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Acetyl-L-Carnitine

<i>Preventive Intake Range</i>	250-1,000 mg per day
<i>Therapeutic Intake Range</i>	500-3,000 mg
<i>Useful in the Treatment of</i>	Alzheimer's, depression, memory loss, liver & heart disease, male reproductive health, mental stress, vision and nerve repair, recovering stroke victims
<i>May Help Prevent</i>	Short term memory loss, depression, Alzheimer's, neurodegenerative diseases
<i>Synergistic Nutrients</i>	Phosphatidyl serine, EPA/DHA, B vitamins, antioxidants, magnesium
<i>Condition Contraindications</i>	Epilepsy, insomnia
<i>Drug Contraindications</i>	None known
<i>Preferred Form</i>	Acetyl-L-Carnitine
<i>Food Sources</i>	Brain, but don't eat any (prions)
<i>Further comments</i>	Take early in the day. Doses above 1 gram may lead to vivid dreams in rare instances.

Alkylglycerols

<i>Preventive Intake Range:</i>	500 mg of Alkyrol
<i>Therapeutic Intake Range:</i>	1000-3000 mg (2-6 capsules)
<i>Useful in the Treatment of:</i>	Cancer, inflammation, arthritis, psoriasis, immune insufficiency (frequent colds and flus)
<i>May Help Prevent:</i>	Colds and flues in the elderly or those with weak immune systems
<i>Synergistic Nutrients:</i>	Antioxidants, selenium, astragalus
<i>Condition Contraindications:</i>	Perhaps autoimmune diseases
<i>Preferred Form:</i>	Alkyrol from Scandinavian health products
<i>Food Sources:</i>	None

Arginine

Preventive Intake Range: 1-5 grams

Therapeutic Intake Range: 1-20 grams

Useful in the Treatment of: Wound healing, liver function, immune enhancement, angina, male infertility, male erectile dysfunction, high LDL cholesterol, high blood pressure, candida overgrowth, severe burn victims, fractures, osteoporosis, Reye's Syndrome

Useful in the Prevention of: Blood clots, muscle loss in the elderly, immune problems, tumor growth

Synergistic Nutrients: Lysine, antioxidants, CoQ10

Condition AIDS, herpes, viral infections (unless combined with lysine) inflammation or oxidative stress, children under 18

Contraindications:

Drug Contraindications Nitroglycerin, Viagra

Preferred Form: L-Arginine

Food Sources: Nuts, pork, wild game, meat, duck, ricotta and cottage cheese

Further Comments: Can stimulate the release of natural anabolic hormones such as Human Growth Hormone (HGH). Take arginine with a broad spectrum antioxidant. For convenience and economy, use the powdered form, though it does not have an agreeable taste.

BCAAs: Valine, Leucine, Isoleucine

<i>Preventive Intake Range:</i>	1-3 grams per day
<i>Therapeutic Intake Range:</i>	3-8 grams per day
<i>Useful in the Treatment of:</i>	Cancer, AIDS, anorexia, other muscle wasting disease, stress, alcoholism, chronic liver disease, Huntington's chorea, stress, infection, fever, muscle training, kidney failure (under close supervision)
<i>May Help Prevent:</i>	Slow post-operative recovery (pre-operative loading is critical)
<i>Synergistic Nutrients:</i>	Glutamine, MCT oil
<i>Condition Contraindications:</i>	Acute and chronic kidney failure
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Free form amino acids of valine, leucine, and isoleucine
<i>Food Sources:</i>	Cheese, eggs, whole milk, yogurt, pork, meat, chicken, turkey, duck, wild game, avocado, chocolate

Beneficial Bacteria
Acidophilus, Bulgaricus, and Bifidobacteria

<i>Preventive Intake Range</i>	1 tsp. of each per day
<i>Therapeutic Intake Range</i>	1-6 tablespoons of each per day
<i>Useful in the Treatment of:</i>	Digestive problems, liver ailments Parkinson's, Alzheimer's, candida, ulcers, IBS, Crohn's disease, depression
<i>May Help Prevent:</i>	GI problems, liver ailments, free radical formation in the colon.
<i>Synergistic Nutrients:</i>	FOS, glutamine, fiber
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	Helpful during antibiotic treatment, yet may interfere with antibiotic action if taken together
<i>Preferred Form:</i>	Power form, refrigerated (Natren, Metagenics)
<i>Food Sources:</i>	Yogurt may contain small amounts of beneficial bacteria, but often not the right strain

Further Comments: When best to take beneficial bacteria supplements is heavily debated. An hour after a meal may be best, but any time will be helpful. If taken on an empty stomach, take with plenty of water to neutralize stomach acid

Beta Carotene

<i>Preventive Intake Range:</i>	5,000-50,000 IUs 5K = 3 mg/ 50,000 IUs = 30 mg
<i>Therapeutic Intake Range:</i>	50,000-300,000 IUs
<i>Useful in the Treatment of:</i>	Immune dysfunction, heart disease, cancer, skin protection
<i>May Help Prevent:</i>	Heart disease, some forms of cancer, immune weakness
<i>Synergistic Nutrients:</i>	All other carotenoids and antioxidants. vitamin E is particularly important
<i>Condition Contraindications:</i>	Liver damage, alcoholism, conditions involving high levels of oxidative stress
<i>Drug Contraindications:</i>	Liver damaging medications
<i>Preferred Form:</i>	Natural food derived beta carotene from a source rich in mixed carotenoids (D salina algae, carrot concentrate, vegetable juices)
<i>Food Sources:</i>	All yellow, orange and green vegetable juices, spirulina, chlorella, algae

Further Comments: Orange colored skin is not a sign of toxicity but of stored beta carotene. Take beta carotene supplements with a meal that has some fat in it.

Biotin

<i>Preventive Intake Range:</i>	300 mcg
<i>Therapeutic Intake Range:</i>	1-15 mg
<i>Useful in the Treatment of:</i>	Type I and II diabetes, skin disorders, hair and nail problems.
<i>May Help Prevent:</i>	Diabetes, autoimmune diseases
<i>Synergistic Nutrients:</i>	B complex, GLA, EPA, zinc
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	Biotin
<i>Food Sources:</i>	Cheese, nuts, egg yolks, soybeans, royal jelly, brewer's yeast, organ meats

Further Comments: Was once called "vitamin H" Biotin is needed for fatty acid elongation. High grain diets antagonize biotin metabolism, and in turn upset fatty acid metabolism.

