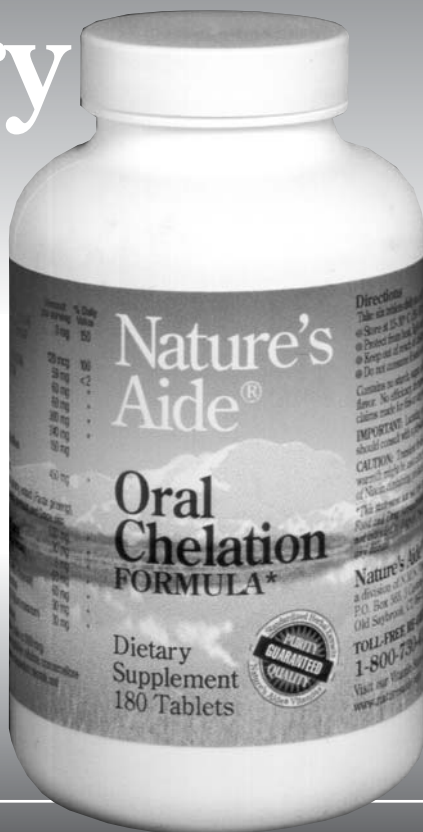


Nature's Aide® Vitamins

The Oral Chelation Multi-Vitamin Story



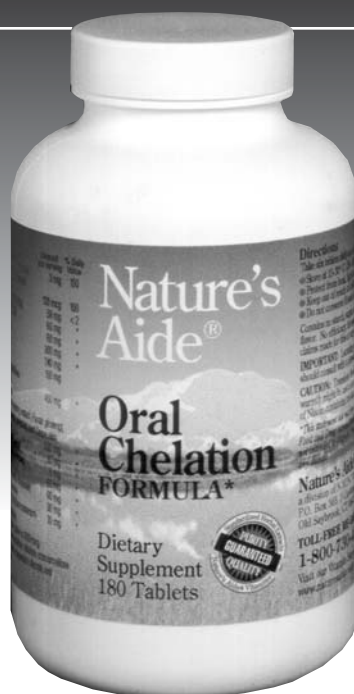
... SIX YEARS OF RESEARCH

ANDREW J. THOMPSON • NATURAL MEDICAL QUARTERLY

Nature's Aide® Vitamins

The Oral Chelation Multi-Vitamin Story

... SIX YEARS OF RESEARCH



When we first developed our formula for Oral Chelation tablets we included the substance ethylenediaminetetraacetata (commonly known as E.D.T.A.) it is a chemical compound that is used primarily as a food preservative and is the main ingredient in physician assisted chelation therapy. After thou-

sands of tests, we determined that E.D.T.A. was not beneficial in tablet form, because it chelated the other ingredients in the product during the manufacturing process therefore rendering it useless. Also we were concerned about the controversy surrounding EDTA. Dr. Nicholas Gonzalez, MD, a

highly regarded New York oncologist and internist seemed to take the most reasonable approach when he states "I wouldn't use it (EDTA) because the same results can be achieved with oral supplements of vitamins C and E, plus antioxidants." This then was the approach that I chose to take when developing our present formula. This does not mean, however, that we have given up testing other ingredients for possible use in the future.

The process of testing and retesting is never ending.

Here is a listing of all of the ingredients in our formula and justification for each

Vitamin A *(palmitate, beta-carotene)*

Elmer Cranton, MD in his book *BYPASSING BYPASS...THE NEW TECHNIQUE OF CHELATION THERAPY* says, "...beta carotene, and all antioxidants are free radical scavengers. Anything that will slow or control free radical damage is certain to slow the progress of degenerative disease." (pg. 168 – updated second edition). Copyright 1990. Dr. Earl Mindell's *Vitamin Bible* says, "...vitamin A builds resistance to respiratory infections, shortens the durations of diseases, keeps the outer layers of your tissues and organs healthy, promotes growth, strong bones, healthy skin, and aids in the treatment of emphysema and hyperthyroidism." (Pg. 29-new and revised edition. Copyright 1985.)

Vitamin D2 *(ergocalciferol)*

"Vitamin D occurs naturally as cholecalciferol (D3) found only in animal sources and ergocalciferol (D2) produced by the action of light on yeast. The functions of these compounds are: to promote absorption of calcium from the small intestine, to promote absorption of phosphate from the small intestine, and to cause release of calcium from bone. Deficiency leads to rickets in children and osteomalacia in adults, both diseases characterized by softening of the bones due to lack of calcium phosphate. Has been used to treat osteoporosis and rheumatoid arthritis," according to Leonard Mervyn, B.Sc., Ph.D., Chem., F.R.S.C. "The Dictionary of Vitamins, The Complete Guide to Vitamins and Vitamin Therapy." Thorsons Publishers, Inc. (Pg. 53-54. "1984.)

