosses the blood-brain barrier. In several studies, children with primary nocturnal enuresis tended to have lower vitamin B12 and folate levels than those of the control children. "Decreased Vitamin B12 Levels in Children with Nocturnal Enuresis." ISRN Urolv.2012; 789706.2012 PMC3302062

Trancor™

GABA & Glutamate Balance Formula. Designed to support beneficial modulation of the balance between the calming influence of GABA and the excitatory effects of glutamate with NAC, green tea catechins (ECGC), and vitamin B6. Taurine and ECGC enhance the metabolism of GABA. Magnesium and vitamin B6 support relaxation and a sense of calm. Trancor is designed to act centrally, within the brain, this formula features the amino acids NAC and taurine, which research suggests may be able to cross the blood brain barrier.

Detrusor Muscle Support Formulas

Detrusor Muscle (urethra closing) is controlled by acetylcholine. Cortico B5B6 can increase acetylcholine. Ceriva naturally potentiates acetylcholine by inhibiting its breakdown.

Cortico-B5B6®

Designed to supply significant amounts of pantothenic acid and pyridoxine—water-soluble B vitamins that are important for many physiological functions. Supports healthy adrenal hormone production and regulation.

Supports the body's production of energy by supplying pantothenic acid, a precursor to coenzyme A. Delivers a full spectrum of bioflavonoids that have potent antioxidant properties and support healthy capillary permeability.

Ceriva™

Designed to support for Acetylcholine Function. Ceriva is a proprietary formula designed to support healthy brain aging, cognition, and memory by providing ingredients that may beneficially modulate the metabolism of the neurotransmitter acetylcholine and provide neuroprotection. This advanced formula features clinically effective levels of huperzine A (HupA) from toothed club moss and a proline-rich-polypeptide (PRP) complex known as Colostrinin™ from colostrum for multidimensional support for neurological health. The brain-supportive benefits of HupA and PRP are backed by extensive research.

- Help support healthy mental function during the aging process
- Support the healthy metabolism of acetylcholine, the primary neurotransmitter associated with cognitive function and memory.
- May help maintain brain cell health
- HupA is believed to support nerve cells
- Research suggests that HupA may be able to cross the blood-brain barrier to beneficially influence acetylcholine metabolism and provide antioxidant protection
- Colostrinin is the only proline-rich polypeptide concentrated from colostrum shown in research to target the central nervous system.
- Several clinical studies have demonstrated PRP complex supports healthy cognition in the elderly
- Laboratory studies with PRP complex have demonstrated antioxidant and DNA-protective properties, suggesting it may have beneficial effects on brain aging.

Nutritional Support Consideration for Weak Bladder, Stress Incontinence

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any food supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctor(s) nor are we in anyway attempting to discourage any one from discontinuing the counsel of their medical doctor(s), make a diagnosis, treatment or imply prevention or cure.

. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

Enuresis (Bedwetting)

- **St. John's Wort with Folate and B12.**
- **Trancor™** — 4 capsules daily between meals.
- **Cortico-B5B6®.**
- **Ceriva™**

Note: Acetylcholine is excitatory to the central nervous system; too much Ceriva too late at night can keep the patient awake. Address Iron deficiency, if indicated by serum lab values:

- **Hemagenics®.**

Nutritional support for red blood cell formation.

Iron deficiency has long been associated in cognitive inabilities, behavioral problems, and weak bladder function.

NOTE: Regarding dosing for children

The general recommendations are dosed for an average 150 pound adult. For example, if the child weighs close to 150 pounds, utilize suggested dosing; if the child weighs 75 pounds, one-half the dose; if the child weighs 37 pounds, one-quarter the dose, etc.

Warning: A very large percentage of Emergency Room visits of children are found to be related to the child's parent(S) administering homeopathic remedies to their child for fever, sore throat and/or ear pains where in the child is experiencing adverse reactions to the parent using homeopathic remedy(s).

Whooping Cough (also called: Pertussis)

Whooping cough is an infectious bacterial disease that causes uncontrollable coughing. The name comes from the noise you make when you take a breath after you cough. You may have choking spells or may cough so hard that you vomit. Anyone can get whooping cough, but it is more common in infants and children. It's especially dangerous in infants. The coughing spells can be so bad that it is hard for infants to eat, drink, or breathe. Before there was a vaccine, whooping cough was one of the most common childhood diseases and a major cause of childhood deaths in the U.S. There are fewer cases today because there are both pertussis-only vaccines and combination vaccines for tetanus, diphtheria, and pertussis. If you have whooping cough, treatment with antibiotics may help if given early. Centers for Disease

Control and Prevention

The following tips on dealing with coughing spells apply to anyone being treated for whooping cough:

- **Get plenty of rest.** A cool, quiet, and dark bedroom may help you relax and rest better.
- **Drink plenty of fluids.** Water, juice, and soups are good choices. In children especially, watch for signs of dehydration, such as dry lips, crying without tears, and infrequent urination.
- **Eat smaller meals.** To avoid vomiting after coughing, eat smaller, more-frequent meals rather than large ones.
- **Vaporize the room.** Use a mist vaporizer to help soothe irritated lungs and to help loosen respiratory secretions. If you use a vaporizer, follow directions for keeping it clean. If you don't have a vaporizer, a warm shower or bath can also temporarily help clear the lungs and ease breathing.
- **Clean the air.** Keep your home free of irritants that can trigger coughing spells, such as tobacco smoke and fumes from fireplaces.
- **Prevent transmission.** Cover your cough and wash your hands often; if you must be around others, wear a mask.

Nutritional Supplementation Considerations for Whooping Cough (also called: Pertussis)

Note: As we review the nutritional food supplements please keep in mind the importance of discussing any foods supplements you might be taking with your medical doctor. The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s) The following nutritional considerations are not in any way intended to discourage any one from discontinuing the counsel of their medical doctors(s), make a diagnosis, treatment or imply prevention or cure.. Similarly a Doctor of Chiropractic that includes whole person health and wellness care will have expertise in giving counsel.

- **NAC 600**
- **Micellized D3™**
- **UltraFlora® Immune Booster.**

Nutritional Formula Description & Supplémentation Rationale

NAC 600

NAC 600 is designed to provide to help boost the body's production of glutathione, a primary antioxidant throughout the entire body. Glutathione plays an important role in protecting the body against oxidative stress and detoxifying harmful compounds. Preliminary research suggests glutathione may also help protect mitochondria—the principle source of cellular energy—from damaging pro-oxidant influences. The Positive effects of NAC (N- ACETYL CYSTEINE) have been published and documented in conditions such as Acute Respiratory Distress Syndrome, Chronic Bronchitis, Chronic Obstructive Pulmonary Disease (COPD), Allergic Rhinitis, Fibrosing Alveolitis, and Lung Cancer.

INFLUENZA (FLU) /COLDS: Administration of NAC appears to reduce symptomatology associated with influenza and influenza like episodes, as well as cold-related viruses such as the rhinovirus and Coxsackie virus, according to several studies conducted at the Institute of Hygiene and Preventive Medicine at the University of Genoa, Italy. Subjects taking NAC had milder symptoms and according to Silvio De Flora, M.D., NAC was not virus-specific and therefore could provide “broad-spectrum protection” to ease or eliminate symptoms of infection, particularly in elderly and other people at risk for contracting the flu. In animal models, NAC has shown to attenuate diaphragm fatigue, possibly due to its ability to scavenge free radicals. Evidence indicates NAC might positively impact some aspects of human diaphragm function as well.

References

- Kelly, G. Clinical applications of N-acetylcysteine. *Alternative Medicine Review*. Vol. No.3, Number 2, 1998.
- N-acetyl cysteine, *Natural Medicines Comprehensive Database*.

Micellized D3™

Micellized D3 is a natural form of vitamin D provided in a water-soluble mycellized form. The Mycellization process produces tiny droplets (micelles) that are then formed into highly absorbable aggregate structures. Mycellization greatly increases the solubility, absorption, and bioavailability of our vitamin D3 over oil or emulsified forms.

Vitamin D and Respiratory Infections? If Linus Pauling were alive today, perhaps he would turn his attention away from vitamin C and write *Vitamin D and the Common Cold*. One randomized controlled trial suggested that vitamin D supplementation reduced acute respiratory tract infections in children during the long, cold, and dark Mongolian winter. Another randomized controlled trial showed that vitamin D reduced symptoms and antibiotic use in a group of patients with an increased frequency of respiratory infections. In infants, cord-blood levels of 25-hydroxyvitamin D (25[OH]D) are inversely associated with the risk for respiratory tract infection and childhood wheezing. Those with vitamin D insufficiency had poorer lung function and vitamin D supplementation showed significant improvements in respiratory muscle strength and exercise capacity. In patients with increased frequency of respiratory tract infections, supplementation with 4000 IU vitamin D3 for 1 year reduced symptoms and antibiotic use, according to findings of a randomized controlled trial published online December 13, 2012 in *BMJ Open*.