Boron

<i>Preventive Intake Range:</i>	3-20 mg
<i>Therapeutic Intake Range:</i>	6-40 mg
<i>Useful in the Treatment of:</i>	DHEA and testosterone deficiency, arthritis, mental concentration, estrogen replacement, hot flashes
<i>May Help Prevent:</i>	Osteoporosis, lack of ability to concentrate
<i>Condition Contraindications:</i>	None known
<i>Drug Contraindications:</i>	None known
<i>Preferred Form:</i>	All forms appear to work well.
<i>Food Sources:</i>	Nuts, legumes, leafy vegetables, broccoli, apples, pears, peaches, grapes, some water supplies

Further Comments: Boron is a new nutrient which is still being studied to determine whether it is essential in humans. Preliminary studies suggest that boron has a range of benefits. It appears to be beneficial for mental concentration, bone health, and hormonal balance.

Bovine Cartilage

<i>Preventive Intake Range:</i>	3-6 grams per day
<i>Therapeutic Intake Range:</i>	9 grams per day
<i>Useful in the Treatment of:</i>	Arthritis, cancer, wound healing, inflammation, “dry socket” (inflammation in gums after tooth extraction), appears to be particularly useful for pancreatic cancer (case report) and glioblastomas (Dr. Prudden’s assertion)
<i>May Help Prevent:</i>	Cancer, osteoarthritis, autoimmune disease
<i>Synergistic Nutrients:</i>	EPA, GLA, beneficial bacteria, zinc
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	750 mg capsules from “Vita Carte”: 12 per day is therapeutic dose for cancer and osteoarthritis
<i>Food Sources:</i>	Gristle in meat, cartilage around bone in animal products , gelatin. Therapeutic dose through food is hard to achieve.

Further Comments: Bovine cartilage treatment consists of 9 grams per day for 4 months before success can be evaluated. Doses above 9 grams per day do not offer any additional benefit according to Dr. Prudden.

Calcium

<i>Preventive Intake Range:</i>	600-1,200 mg
<i>Therapeutic Intake Range:</i>	800-1,500 mg
<i>Useful in the Treatment of:</i>	Osteoporosis, high cholesterol, hypertension, insomnia
<i>May Help Prevent:</i>	Decaying teeth, bone loss, heart disease, high blood pressure, low birth weight babies, spontaneous labor, heart attack, stroke, colon cancer, nervous system disorders, colonic and pancreatic cancer
<i>Synergistic Nutrients:</i>	EPA, GLA, magnesium, manganese, copper, zinc, boron, vitamin K, vitamin C, diet optimized for protein intake
<i>Condition Contraindications:</i>	Hyper-parathyroidism, renal failure
<i>Preferred Form:</i>	Carbonate works fine for those with good digestion. Citrate or citrate-malate is best for those with low stomach acid. Hydroxyapatite should be used in those with osteoporosis.
<i>Food Sources:</i>	Milk, cheese, yogurt, sesame seeds, salmon, almonds, Brazil nuts, kale, chard, cooked spinach, bok choy, mustard greens, pinto beans, and fish (with bones)

Further Comments: Excessive dosing with calcium without magnesium leads to an imbalance that can cause such symptoms as a slow metabolism, depression, and a relative magnesium deficiency. Vigorous exercise greatly increases need for calcium.

L-Carnitine

<i>Preventive Intake Range:</i>	500 mg-2 grams
<i>Therapeutic Intake Range:</i>	1-9 grams (3 grams equals one teaspoon of powder)
<i>Useful in the Treatment of:</i>	Obesity, fatigue, athletic performance, heart disease, infant health, low thyroid, kidney dialysis, diabetes, hypertension, liver disease, immune problems
<i>May Help Prevent:</i>	Muscle loss, liver damage from alcohol and other challenges
<i>Synergistic Nutrients:</i>	Vitamin C, CoQ10, lipoic acid, B vitamins, chromium
<i>Condition Contraindications:</i>	Insomnia
<i>Drug Contraindications:</i>	May lower need for heart drugs
<i>Preferred Form:</i>	Carnitine tartrate, carnitine magnesium citrate or carnitine base in capsules or powder. Powder is best for doses of 3 grams and higher
<i>Food Sources:</i>	Mutton, lamb, beef, milk

Further Comments: Strict vegetarians have a special need for carnitine as they get none through food. Take on empty stomach at least ½ hour before meals or 2 hours after a meal for optimal absorption.

Charcoal

<i>Preventive Intake Range:</i>	None
<i>Therapeutic Intake Range:</i>	0.5 grams per pound of body weight
<i>Useful in the Treatment of:</i>	Food poisoning, drug overdose, elevated cholesterol
<i>May Help Prevent:</i>	Effects of poisoning (call poison control for guidance in all poisoning cases)
<i>Synergistic Nutrients:</i>	2-3 drops oil of oregano
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	Charcoal in capsule form

Further Comments: Should not be taken on a regular or preventive basis. Should be in every home—it is the premier poison antidote, so some should always be on hand, especially in homes with young children.

Chlorella

<i>Preventive Intake Range:</i>	½ tsp. per day
<i>Therapeutic Intake Range:</i>	1-3 tsp. per day
<i>Useful in the Treatment of:</i>	Cleansing, detoxification, purification, iron deficiency, uranium and cadmium accumulation, weak immune system, ulcers, colitis, Crohn's disease, diverticulosis, high cholesterol, wound healing (applied topically), low energy
<i>May Help Prevent:</i>	Cancer, liver ailments, may slow the aging process
<i>Synergistic Nutrients:</i>	Antioxidants, milk thistle
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	Chlorella
<i>Food Sources:</i>	Chlorella

Further Comments: Important for vegetarians, providing B-12, protein, and iron

Chondroitin Sulfate

<i>Preventive Intake Range:</i>	100-500 mg
<i>Therapeutic Intake Range:</i>	250 mg - 2 grams
<i>Useful in the Treatment of:</i>	Osteoarthritic aches, inflammation in joints, cardiovascular disease, fat metabolism, high cholesterol, blood clots, arterial plaque accumulation, circulation
<i>May Help Prevent:</i>	Arthritis, heart disease.
<i>Synergistic Nutrients:</i>	Glucosamine, antioxidants
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	Chondroitin Sulfates
<i>Sources:</i>	Bovine cartilage and other cartilage
<i>Further Comments:</i>	10 grams daily for years has been shown to be safe in human studies.