Vitamin E *(d- and dl-tocopherols)*

Richard A. Passwater, Ph.D. says in a study done in 1974 -1975, "Among persons taking vitamin E over 10 years, I found only four suffered from heart disease out of a total of 2,508. Ordinarily, in a sample of that size, approximately 836 persons would be expected to suffer from heart disease. ...Reducing heart attacks by reducing the tendency of blood to clot is a different concept than preventing damage to arteries which narrows them and induces clots to form. Preventing clots is attacking the problem, at the second stage, whereas preventing plaque formation is to attack at the first stage. It is better to keep the arteries from being narrowed in the first place, as this ensures an adequate blood flow to all of the heart tissue. Isn't it fortunate that

vitamin E will stop both processes?" (Richard A. Passwater, Ph.D. "Health Connection Establishment Verification: Antioxidants Prevent Heart Disease." Whole Foods. "1992 April. Pg. 66-71.)

Vitamin C (*ascorbic acid*)

Dr. Earl Benditt, a cell biologist at the University of Washington, Seattle, and his "monoclonal hypothesis" as reported by Morton Walker, DPM in consultation with Dr. Garry Gordon, MD in their book *THE CHELATION ANSWER*, states; "...cholesterol is converted into bile acids with the assistance of vitamin C in a type of chelation action." He further was quoted as saying; "The vitamin helps to support the adrenal glands, in an anti-stress factor, improves iron absorption, converts folactin into folic acid, lowers blood cholesterol levels by the action described, combats many toxins, increases interferon during viral conditions, and achieves many other metabolic functions." (Copyright 1982. Pg. 120)

Vitamin C may be working behind the scenes to prevent heart disease according to scientists at the Lipid Research Laboratory at Sheba Hospital in Tel Hashomer, Israel.

Epidemiologic studies already show that vitamins C and E help ward off cardiovascular problems. In fact, in vitro studies demonstrate that vitamin C protects LDL from oxidation...the presumed initiating factor in atherosclerosis. One popular hypothesis holds that vitamin C helps recycle the vitamin E that is spent mopping up free radicals.

The Israeli researchers questioned whether this LDL protection occurs in the

body and, if so, whether diet alone can deliver the necessary vitamin C. They studied 36 healthy men ages 18 to 23 with no known risk of cardiovascular disease. The men ate a diet relatively low in vitamin C (50 mg a day) for one month before being split into two groups. For three months, one group continued on the low-C diet, and the second received fresh-squeezed orange juice to raise their daily vitamin C intake to 500 mg.

Shifting to the greater vitamin C diet raised vitamin C plasma levels nearly fourfold to a level shown to maximize protection from coronary artery disease (*American Journal of Clinical Nutrition*). Vitamin E concentrations in blood lipoproteins did not change.

Researchers subjected the men's blood LDL cholesterol to oxidative stress and measured how long it took to oxidize. This "lag" time increased nearly 46 percent in the men drinking orange juice compared to those eating a low-C diet. The protective effect rose as the dose increased. Because vitamin E levels did not change, the authors speculate that vitamin C regenerated the vitamin E spent in quenching free radicals.

Although increasing citrus intake certainly can boost vitamin C to therapeutic levels, the authors note that the average American is unlikely to attain such amounts solely through diet...nearly one-third fall short of getting even the paltry RDA of 60 mg of vitamin C per day.

In a separate report, researchers at the Medizinische Hochschule in Hannover, Germany discovered that relatively high doses of vitamin C increase arterial dilation in people with chronic heart failure.

Overly constricted blood vessels are a hallmark of chronic heart failure (CHF) and, when combined with other classic symptoms such as salt retention and poor circulation, can lead to high blood pressure and tissue fluid accumulation.

Burkhard Hronig, M.D., and colleagues tested the hypothesis that abnormal blood vessel constriction is caused by free radical damage to nitrous oxide, a vasodilator produced by endothelial cells, lining the blood vessels. Because people with CHF generally have low antioxidant reserves, researchers investigated the effects of vitamin C on arterial dilation.

They gave 15 nonsmoking patients with chronic heart failure and eight healthy volunteers either intra-arterial vitamin C at a rate of 25 mg per minute for 10 minutes or a placebo. They then measured the diameter and blood flow of the radial artery in the forearm. Compared to the placebo, vitamin C significantly increased the CHF patients' arterial dilation by up to 9 percent. The control group showed no increased arterial dilation. Forearm blood flow was not significantly affected by vitamin C or placebo in either group.