Références

- *Camargo, C. A. Jr, Ganmaa D., Frazier A. L., et al. Randomized trial of vitamin D supplementation and risk of acute respiratory infection in Mongolia. Pediatrics. 2012;130:e561-567.*
- *Bergman P., Norlin A. C., Hansen S., et al. Vitamin D3 supplementation in patients with frequent respiratory tract infections: A randomized and double-blind intervention study. BMJ Open. 2012;2:e001663.*
- *Barclay, Laurie. High doses of vitamin D supplementation improve COPD rehabilitation. Am J Respir Crit Care Med. 2011;183:A2533.*
- *Camargo, C. A., et al. Cord-blood 25(OH) vitamin D levels inversely related to risk for respiratory infection. Pediatrics. Published online December 27, 2010.*

NOTE: The Micellized D3 is now 1000 IU per drop (formerly, it was 600 IU per drop).

UltraFlora® Immune Booster

UltraFlora Immune Booster provides a blend of highly viable, pure strains of friendly bacteria that have been clinically shown to support nasal, sinus, and respiratory health. In addition to changes in immune markers, clinical studies in children and adults with cold and flu-like infections who utilized UltraFlora Immune Booster benefited from:

- **Fewer cold episodes.** The incidence of one or more cold episodes was significantly reduced from 67% in the placebo arm to 55% in the probiotic arm ($p=0.043$). The difference was even more pronounced for two or more episodes, with a significant reduction from 33% to 21% ($p=0.0024$, probiotic compared to control).
- **Delay onset of episodes.** The mean occurrence of the first cold was significantly delayed in probiotic subjects to 30.5 days, compared to 21.9 days for control ($p=0.038$). A similar trend was observed for episodes that followed.
- **Reduce duration of episodes.** The probiotic arm demonstrated a significant reduction in sick days at a mean of 6.2, compared to a mean of 8.6 in the control group ($p<0.05$).
- **Reduce symptom severity.** In subjects with one or more cold episodes, the probiotic arm demonstrated a trend in lower total and individual scores for pharyngeal, nasal, and bronchial symptoms. For subjects experiencing a second episode, the total symptoms score was significantly lower in the probiotic arm compared to the control ($p=0.031$).
- **Modulated immune response.** After two weeks of treatment, the probiotic arm demonstrated a significant reduction in the number of peripheral B lymphocytes compared to baseline measures. (Participants with abnormally high leukocyte counts in the first blood sample were excluded.) An increase in lymphocytes is considered a sign of viral infection. Though no control subjects had a cold episode with the first 14 days, researchers hypothesize that minor underlying viral infections may have been the cause. Furthermore, it was suggested that the probiotic combination may be to an inhibited or reduced B-cell proliferation and indirectly related to reduced inflammation, potentially resulting in milder symptoms.

SUMMARY

In two large-scale, randomized, placebo-controlled studies, daily administration of a combination of *Lactobacillus plantarum* HEAL9 and *Lactobacillus paracasei* 8700:2 during a 12-week period resulted in reduced incidence and delayed onset of cold episodes. Significant reductions in the intensity of total cold symptoms and key individual symptoms were observed. Furthermore, subjects receiving the probiotic combination experienced a faster recovery period—approximately 15% compared to placebo in both healthy patients and those more susceptible to upper respiratory

infections. This probiotic combination may provide a useful therapeutic application in clinical practice for reducing the severity, duration, and frequency of cold-like illnesses.

References

•• *Busch, R., Gruenwald, J., & Dudek, S. Randomized, double blind and placebo controlled study using a combination of two probiotic lactobacilli to alleviate symptoms and frequency of common cold. FNS. 2013;4(11A):13-20.*

•• *Berggren, A., Lazou Ahrén, I., Larsson, N., & Önning, G. Randomized, double-blind and placebo-controlled study using new probiotic lactobacilli for strengthening the body immune defense against viral infections. Eur J Nutr. 2011;50(3):203-210.*

Again we cannot over state the importance of seeking the counsel of Board certified health care providers.

24/7/365 Access

Is there some procedure when people want to order food supplements from Nutri Dyn Midwest? Yes

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Via Telephone: Telephone: 1-800-444-9998. Fax: 763-479-1288

Online

1. Go to www.futurehealth-today

1. Go to www.nutri-dyn.com

2. Click on Create Account

3. Click on Patients

4. Complete the short form and type in the following Account Number 100160

5. Click submit

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive

On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.

For your conscience we will periodically list that ordering procedure

Then you will be able to log in with your address and whatever password you just created on the registration form and enabled to list the food supplement products you want to order and receive

On orders of \$200.00 or more there will be a 10 % discount and no Shipping and Handling Fee.

On orders less than \$200.00 there is a 10% discount and an \$8.00 shipping and handling fee.

Warning: If you order food supplements and fail to give the Nutri Dyn Midwest Service Representative Account 100160 you will miss the 10% discount.