Chromium

<i>Preventive Intake Range:</i>	200 mcg
<i>Therapeutic Intake Range:</i>	200-1,000 mcg
<i>Useful in the Treatment of:</i>	Insulin resistance, diabetes, obesity, sugar cravings, hypoglycemia, stroke, high blood pressure, Crohn's disease, colitis, ulcers, gastritis, MS, migraines, PMS tension, acne, and some psychiatric disturbances
<i>May Help Prevent:</i>	Insulin resistance and its associated conditions (Type II diabetes, heart disease, obesity, hypertension)
<i>Synergistic Nutrients:</i>	Zinc, magnesium, taurine, vitamin E, manganese, EPA, flaxseed oil
<i>Condition Contraindications:</i>	Very high doses (600 mcg and above) in hypoglycemics sometimes lead to food cravings
<i>Drug Contraindications:</i>	Will decrease need for blood sugar lowering medications
<i>Preferred Form:</i>	Picolinate, Arginate. Polynicotinate does not exist.
<i>Food Sources:</i>	Brewer's yeast, barley

Conjugated Linoleic Acid (CLA)

<i>Preventive Intake Range:</i>	100-500 mg
<i>Therapeutic Intake Range:</i>	100-1,000 mg
<i>Useful in the Treatment of:</i>	Atherosclerosis, elevated blood lipids, loss of lean tissue (cachexia), diabetes, inflammation, cancer, esp. hormonally related cancers such as breast cancer
<i>May Help Prevent:</i>	Cancer, esp. hormonally related cancers such as breast cancer, atherosclerosis, diabetes, loss of lean tissue, inflammation, heart disease
<i>Synergistic Nutrients:</i>	Vitamins E and C, selenium, zinc, lipoic acid, all carotenoids
<i>Condition and Drug</i>	None
<i>Contraindications</i>	
<i>Preferred Form:</i>	Conjugated linoleic acid
<i>Food Sources:</i>	Meat and dairy products, esp. animals allowed to graze on grass

Coenzyme Q-10

Preventive Intake Range: 10-100 mg

Therapeutic Intake Range: 60-400 mg

Useful in the Treatment of: Cardiomyopathy, high blood pressure, periodontal disease, diabetes, obesity, cancer, Alzheimer's, low sperm count, tinnitus, Meniere's disease, Bell's palsy, MS, Huntington's disease, ulcers, HIV, improved pulmonary capacity in those with chronic lung disease

May Help Prevent: Heart disease, miscarriages, immune system weakness, fatigue, oxidative stress, mitochondrial burnout in athletes

Synergistic Nutrients: Carnitine, lipoic acid, Vitamin E, lycopene, magnesium, B vitamins

Condition Low blood pressure, insomnia

Contraindications:

Preferred Form: Water-soluble form may be better absorbed and therefore require only half to one fourth the dose

Food Sources: (not significant) Organ meats, red meat, nuts, unprocessed vegetable oils, and smaller amounts in dark green vegetables and cereal bran

Further Comments: Don't take too late in the day as it is an energizing nutrient that may make it difficult to fall asleep.

Copper

<i>Preventive Intake Range:</i>	2 mg
<i>Therapeutic Intake Range:</i>	2-8 mg
<i>Useful in the Treatment of:</i>	Elevated cholesterol and triglycerides, rheumatoid arthritis, bone weakness, yeast infections, diabetes, radiation damage, cancer, convulsions, anemia
<i>May Help Prevent:</i>	Coronary heart disease, aneurysms, bone weakness, immune problems, anemia, hypertension, gout
<i>Synergistic Nutrients:</i>	Zinc, Vitamin C
<i>Condition Contraindications:</i>	High copper levels, Wilson's disease
<i>Preferred Form:</i>	Copper sebacate
<i>Food Sources:</i>	Nuts, seeds, organ meats, soy products

Further Comments: Too much or too little copper is a problem. Vegetarians and the elderly tend to be low. Most men need more. Women often have excess copper as seen in hair mineral analysis. The correct intake of zinc to copper is critical (15:1), though this should be altered when addressing an imbalance between these two minerals. Copper excess is a potential problem and can be lowered using zinc, B6, and Molybdenum. Signs of copper excess include depression, anxiety, schizophrenia, and migraines. Copper sebacate is

much less likely to cause toxicity problems than other forms of copper.

Creatine

<i>Preventive Intake Range:</i>	1-3 grams
<i>Therapeutic Intake Range:</i>	5-20 g
<i>Useful in the Treatment of:</i>	Short term athletic performance enhancement (sprints, weight lifting), increasing muscle mass
<i>May Help Prevent:</i>	Disturbances in heart rhythm, cancer
<i>Synergistic Nutrients:</i>	Carnitine, arginine, glutamine
<i>Condition Contraindications:</i>	Kidney failure
<i>Preferred Form:</i>	Creatine monohydrate
<i>Food Sources:</i>	Meat

Further Comments: Body can manufacture creatine from arginine, glycine and methionine. The main role of creatine in larger doses is to promote the growth of lean muscle mass. Ergogenic effect completely eliminated by caffeine.

DHEA

<i>Preventive Intake Range:</i>	5-25 mg upon waking
<i>Therapeutic Intake Range:</i>	5-50 mg
<i>Useful in the Treatment of:</i>	Age related decline in sex drive, immune function, energy, stamina, physical and psychological abilities, also lupus, rheumatoid arthritis, heart disease, weight loss, memory loss
<i>May Help Prevent:</i>	Heart disease, cancer, Alzheimer's, blood sugar instability, autoimmune diseases
<i>Synergistic Nutrients:</i>	Beneficial bacteria, EPA/DHA
<i>Condition Contraindications:</i>	Elevated androgens
<i>Preferred Form:</i>	DHEA
<i>Food Sources:</i>	None. High protein breakfasts naturally elevate DHEA

Further Comments: Make sure to have a doctor check blood levels first before starting therapeutic amounts of DHEA.