Next, two groups of five patients with CHF took either 1 g of oral vitamin C daily for four weeks or placebo. Twenty-four hours after the last dose, researchers measured vascular dilation. The placebo group showed no change, yet the vitamin C group showed 12 percent greater radial artery dilation.

Both intra-arterial and oral vitamin C treatment improved arterial dilation

to the point that it equaled a healthy person's.

Vitamin C appeared to spare nitrous oxide from oxidation, thus increasing its availability and ensuring blood vessel dilation. Although these findings suggest that long-term vitamin C supplementation can sustain such benefits, large-scale trials must confirm this.

This study is another factor that influenced my decision to maintain high levels of vitamin C in many of our supplement products – primarily this Oral Chelation formula.

Folic acid

THE DICTIONARY OF VITAMINS, compiled and written by Leonard Mervyn B.Sc, Ph.D., C.Chem., F.R.S.C., member of the New York Academy of Sciences states that; "Deficiency in man causes megaloblastic anemia where red blood cells are large and uneven in size and shape with shorter life span. Deficiency symptoms are weakness, fatigue, breathlessness, irritability, sleeplessness eventually giving rise to mild mental symptoms such as forgetfulness and confusion." (Copyright 1984. Pg. 83)

Vitamin B1 *(thiamine HCl)*

Earl Mindell's New & Revised Vitamin Bible says, "Vitamin B1 is known as the 'morale vitamin' because of its beneficial effects on the nervous system and mental attitude. It also has a mild diuretic effect. B1 promotes growth and aids in digestion, especially of carbohydrates. It improves your mental attitude. Keeps the nervous system, muscles, and heart functioning normally. It helps fight air- or sea-sickness. Relieves dental postoperative

pain and aids in treatment of herpes zoster." Earl Mindell, R.Ph., Ph.D. "Earl Mindell's New and Revised Vitamin Bible." Warner Books. ("1985. Pg. 31-32.)

Vitamin B2 (*riboflavin*)

The Vitamin Book states, "Like most B-complex vitamins, riboflavin is involved with energy production. But unlike the others, a lack of this vitamin manifests itself primarily in skin sores and blemishes that affect not only the outer skin but the lining of the stomach."

"Riboflavin is converted in the body to two active forms, flavin mononucleotide (FMN) and flavin adenine dinucleotide (FAD). FMN and FAD are essential to cell function because they are coenzymes (catalysts) for chemical reactions that involve utilization of oxygen and liberation of energy. The energy that is released is used by each cell to convert food into more energy, which it then uses to perform its designated functions in the body. Riboflavin is found in every cell in the body." Harold M. Silverman, Pharm. D., Joseph A. Romano, Pharm. D., and Gary Elmer, Ph.D. "The New, Complete Reference The Vitamin Book." Bantam Books. (Pg. 99. "1985.)

Niacin and Niacinamide

In the health magazine, Let's Live, Jack Joseph Challem says, "Vitamin B3 is found in two common forms, niacin and niacinamide. Niacin is the more potent form of the vitamin."

"Many years ago, Drs. Abram Hoffer and Humphry Osmond discovered that niacin was very effective in lowering levels of cholesterol and triglycerides, two

blood fats associated with heart disease. In fact, niacin lowers levels of the 'bad' low-density lipoprotein type of cholesterol, while increasing levels of the 'good' cholesterol, called high-density lipoprotein. More recent research has found that niacin has none of the side effects of prescription drugs used to lower the bad types of cholesterol." Jack Joseph Challem. Let's Live. "Vitamins and Minerals: They're Vitally Important To Our Health, A Special Quick-Reference Guide." (Pg. 18. "Jan. 1989.)

Vitamin B6 (*pyridoxine HCl*)

Also in Let's Live, Jack Challem says, "Vitamin B6, pyridoxine, affects both physical and mental health."

"The vitamin inhibits the formation of a toxic chemical called homocysteine, which attacks heart tissue and promotes heart disease. Dr. Kilmer McCully of the Harvard Medical School believes that a vitamin B6 deficiency, not an excess of cholesterol, may ultimately cause heart disease. Without vitamin B6, homocysteine damages the heart and allows cholesterol deposits to form."

"Dr. Carl Pfeiffer, a physician and researcher in Princeton, New Jersey, has used vitamin B6 and the mineral zinc to treat depression and schizophrenia. Dr. Bernard Rimland, a San Diego researcher, has found that vitamin B6 helps hyperactive and autistic children."