DMG - Dimethylglycine

<i>Preventive Intake Range:</i>	125 mg
<i>Therapeutic Intake Range:</i>	250 mg
<i>Useful in the Treatment of:</i>	Fatigue, immune function, attention span of autistic children, athletic endurance
<i>May Help Prevent:</i>	Immune weakness, fatigue, cataracts and other conditions related to increased oxidative stress
<i>Synergistic Nutrients:</i>	Carnitine, CoQ10, lipoic acid, B vitamins, magnesium
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Sublingual form from Davinci Labs
<i>Food Sources:</i>	None that are significant

Further Comments: Anecdotal evidence suggests it is very helpful for the treatment of Autism. It also works safely and effectively as a natural energizer.

Omega 3 Fish Oils
EPA & DHA

<i>Preventive Intake Range:</i>	500 mg-1 gram
<i>Therapeutic Intake Range:</i>	1-4 grams
<i>Useful in the Treatment of:</i>	Heart disease, high triglycerides, arrhythmias, high blood pressure, breast cancer, arthritis, joint disease, diabetes, all inflammatory conditions, autoimmune disease, IBS, arterial plaque, blood clots, immune system weakness, acne, psoriasis, pulmonary disorders, kidney problems, chronic fatigue, depression
<i>May Help Prevent:</i>	All of the above listed for treatment
<i>Synergistic Nutrients:</i>	Vitamins C and E, GLA, lipoic acid, zinc, fiber
<i>Condition Contraindications:</i>	
<i>Drug Contraindications:</i>	Warfarin or other blood thinners
<i>Preferred Form:</i>	SuperMaxEPA liquid, flavored Cod Liver Oil for children. CLO contains A & D while fish body oils (MaxEPA) does not.
<i>Food Sources:</i>	Sardines, salmon, mackerel, trout, all cold water fish

Omega 3

DHA

<i>Preventive Intake Range:</i>	100 mg
<i>Therapeutic Intake Range:</i>	100-300 mg
<i>Useful in the Treatment of:</i>	Depression, optimal nutrition for pregnancy, ADHD
<i>May Help Prevent:</i>	All of the above listed for treatment
<i>Synergistic Nutrients:</i>	Fish oils, flaxseed oil, GLA
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Algae extracts (Neuromins) and fish oils
<i>Food Sources:</i>	Sardines, salmon, mackerel, halibut, algae extracts.

Further Comments: We tend to eat too many ω -6 fats (safflower, sunflower, corn oil) and not enough ω -3's (flaxseed oil, fish oils). Correcting this imbalance will go a long way in treating and preventing disease.

Fiber

<i>Preventive Intake Range:</i>	1-3 Tbs. or 30 g per day
<i>Therapeutic Intake Range:</i>	10-30 grams per day
<i>Useful in the Treatment of:</i>	High cholesterol, high triglycerides, type II diabetes (guar gum), constipation (wheat and rice bran)
<i>May Help Prevent:</i>	Varicose veins, appendicitis, heart disease, colon cancer, IBS, gall bladder disease, hiatal hernia, toxin accumulation in bowels, constipation
<i>Synergistic Nutrients:</i>	None
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	Digoxin, Insulin, Lithium (take fiber one hour before Lithium)
<i>Preferred Form:</i>	Powdered psyllium husks, flaxmeal, or rice bran
<i>Food Sources:</i>	Citrus fruits, peas, oats, wheat bran, oat bran, guar gum, apple pectin, flaxmeal, psyllium husks

Flaxmeal

<i>Preventive Intake Range:</i>	1-3 Tablespoons
<i>Therapeutic Intake Range:</i>	1-8 Tablespoons
<i>Useful in the Treatment of:</i>	PMS, constipation, diverticulitis, breast and colon cancer, all hormone related cancers, arthritis
<i>May Help Prevent:</i>	Heart disease, diabetes, diverticulosis, hormone related cancers, colon cancer, arthritis
<i>Synergistic Nutrients:</i>	Vitamin E, vitamin C, selenium, beneficial bacteria
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	Blood thinning medications when high doses of flaxmeal (above 2 Tbsp.) are used
<i>Preferred Form:</i>	Freshly ground flaxmeal. It appears to keep fresh for a week when refrigerated, but grinding fresh for each use is optimal.

Flaxseed Oil
Alpha-Linolenic Acid

<i>Preventive Intake Range:</i>	1 teaspoon to 3 tablespoons per day
<i>Therapeutic Intake Range:</i>	1-5 tablespoons per day
<i>Useful in the Treatment of:</i>	Fatigue, obesity, dry skin and other skin problems, impaired immune function, heavy metal toxicity, high triglycerides, PMS, cancer
<i>May Help Prevent:</i>	Obesity, cancer, diabetes, syndrome X, PMS, skin problems
<i>Synergistic Nutrients:</i>	Vitamins C and E, GLA, zinc, B6, niacin, magnesium
<i>Condition Contraindications:</i>	Insomnia
<i>Drug Contraindications:</i>	No more than 1 tsp. per day with blood thinning medications
<i>Preferred Form:</i>	Ground flax seeds, organic flaxseed oil
<i>Food Sources:</i>	Alpha linolenic acid is also found in hemp seed, chia seeds, canola, and walnuts

Folic Acid

<i>Preventive Intake Range:</i>	400 mcg – 5 mg
<i>Therapeutic Intake Range:</i>	400 mcg – 60 mg
<i>Useful in the Treatment of:</i>	Heart disease, wound and gut healing, female problems, colitis, GI problems, cancer, cervical dysplasia*, hot flashes*, low sex drive in post menopausal women*, estrogen replacement, psoriasis, restless leg syndrome, chronic fatigue, HIV infection *20-60 mg dose
<i>May Help Prevent:</i>	Birth defects, spontaneous abortions, stroke, epilepsy, depression, mania, schizophrenia, peripheral neuropathy, periodontal disease (esp. as a mouthwash)
<i>Synergistic Nutrients:</i>	B12, B complex
<i>Condition Contraindications:</i>	Doses above 800 mcg may aggravate conditions associated with high estrogen
<i>Drug Contraindications:</i>	Up to 1 mg may be safely used with methotrexate and sulfasalazine to prevent drug side effects
<i>Food Sources:</i>	Liver, kidney, broccoli, beef, kale, turnip greens, beets and corn