"Like many of the other B vitamins, vitamin B6 is useful in combating arthritis. Dr. John Ellis, a Texas physician, uses vitamin B6 to treat arthritic patients. It is also useful in fighting allergies, minimizing water retention, and easing symptoms

of premenstrual syndrome (PMS)” Jack Joseph Challem. *Let’s Live*. “Vitamins and Minerals: They’re Vitally Important To Our Health, A Special Quick-Reference Guide.” (Pg. 20. “Jan. 1989.)

Pantothenic acid
(*d-calcium pantothenate*)

The Dictionary of Vitamins states, “Pantothenic acid functions as a constituent of coenzyme A needed for: production of energy; for converting cholesterol into anti-stress hormones; for control of fat metabolism; for antibody formation; for a healthy nervous system (converts choline to brain substance acetylcholine); and for detoxification of drugs.” Leonard Mervyn, B.Sc., Ph.D., C.Chem., F.R.S.C. “The Dictionary of Vitamins.” Thorsons Publishers Inc. (Pg. 138. “1984.)

Vitamin B12
(*cyanocobalamin*)

Earl Mindell’s *New and Revised Vitamin Bible* says, “Vitamin B12 forms and regenerates red blood cells, thereby preventing anemia. Promotes growth and increases appetite in children. Increases energy. Maintains a healthy nervous system. Properly utilizes fats, carbohydrates, and protein. Relieves irritability and improves concentration, memory, and balance.” Earl Mindell, R.Ph., Ph.D. “Earl Mindell’s *New and Revised Vitamin Bible*.” Warner Books. (Pg. 39-40. “1985.)

Biotin

“Biotin functions as coenzyme for a wide variety of body metabolic reactions. Required for production of energy from carbohydrates, fats and proteins and for interconversions. Essential for maintenance of healthy skin, hair, sweat

glands, nerves, bone marrow, and glands producing sex hormones.”

“Therapy has been successful in seborrheic dermatitis; Leiner’s disease; alopecia; scalp disease; skin complaints. Given to babies to prevent crib death,” states *The Dictionary of Vitamins*. Leonard Mervyn, (Pg. 28-29. “1984.)

Calcium (*carbonate*),
Calcium (*citrate*), and
Calcium (*amino acid chelate*)

Jack Challem says, “Dr. David McCarron, a researcher at the Oregon Health Sciences University in Portland, found substantial differences in calcium intake between people with normal and high blood pressure. People with normal levels were more likely to have normal blood pressure.”

“Calcium, of course, is the most abundant mineral in the body, accounting for up to three to four pounds of an adult’s weight. Most of the calcium forms the skeleton and teeth, but the rest is used to trigger a host of necessary chemical reactions in the body.”

“One of calcium’s roles is to transmit nerve signals through the body. These nerve signals kept the heart pumping blood and trigger the muscle contractions that allow you to walk, run, or even turn this page. Sometimes a lack of calcium can cause nervousness and irritability.” Jack Challem. *Let’s Live*. (Pg. 28. “Jan. 1989.)

Iodine
(*potassium iodide*)

Renate Lewin states, “Subacute thyroid dysfunction may be more common than is recognized by most

doctors, according to Henry Newbold, M.D., author of *Mega-Nutrients: A Prescription for Total Health* (The Body Press, 1987). Part of the reason may be iodine deficiency, since this mineral is critical for production of thyroxine, the principal thyroid hormone. Too little iodine can cause obesity, slow or confused thinking, sensitivity to cold, infertility and menstrual irregularities in women, and relentless fatigue. Prolonged iodine deficiency causes goiter, a massive swelling of the thyroid gland at the base of the neck. Goiter was relatively common in this country before table salt was routinely iodized, especially in regions of the country away from sources of seafood. The best natural sources are seafood, kelp, and iodized table salt." Renate Lewin. *Let's Live. "The Mineral Primer: What You Need To Know and Why."* (Pg. 30. "Dec. 1989.)

Magnesium *(oxide aspartate)*

Dr. Sheldon Saul Hendler, M.D., Ph.D., states, "There are signs that marginal magnesium deficiency may be commonplace, especially among a number of subgroups, including athletes and others who exercise regularly and strenuously, among the elderly, pregnant women, dieters and others. The most significant findings indicate that magnesium is protective against some forms of cardiovascular disease. Magnesium has to be in the proper balance with calcium; when it is not, a number of adverse events can occur, predisposing to heart-tissue damage and heart attack. It has been convincingly demonstrated that magnesium deficiency predisposes humans to potentially fatal cardiac dysrhythmias (abnormal cardiac rhythms). There is some

evidence that magnesium supplements may be useful in the management of high blood pressure. (THE COMPLETE GUIDE TO ANTI-AGING NUTRIENTS, Pg. 71 SIMON AND SCHUSTER copyright 1985).

Copper *(sulfate, aspartate)*

Dr. Patrick Quillin, Ph.D., R.D., states, "Copper is another essential metal that could play a role in protecting you against cancer. The average intake of copper in the United States is roughly half of the RDA. Also, the higher the intake of sugar, the lower the absorption of copper."

He further states, "Copper is bound within the blood in the form of ceruloplasmin, which is one of the more important antioxidants in the blood stream. Ceruloplasmin acts to keep hemoglobin iron from rusting. Hemoglobin oxidation could create free radicals that could instigate abnormal growth, such as cancer. Both copper and zinc are involved in a crucial anticancer enzyme called superoxide dismutase (SOD). There are several different types of SOD enzymes containing different trace minerals. SOD and ceruloplasmin both act as "fire extinguishers" throughout the body to squelch free radicals that could be the beginning of strange growths. Also, copper salts provided measurable protection against cancer when added to the diets of lab rats that were exposed to chemical carcinogens." (HEALING NUTRIENTS, copyright 1987, pg 144)

Zinc *(gluconate, aspartate)*

Renate Lewin says, "Some of the most interesting recent research points severe zinc deficiency as a cause of

anorexia, according to Alexander Schauss, M.D., of the Institute for Biosocial Research in Tacoma, Washington. Zinc is also essential for preventing birth defects, maintaining the immune system and fighting viruses, encouraging wound healing, promoting synthesis of DNA, and powering about 100 critical enzymen reactions in the body. The late Carl Pfeiffer, M.D., Ph.D., of the Brain Bio Center in New Jersey, discovered that zinc, in combination with vitamin B6, could reduce symptoms of some kinds of mental illness. Zinc deficiency may also be associated with the stretch marks of pregnancy, according to the late nutritionists Carlton Fredericks, Ph.D."Renate Lewin. Let's Live. "The Mineral Primer: What You Need To Know And Why. (Pg.32. "Dec. 1989.)

Manganese (*gluconate*)

Dr. Sheldon Saul Hendler, M.D., Ph.D. states in his COMPLETE GUIDE TO ANTI-AGING NUTRIENTS, that until 1974 there was very little documented about manganese deficiency in man Until Dr. Doisy published (Trace Element Metabolism in Animals, University Park Press, Baltimore 1974) "He apparently produced manganese deficiency in a patient who was maintained for four months on a manganese-deficient diet and who simultaneously was given magnesium-containing antacids. The blood clotting, reddening of his black hair and beard, slowed growth of hair and nails, and scaly dermatitis. Doisy suggests that in man this element functions in both glycoprotein synthesis (some of the clotting factors are protein with carbohydrates.attached to them) and cholesterol synthesis. (Copyright 1985. Pg 167.)

Chromium (*amino acid chelate*)

Harold M. Silverman, Pharm. D., Joseph A. Roman, Pharm. D. and Gary Elmer, Ph.D. say, "Chromium is clearly essential in human nutrition, but the exact form of chromium that is used by the body is uncertain. Our diets seem to be marginally low in this element, and it is possible that supplements may help some diabetics."

"The best-studied feature of chromium is its effect on glucose metabolism. The body needs the hormone insulin to get glucose from the blood into tissues where it can be used to generate energy, and it is believed that chromium increases the sensitivity of tissues to the action of insulin. In a chromium-deficient state, increasing amounts of insulin are needed to maintain normal glucose utilization. Chromium itself has no effect on glucose; it only works together with insulin to drive sugar from blood to tissue.

"Investigations have shown that some maturity-onset diabetics can decrease their insulin requirements and improve glucose tolerance by taking chromium supplements."

"Body chromium levels decrease with age, while glucose tolerance time (the length of time the body takes to utilize glucose) increases with age. An increased glucose tolerance test time can be a forerunner of diabetes, and reliable studies have shown that chromium supplementation is beneficial to some patients who have abnormalities in glucose metabolism.."Harold M. Silverman, Pharm. D., Joseph A. Romano, Pharm. D., and Gary Elmer, Ph.D. "The New Complete ReferenceThe Vitamin

Book.” Bantam Books. (Pg. 241-242. “1985.)

Selenium

(selenomethionine)

In “Selenium 20th Century Nutrient,” Dr. Richard Barmakian says, “The late Dr. Klaus Schwartz, one of the world authority on silica as well as selenium, established selenium in the U.S. as an essential nutrient in 1957.”