Fructooligosaccharides (FOS)

<i>Preventive Intake Range:</i>	¼ tsp.- ½ tsp. per day
<i>Therapeutic Intake Range:</i>	¼ tsp - 1 tsp. per day
<i>Useful in the Treatment of:</i>	Diabetes, candida, constipation, diarrhea, ulcer symptoms
<i>May Help Prevent:</i>	Dysbiosis, high blood sugar, cavities, high blood pressure, high cholesterol and high triglycerides
<i>Synergistic Nutrients:</i>	None
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Syrup or powder
<i>Food Sources:</i>	Bananas, onions, barley, tomatoes, asparagus, garlic (food sources are not significant enough to have a therapeutic effect)

Further Comments: Therapeutic amounts cannot be obtained from food. FOS feeds the bifido bacteria in your gut. Increase amounts of bifido bacteria before using high amounts of FOS or mild diarrhea may result.

GABA

<i>Preventive Intake Range:</i>	500 mg
<i>Therapeutic Intake Range:</i>	500 mg - 2g taken in divided doses.
<i>Useful in the Treatment of:</i>	Anxiety, convulsions, mood swings, insomnia, PMS
<i>May Help Prevent:</i>	Anxiety, poor sleep, elevation of stress hormones, stress damage to the brain
<i>Synergistic Nutrients:</i>	Vitamin B6, zinc
<i>Condition Contraindications:</i>	Depression
<i>Preferred Form:</i>	GABA. Valerian does contain some GABA as well.
<i>Food Sources:</i>	None that yield a therapeutic effect

Further Comments: GABA is the best nutrient sedative there is. Niacinamide comes in second. However, some feel better on herbals such as kava or valerian. Experiment to see which works best in each individual case.

Gamma Oryzanol

<i>Preventive Intake Range:</i>	150 mg
<i>Therapeutic Intake Range:</i>	300-600 mg
<i>Useful in the Treatment of:</i>	Digestive problems, heart disease, menopause, depression, muscle gain, symptoms of prostate disorder
<i>May Help Prevent:</i>	Depression, digestive problems, heart disease
<i>Synergistic Nutrients:</i>	Tocotrienols, vitamin E, antioxidants
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Gamma-oryzanol
<i>Food Sources:</i>	Rice bran and rice bran oil

GLA
Gamma-Linolenic Acid

<i>Preventive Intake Range:</i>	50-300 mg
<i>Therapeutic Intake Range:</i>	240-1500 mg
<i>Useful in the Treatment of:</i>	Immune weakness, chronic fatigue, high cholesterol, cancer, rheumatoid arthritis, PMS, diabetes, skin disorders, dry skin, MS, fatigue
<i>May Help Prevent:</i>	Premature aging, autoimmune diseases, and all ailments listed for treatment
<i>Condition Contraindications</i>	Manic episodes of bipolar disorder, insomnia
<i>Synergistic Nutrients:</i>	EPA/DHA, vitamin E, B vitamins, vitamin C, magnesium
<i>Preferred Form:</i>	Borage seed oil, black current seed oil, evening primrose oil
<i>Food Sources:</i>	Spirulina (100 mg GLA per tablespoon)

Further comments: Fish oil therapy creates a need for GLA, because fish oils will suppress the D6D enzyme the body uses to make GLA.

D-Glucarate

Preventive Intake Range: 200 mg
Therapeutic Intake Range: 200 mg twice daily
Useful in the Treatment of: Cancer, elevated cholesterol

May Help Prevent: Cancer, atherosclerosis

Condition Contraindications No long-term safety studies

Synergistic Nutrients: Retinoids, 5-fluorouracil

Preferred Form: Calcium-D-glucarate

Food Sources: Cruciferous vegetables, bean sprouts and apples

Further comments: Animal and in-vitro work have been done to show anticancer and lipid-lowering effects.

Glucosamine

<i>Preventive Intake Range:</i>	500-1,500 mg (esp. for athletes)
<i>Therapeutic Intake Range:</i>	500 mg 2-6x per day (1-3 grams) 3 weeks to 3 months are usually needed before results are seen
<i>Useful in the Treatment of:</i>	Osteoarthritis, cancer, asthma
<i>May Help Prevent:</i>	Osteoarthritis
<i>Synergistic Nutrients:</i>	Chondroitin sulfates, fish oils, bovine cartilage, antioxidants, molybdenum, folic acid, B12, boswellia
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Glucosamine hydrochloride which works just as well as the sulfate and costs dramatically less. The sulfate does have more research behind it, but this does not justify triple the cost. N-acetyl-glucosamine is useful for asthma and perhaps leaky gut.
<i>Food Sources:</i>	Gristle in meat, and cartilage around bone

Glutamine

<i>Preventive Intake Range:</i>	1-5 grams
<i>Therapeutic Intake Range:</i>	5-40 grams
<i>Useful in the Treatment of:</i>	Gastrointestinal problems, leaky gut, IBS, wound healing, immune system weakness, viral infections, chronic fatigue, sugar cravings, alcohol cravings, sore muscles, preservation of muscle tissue
<i>May Help Prevent:</i>	Immune weakness, muscle loss, leaky gut
<i>Synergistic Nutrients:</i>	B6, magnesium
<i>Condition Contraindications:</i>	Advanced cirrhosis, high blood ammonia levels
<i>Drug Synergy</i>	Useful in protection of the GI tract against the damage of NSAIDS (Advil, Motrin, etc.)
<i>Preferred Form:</i>	Powdered form
<i>Food Sources:</i>	Meat and other animal products
<i>Further Comments:</i>	Very beneficial pre- and post surgery to promote healing.