“It was not, however, until 1972 that Dr. John Rotruck of the University of Wisconsin discovered the WHY of Selenium importance. Dr. Rotruck found that the enzyme involved in oxygen transport, glutathione peroxidase, could not be sufficiently synthesized or produced by the body without enough selenium present.”

“Dr. Douglas Frost, U.S. trace mineral researcher, states, ‘If we want to avoid getting cancer we should be sure to get enough selenium.’ Why is it that nutrition is hardly ever even mentioned when it comes to the official position of cancer treatment in the U.S., only very casually at best, and certainly nothing about the importance of the mineral selenium. Yet, top scientists in the U.S. and around the world have repeatedly stressed the importance of selenium in connection with cancer. Dr. Gerhard Schrauzer, professor of chemistry at the University of California at San Diego, says, ‘a low intake of selenium lessens the ability of the body to fight cancer.’”

“Research in China recently showed selenium to eliminate degenerative, congestive heart disease in children. Known as Keshan disease, the children in the control group, not given selenium, continued to regress, while those given

tiny amounts of selenium recovered from their degenerative heart diseases.”

Dr. Richard Barmakian. Total Health.

“Selenium 20th Century Nutrient.”

(Pg. 57-59. “April 1986.)

Potassium

(chloride)

Michael Murray, N.D. says, “There is growing evidence that the dietary potassium intake of most Americans is inadequate to maintain health. This low potassium intake is a major factor in the high number of cases of heart disease, strokes, high blood pressure, and cancer in this country. A diet high in potassium-rich foods and food-based potassium supplements is encouraged. Michael Murray, N.D. Health World. “Do You Need More Potassium?” (Pg. 32-33. “Dec. 1991.)

Choline

(bitartrate)

Dr. Leonard Mervyn, Ph.D. (Member of the New York Academy of Sciences) reports in Thorsons Complete Guide To VITAMINS AND MINERALS, “Choline, is a water-soluble member of the vitamin B complex. It has therapeutic uses listed – Angina, Atherosclerosis, Thrombosis, Stroke, High blood pressure, Alzheimer’s disease, and Senile dementia. (Pg.72. “1986.)

Inositol

Dr. Sheldon Saul Hendler, M.D., Ph.D. claims, “Like choline, myo-inositol, the biologically active form of inositol, is a constituent of phospholipids, those water-insoluble structures that are essential in cell membranes. Myo-inositol is recognized as important in the metabolism of fats, and it has long been claimed that it can lower blood concentrations of fats and cholesterol. “Inositol protects against

cardiovascular disease, protects against diabetes, and protects against hair loss.” Dr. Sheldon Saul Hendler, M.D., Ph.D. “The Complete Guide to Anti-Aging Nutrients.” Simon and Schuster. (Pg.232. “1985.)

PABA

Dr. Harold Silverman, Pharm.D., Joseph A. Romano, Pharm.D., and Gary Elmer, Ph.D., say, “PABA is in fact a chemical that bacteria use as part of the process whereby they manufacture folic acid. Folic acid is then used by bacteria for cell replication, so PABA could, in a sense, be considered a vitamin for bacteria.”

In 1938, Dr. G. Domagk was awarded the Nobel prize in medicine for his discovery of the mechanism of action of a PABA derivative called Prontosil. He found that this drug interfered with the ability of bacterial cells to utilize PABA and thus acted as an antibacterial agent. Subsequently over five thousand sulfa drugs as this antibacterial group has come to be known were synthesized and served as the basis for the first antibacterial age.” Harold M. Silverman, Pharm.D., Joseph A. Romano, Pharm.D., and Gary Elmer. “The Vitamin Book.” Bantam Books. (Pg. 191. “1985.)

Amino Acids

dl-Methionine

Eric R. Braverman, M.D. and Carl C. Pfeiffer, M.D., Ph.D. report, “We use methionine for patients with high blood histamine, depression, high copper, high cholesterol and chronic pain, allergies, and asthma.”