Glutathione

<i>Preventive Intake Range:</i>	1-8 grams
<i>Therapeutic Intake Range:</i>	People with proven deficiency should be treated by a doctor, and may require intravenous or intramuscular injections
<i>Useful in the Treatment of:</i>	Cancer, hepatic dysfunction, immune dysfunction, cardiac disease, diabetes, inflammatory bowel, neurodegenerative disease, toxic metal elimination, HIV and AIDS
<i>May Help Prevent:</i>	Immune weakness, cancer, cataract formation, premature aging
<i>Synergistic Nutrients:</i>	Vitamin C and E
<i>Condition Contraindications:</i>	No side effects or interactions are associated with oral intake
<i>Preferred Form:</i>	Powdered or capsule form
<i>Food Sources:</i>	Asparagus, avocado, walnuts, fish and meat

Glycerol Monolaurate (Monolaurin)

<i>Preventive Intake Range:</i>	1-3 capsules
<i>Therapeutic Intake Range:</i>	4-6 capsules of 300 mg each at first sign of viral infection
<i>Useful in the Treatment of:</i>	Viral infections such as influenza, herpes I and II, and the chronic fatigue viruses cytomegalovirus, Epstein-Barr virus, and herpes 6 virus
<i>May Help Prevent:</i>	Viral infections of all kinds, from colds and flus to more serious conditions
<i>Synergistic Nutrients:</i>	Vitamin C, vitamin A, zinc, oregano oil, and olive leaf extract
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	Monolaurin from Ecological Formulas/Cardiovascular Research
<i>Food Sources:</i>	Fresh coconut and coconut oil are the best sources. Lauric acid is found in palm oil and butterfat as well.

Further Comments: Best given at first sign of flu symptoms at high dose, then down to 600 mg when symptoms begin to subside.

Glycine

<i>Preventive Intake Range:</i>	None
<i>Therapeutic Intake Range:</i>	3-30 g spread throughout the day (empty stomach)
<i>Useful in the Treatment of:</i>	Wound healing, aluminum toxicity, high triglycerides, gout, myasthenia, spasticity, epilepsy, detoxification, kidney disease, manic depression and in large doses causes growth hormone release
<i>May Help Prevent:</i>	Damage from aspirin consumption when salt of glycine is taken in 1:1 ratio with aspirin
<i>Synergistic Nutrients:</i>	B6
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Non-therapeutic amounts from food
<i>Food Sources:</i>	Wild game, meat, chicken, turkey, cheese, eggs, whole milk, yogurt

HCL

<i>Preventive Intake Range:</i>	None
<i>Therapeutic Intake Range:</i>	500-1,000 mg with each meal of betaine HCL
<i>Useful in the Treatment of:</i>	Sluggish digestion, food allergies, candida, heartburn
<i>May Help Prevent:</i>	Low levels may aggravate diabetes, asthma, food allergies, osteoporosis, anemia, candida, rheumatoid arthritis, intestinal infections, psoriasis, vitiligo, hives, eczema, dermatitis, herpetiformis, acne, low absorption of minerals and nutrients
<i>Synergistic Nutrients:</i>	Pancreatic enzymes, fiber, probiotics, FOS, DGL, glutamine
<i>Condition Contraindications:</i>	Ulcers
<i>Drug Contraindications:</i>	Tagamet, Xantac
<i>Preferred Form:</i>	Betaine HCL
<i>Food Sources:</i>	None

Further Comments: If taking 1 Tbs. of vinegar gives heartburn relief, then HCL will be therapeutic. Quick fullness after a meal is a sign of HCL deficiency. Heidelberg test can determine HCL levels. If low, start taking small amounts and gradually build up.

Indole-3-Carbinol

Preventive Intake Range: 200-800 mg

Therapeutic Intake Range: 200-800 mg

Useful in the Treatment of: Cancer, atherogenic-activity

May Help Prevent: Cancer, atherogenic-activity, formation of papillomatosis cysts, free radical damage

Synergistic Nutrients: None

Condition Contraindications: No long-term safety studies have been done

Drug Contraindications: Antacids, H2 blockers, proton-pump inhibitors

Preferred Form: Indole-3-carbinol

Food Sources: Cabbage, broccoli sprouts, Brussels sprouts, cauliflower, bok choy, kale

Further Comments: The conversion of indole-3-carbinol to DIM and ICZ (indole carbazole) requires stomach acid. Indole-3-carbinol may be synergistic with tamoxifen in protecting against breast cancer.

Inositol Hexanicotinate

(No Flush Niacin)

<i>Preventive Intake Range:</i>	100-500 mg
<i>Therapeutic Intake Range:</i>	800-2,400 mg
<i>Useful in the Treatment of:</i>	High LDL cholesterol, high triglycerides, heart health, insomnia, depression, anxiety, obesity, female health, intermittent claudication
<i>May Help Prevent:</i>	Senility, diabetic neuropathy, type II diabetes, atherosclerosis
<i>Synergistic Nutrients:</i>	B complex, phosphatidyl choline, magnesium, carnitine, milk thistle
<i>Condition Contraindications:</i>	Unstable cardiac arrhythmias, recent heart attack, gout, elevated blood sugar, hepatitis
<i>Drug Contraindications:</i>	Enhances effects of vasodilating drugs and cholesterol lowering drugs
<i>Preferred Form:</i>	Inositol Hexanicotinate
<i>Food Sources:</i>	Fresh produce, whole grains, meat, milk

Further Comments: Inositol Hexanicotinate has all the benefits of vitamin B-3 without the side effects. Will not cause flushing as does Niacin, nor will it irritate the liver. Other time released forms are not safe nor recommended. Many notice its relaxing, anxiety-easing effects.

Iodine

<i>Preventive Intake Range:</i>	75-150 mcg
<i>Therapeutic Intake Range:</i>	75-300 mcg
<i>Useful in the Treatment of:</i>	Fibrocystic breasts, PMS, endometriosis, uterine fibroids, estrogen modulation, healthy pregnancy, iodine deficiency goiter
<i>May Help Prevent:</i>	Birth defects, goiter, damage during prenatal neuron development
<i>Synergistic Nutrients:</i>	Selenium
<i>Condition Contraindications:</i>	Selenium deficiency, autoimmune thyroiditis, hyperthyroid, goiter linked to excessive iodine intake
<i>Drug Contraindications:</i>	Thyroid suppressing drugs
<i>Preferred Form:</i>	Seaweeds such as kelp, potassium iodide and other forms
<i>Food Sources:</i>	Seafood, seaweed, iodized salt

Further Comments: Pregnancy increases iodine need and puts a great strain on body iodine stores. High dose of iodine can be toxic and should be supervised. Japanese typically consume 1,000 mcg with no adverse effects. Iodine supplements must always be combined with selenium supplements.