“The homocysteine-vitamin B6 defi-

ciency theory of atherogenesis has been the subject of some controversy. but undoubtedly B6 deficiency is a strong factor in the production of coronary artery disease (Kinderlehrer, 1979). Methionine and vitamin B6 are essential for normal homocysteine metabolism and are mild cholesterol-lowering agents. Methionine in high doses without vitamin B6 is toxic to blood vessels, because homocysteine may build up (Murphy-Chutorian, 1985). With adequate vitamin B6, this is not a hazard. Large doses of methionine have been reported to raise homocysteine levels. Our loading studies using 5g of methionine in patients with adequate vitamin B6 levels did not result in increased homocysteine levels.” Eric R. Braverman, M.D. with Carl C. Pfeiffer, M.D., Ph.D. *The Healing Nutrients Within—Facts, Findings, and New Research on Amino Acids* New Canaan, CT: Keats Publishing, Inc., ©1986.

l-Cysteine

Eric Braverman, M. D. and Carl C. Pfeiffer, M.D., Ph.D. report, “Cysteine is a sulfur amino acid that is a biochemical powerhouse. Its most exciting trait is its ability to help the body process and to render harmless toxic chemical that killed so many people in Bhopal, India, in early 1985. Because of this capability, cysteine not only helps prevent cancer, but has an active role to play in its treatment.”

“Probably cysteine’s most exciting and most important role in the body, however, takes place in the liver, where it helps the small but ubiquitous protein glutathione to detoxify carcinogens and other dangerous chemicals, and in all the rest of the cells of the body, where it serves as the major scavenger of hazardous oxidants.”

"Hormones are often ten, twenty, or fifty amino acids long, with each amino acid playing only a small role in the hormones' dramatic regulation and enforcement of physiological balances. Glutathione, the toxic waste neutralizer of the body, is tiny in comparison: a tripeptide made up of only three amino acids—cysteine, glutamic acid and glycine. It was discovered in 1921. Glutathione is a powerful and important antioxidant and detoxifying agent, cysteine is the major amino acid that determines how much glutathione is produced by the body, and it is cysteine's thiol group that gives glutathione its power." Eric R. Braverman, M.D. with Carl C. Pfeiffer, M.D., Ph.D. *The Healing Nutrients Within*. New Canaan, CT: Keats Publishing, Inc., "1986.

Patented methylsulfonylmethane
(34% organic sulfur)

Methylsulfonylmethane (MSM), a naturally occurring dietary derivative of DMSO, serves as an important source of bioavailable dietary sulfur and, when administered orally, is effective in ameliorating symptoms of physiological response to stress including gastrointestinal upset, inflammation of the mucous membranes, pain associated with musculoskeletal system disorders, and infectant allergens. MSM appears to augment immunological competence through a natural, vitamin-like moderating or normalizing activity for various body functions and is noted for its exceptionally non-toxic nature. MSM has proved useful as a dietary supplement for both children and adults, including geriatric patients. DH Baker, *Utilization of Isomers and analogs of amino acids and other sulfur-containing compounds*. *Progress Food Nutr. Sci.* 1986:10:133-178

Herbs

Herbal blend containing:

Ginkgo biloba, Red ginseng extract, Green tea extract, and Grape skin extract.

Ginkgo Biloba

Michael A Weiner, Ph.D. and Janet A. Weiner inform us, "That Ginkgo research has proceeded in many different areas. The most interesting and important relate to vascular diseases, brain function, impotency, dopamine synthesis, inflammation, and asthma."

"An extract from Ginkgo leaves is marketed as Tebonin. clinical research has shown that Tebonin achieves vasodilatation and improved blood flow, especially in deeper-seated medium and small arteries. the flow rate in capillary vessels and end arteries is increased. In elderly subjects, Tebonin alleviated dizziness and loss of memory. Ginkgo has proven to be a particularly valuable geriatric drug."Michael A. Weiner, Ph.D. and Janet A. Weiner. *Herbs That Heal Rx: Prescription For Herbal Healing*. Mill Valley, CA: Quantam Books, "1994.

Red Ginseng

In Earl Mindell's *Herb Bible*, Earl Mindell states that, "Korean Red Panax ginseng increases physical and mental endurance, helps the body adjust to stressful situations, normalizes body functions, reduces cholesterol, increases energy, may help reduce discomfort caused by menopause, may inhibit growth of cancerous tumors, and may enhance sexual desire." Earl Mindell, R.Ph., Ph.D. *Earl Mindell's Herb Bible*. New York: Simon and Schuster/Fireside, "1992.

Green Tea Extract

Michael a. Weiner, Ph.D. and Janet A. Weiner report, "The catechins in Green tea are formed by polyphenic compounds. Many researchers have found that phenolic compounds, including tea catechins, delay the development of arteriosclerosis. Clinical investigations ascertained that consumption of Green Tea had a therapeutic effect on infectious diseases, particularly dysentery. Incorporating Green tea in the treatment of rheumatism had a favorable effect on both the general condition and capillary resistance of their patients. The researchers concluded that Green tea exerts a favorable regulatory effect on every vital component of human metabolism."