Iron

<i>Preventive Intake Range:</i>	0-18 mg per day
<i>Therapeutic Intake Range:</i>	18 mg 1-2 times daily
<i>Useful in the Treatment of:</i>	Iron deficiency anemia
<i>May Help Prevent:</i>	Anemia in long distance runners and women with heavy periods
<i>Synergistic Nutrients:</i>	Vitamins C and E, copper, B6, folate and B12
<i>Condition Contraindications:</i>	Hemochromatosis, gastrointestinal infection, bacterial infections of any kind
<i>Drug Contraindications:</i>	Anti-inflammatory medications
<i>Preferred Form:</i>	Animal foods, liquid liver extract, iron glycinate
<i>Food Sources:</i>	Meat, poultry and fish

Further Comments: First determine if your client is deficient before recommending iron. Use serum ferritin if possible to assess iron status. Serum ferritin should be below 50, under 30 in cancer patients. Too much or too little iron are both harmful. Too much causes fatigue (just like anemia), as well as cancer, heart disease, diabetes, free radical formation, gastritis, infections in gut, stomach problems, inflammation, arthritis, cataracts, liver cancer, and perhaps Parkinson's. Men should not take iron unless they are deficient, and multivitamins with iron in them should not be taken. Men should avoid iron-fortified foods such as Product 19. Remember that the body sequesters iron during bacterial infections to keep it from the bacteria. Giving iron during such times may only feed the bacteria and worsen the infection.

Larch Arabinogalactan

Preventive Intake Range: 1-5 grams
Therapeutic Intake Range: 10-30 grams (g.i. side-effects may occur)
Useful in the Treatment of: Depressed immune system, gut permeability, *candida*

May Help Prevent: Cancer

Synergistic Nutrients:

Condition Contraindications: Those who require a low galactose diet should avoid

Preferred Form: Capsules

Food Sources: Carrots, radishes, tomatoes, pears and wheat

Larch arabinogalactan is considered nondigestible soluble fiber. It may stimulate the colonic growth of bifidobacteria and lactobacilli.

Lipoic Acid

<i>Preventive Intake Range:</i>	25-100 mg
<i>Therapeutic Intake Range:</i>	50-1,000 mg
<i>Useful in the Treatment of:</i>	Liver ailments including hepatitis, diabetes, cancer, AIDS, immune disorders, low energy, toxic metal detoxification, weight loss, depression, neurodegenerative disorders, heart disease, cataracts
<i>May Help Prevent:</i>	Diabetes, liver problems, type II diabetes, neurodegenerative diseases, and all diseases caused by oxidative stress
<i>Synergistic Nutrients:</i>	Vitamin C, vitamin E, B complex
<i>Condition Contraindications:</i>	May reduce need for diabetic medications
<i>Preferred Form:</i>	Lipoic acid and alpha-lipoic acid are the same and only form available
<i>Food Sources: (not significant)</i>	Liver, meat

Lutein And Zeaxanthin

<i>Preventive Intake Range:</i>	5-10 mg
<i>Therapeutic Intake Range:</i>	10-20 mg
<i>Useful in the Treatment of:</i>	Eye disease, cataracts, macular degeneration
<i>May Help Prevent:</i>	Eye disease, macular degeneration, cataracts, blindness, heart disease
<i>Synergistic Nutrients:</i>	Vitamin C
<i>Condition Contraindications:</i>	Liver disease
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Supplements that use a natural source for their carotenoids
<i>Food Sources:</i>	Kale, collard greens, spinach, and green leafy vegetables

Lycopene

<i>Preventive Intake Range:</i>	5-10 mg
<i>Therapeutic Intake Range:</i>	5-20 mg
<i>Useful in the Treatment of:</i>	Heart health, reducing LDL cholesterol and protecting it from oxidation, perhaps prostate cancer and other cancers
<i>May Help Prevent:</i>	Breast, lung, endometrial, and prostate cancer and heart and artery disease
<i>Synergistic Nutrients:</i>	All carotenoids and antioxidants
<i>Condition Contraindications:</i>	Alcoholism or those with impaired liver function
<i>Drug Contraindications:</i>	Liver damaging medications
<i>Preferred Form:</i>	Supplements from a food source
<i>Food Sources:</i>	Tomatoes, watermelons, guavas, dark green leafy vegetables, pink grapefruits (not found in strawberries or red peppers)
<i>Further Comments:</i>	Lycopene should be taken along with fat in the meal for optimal absorption. Like all carotenoids, lycopene is safe during pregnancy.

Lysine

Preventive Intake Range: 1-3 grams

Therapeutic Intake Range: 2-6 grams

Useful in the Treatment of: Herpes simplex, bone health, cold sores, immune weakness

May Help Prevent: Cataracts, osteoporosis, loss of muscle tissue, heart disease

Synergistic Nutrients: Vitamin A, C, bioflavonoids, bromelain, arginine

Condition Impotence

Contraindications:

Drug Contraindications: None

Preferred Form: L-Lysine

Food Sources: Red meat, turkey, chicken, beans

Further Comments: Vegetarians or those eating a low protein diet are usually low in lysine and often benefit from supplementation. Processing of foods such as grains often removes much of the lysine.