"Green tea polyphols, which comprise from 17-30 percent of the dry weight of Green tea leaves, are now known to explain the panacea-like properties of the world's most popular beverage. Found recently to account for the anti-viral, antioxidant effects in Green tea, these unique polyphenols also enhance immunity and destroy bacteria. Epidemiological surveys suggest that Green tea consumption is associated with a reduced incidence of pancreatic and stomach cancers. "Michael A. Weiner, Ph.D. and Janet A. Weiner, *Herbs That Heal Rx: Prescription For Herbal Healing*. Mill Valley, CA:Quantum Books, "1994.

Couchgrass

David Hoffman claims Couch grass is used as a diuretic, demulcent, and antimicrobial. Couch grass may be used in urinary infections such as cystitis, urethritis and prostatitis. As a broadly applicable and safe diuretic it can be used in most conditions where this action is needed. Its

demulcent properties soothe irritation and inflammation. It is of value in the treatment of enlarged prostate glands. It can also be used for easing or removing kidney stones and gravel. As a tonic diuretic, Couch grass has been used with other herbs in the treatment of rheumatism. David Hoffman. *The Herbal Handbook User's Guide to Medical Herbalism*. Rochester, VT: Healing Arts Press, "1988.

Juniper Berries

Michael Tierra, C.A., N.D. says, "Juniper berries are primarily used for the treatment of urinary problems, including urine retention, stones and gravel, lumbar pains, uric acid buildup and gout and rheumatic problems. It is antiinflammatory for arthritic and rheumatic ailments as well as being a useful carminative for indigestion and flatulence." Michael Tierra, C.A. N.D. *The Way of Herbs*. New York:: Pocket Books/Simon Schuster, "1990.

Garlic

Michael Castleman reports, "Researchers have found that 1 medium-size garlic clove packs the anti-bacterial punch of about 100,000 units of penicillin. Depending on the type of infection, oral penicillin doses typically range from 600,000 to 1.2 million units.

"To help reduce blood pressure, cholesterol, and the likelihood of internal blood clots, three to ten cloves of fresh garlic a day is recommended."

"Garlic's anticlotting action may help prevent heart attack and some kinds of stroke, but medicinal amounts could conceivably cause problems for those with clotting disorders." Michael Castleman. *The Healing Herbs The Ultimate Guide to*

the Curative Power of Nature's Medicines. Emmaus, PA: Rodale Press, "1991.

Schizandra

Michael A. Weiner, Ph.D. and Janet A. Weiner reveal, "Schizandra has many biological activities including: antibacterial (equivocal results), sympathomimetic (stimulant), resistance stimulation, liver-protective, anti-toxic, anti-allergenic, anti-depressant, and glycogenesis stimulant."

In addition, and perhaps most interesting from the point of view of it being a folkloric "tonic," this herb protected against the narcotic and sedative effects of alcohol (ETOH) and pentobarbitol (PB) and exposure to the highly toxic ether, in mice. As a result of these data, the authors concluded that Schizandra may be a useful clinical agent for reversal of CNS depression." Michael A. Weiner, Ph.D. and Janet A. Weiner. Herbs That Heal Prescription For Herbal Healing. Mill Valley, CA: Quantum Books, "1994.

Buchu Leaf

Michael Castleman says, "Herbalists consider Buchu a urinary anti-septic. It is used for the relief of water retention, and is an ingredient in two over-the-counter diuretics (Fluidex and Odrinil) marketed to relieve the bloating of premenstrual syndrome (PMS). Michael Castleman. The Healing Herbs The Ultimate Guide to the Curative Power of Nature's Medicines. Emmaus, PA: Rodale Press, "1991.

Silymarin

Michael Murray, N.D. and Joseph Pizzorno, N.D. report, "The common milk thistle contains silymarin, one of the most potent liver medicines known. Silymarin's

effect in preventing liver destruction relates to its ability, in many instances, to inhibit the factors that are responsible for the damage, i.e. free radicals and leukotrienes. Equally important is its ability to stimulate protein synthesis, which results in an increase in the production of new liver cells to replace the damaged ones."

"In human studies, silymarin has been shown to have positive effects in treating several types of liver disease, including cirrhosis, chronic hepatitis, fatty infiltration of the liver (chemical and alcohol induced), subclinical cholestasis of pregnancy and gallbladder inflammation. The therapeutic effect of silymarin in these disorders has been confirmed by microscopic examination of the cells (biopsy), clinical and laboratory data." Michael Murray, N.D. and Joseph Pizzorno, N.D. Encyclopedia of Natural Medicine . Rocklin, CA: Prima Publishing, "1991.

*Respectfully Submitted,
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