Magnesium

<i>Preventive Intake Range:</i>	400-800 mg
<i>Therapeutic Intake Range:</i>	400-1,000 mg (watch for loose bowels at higher doses)
<i>Useful in the Treatment of:</i>	Heart disease, weak immune function, high blood pressure, high LDL, diabetes, asthma, chronic fatigue, fibromyalgia, muscle cramps, bone health, muscle building, mental health, kidney stones, MVP, arrhythmias
<i>May Help Prevent:</i>	Stroke, heart attacks, kidney stones, all conditions listed above
<i>Synergistic Nutrients:</i>	Calcium, carnitine, CoQ10, B vitamins
<i>Condition Contraindications:</i>	Kidney failure, monotherapy with cardiac arrhythmias (must be combined with potassium)
<i>Drug Contraindications:</i>	Amiloride, Ciprofloxacin, Sulfonyureas, Tetracycline, Warfarin
<i>Preferred Form:</i>	Magnesium glycinate, magnesium ascorbate, magnesium chloride, magnesium malate in FM
<i>Food Sources:</i>	Nuts, seeds, leafy greens, seafood

Manganese

<i>Preventive Intake Range:</i>	2.5-5 mg
<i>Therapeutic Intake Range:</i>	5-25 mg (do not take long term above 10 mg)
<i>Useful in the Treatment of:</i>	Heart disease (helps HDL work), wound healing, bone and joint health, blood sugar balance, osteoarthritis, diabetes, hypoglycemia, seizure disorders
<i>May Help Prevent:</i>	Heart disease, birth defects, rheumatoid arthritis, osteoporosis, cataracts, seizure disorders, free radical damage
<i>Synergistic Nutrients:</i>	Zinc, copper, vitamin C
<i>Condition Contraindications:</i>	Possibly neurodegenerative diseases, criminal behavior (associated with high Mn levels)
<i>Preferred Form:</i>	Most forms are fine
<i>Food Sources:</i>	Nuts, seeds, berries

MCT Oil
Medium Chain Triglycerides

<i>Preventive Intake Range:</i>	1 tsp. or 1000 mg capsule
<i>Therapeutic Intake Range:</i>	1 tsp. to 2 Tbsp. of liquid
<i>Useful in the Treatment of:</i>	Energy, weight loss, sports endurance, digestive disorders and possibly in the management of cystic fibrosis, epilepsy, cholesterol gallstones, and cirrhosis
<i>May Help Prevent:</i>	Fatigue, obesity
<i>Synergistic Nutrients:</i>	Carnitine
<i>Condition Contraindications:</i>	Insomnia
<i>Preferred Form:</i>	MCT Oil
<i>Food Sources:</i>	Coconut and coconut oil

Melatonin

<i>Preventive Intake Range:</i>	0.5-2 mg
<i>Therapeutic Intake Range:</i>	3-100 mg
<i>Useful in the Treatment of:</i>	Insomnia, jet lag, cancer, heart disease, headache, and possibly sarcoidosis
<i>May Help Prevent:</i>	Alzheimer's, cataracts, heart disease, neurological disorders, cancer, age related decline, oxidative damage
<i>Synergistic Nutrients:</i>	DHEA, pregnenolone, B6, B12, niacinamide, acetyl L-Carnitine
<i>Condition Contraindications:</i>	Fatigue
<i>Preferred Form:</i>	Synthetically derived melatonin (not from animal sources)
<i>Sources:</i>	Deep sleep in dark surroundings, urine, (Indian urine therapy) exercise

Further Comments: Natural production of melatonin is suppressed by lack of sleep, insufficient darkness, electromagnetic radiation from electric blankets and waterbed heaters and alcohol consumption.

L-Methionine

<i>Preventive Intake Range:</i>	Amount in mixed diet usually suffices unless one is a strict vegetarian or on a very low protein diet
<i>Therapeutic Intake Range:</i>	1500-4000 mg
<i>Useful in the Treatment of:</i>	Depression, liver disease, osteoarthritis, Parkinson's, MS, fibromyalgia, chronic fatigue
<i>May Help Prevent:</i>	Fatty liver, poor protein synthesis
<i>Synergistic Nutrients:</i>	B6, Folic acid, B12, phosphatidyl choline
<i>Condition Contraindications:</i>	Elevated homocysteine refractory to nutrient therapy
<i>Preferred Form:</i>	L-Methionine
<i>Food Sources:</i>	Meat, poultry, seafood, nuts and seeds

Further Comments: Especially important for strict vegetarians, those who use soy foods as their sole protein source, or those on low-protein diets.

Methyl-sulfonyl-methane-MSM

Preventive Intake Range: 250-1000 mg

Therapeutic Intake Range: 1250-5000 mg

Useful in the Treatment of: GERD, heartburn, allergies, arthritis

May Help Prevent: Breast cancer

Synergistic Nutrients:

Condition Contraindications: None known

Preferred Form: Powder or capsules

Food Sources: Meat, fish, eggs, poultry, milk, grains, legumes, cruciferous vegetables, fruits

Further Comments: *MSM is lost food processing* and storage, dietary sources may

not

offer enough MSM for therapeutic needs

Molybdenum

<i>Preventive Intake Range:</i>	200-500 mcg
<i>Therapeutic Intake Range:</i>	200-1,000 mcg
<i>Useful in the Treatment of:</i>	Arthritis, aldehyde toxicity (feeling “spaced out”), energy production, detoxification, candida, asthma (I.V.: Jonathan Wright) , low uric acid levels, seizures in newborns, Wilson’s Disease
<i>May Help Prevent:</i>	Complications during pregnancy, gastrointestinal cancer, tooth decay, elevated copper
<i>Synergistic Nutrients:</i>	Zinc, B6, vitamin C (for copper removal)
<i>Condition Contraindications:</i>	Gout
<i>Drug Contraindications:</i>	Alipurinol (Gout medication)
<i>Preferred Form:</i>	Molybdenum malate, most forms
<i>Food Sources:</i>	Legumes, grains, black pepper, black tea

N-Acetyl-Cysteine (NAC)

<i>Preventive Intake Range:</i>	500 mg -1 gram
<i>Therapeutic Intake Range:</i>	1-5 grams
<i>Useful in the Treatment of:</i>	AIDS, liver ailments, heart disease, oxidative stress of any kind, hypertension, high cholesterol, mucous build up in lungs, bronchial infections, colitis, elevated lipoprotein (a), hair loss
<i>May Help Prevent:</i>	Cancer, oxidative damage, aging process, heart disease
<i>Synergistic Nutrients:</i>	Vitamin C, selenium, lipoic acid, milk thistle
<i>Condition Contraindications:</i>	Perhaps out of control diabetes, (NAC may block insulin receptors, but it is beneficial in reducing oxidative stress), low copper or zinc levels
<i>Drug Contraindications:</i>	Consult with physician before taking with nitroglycerine
<i>Preferred Form:</i>	N-Acetyl-Cysteine
<i>Food Sources:</i>	Meats, seafood, liver, nuts and seeds

NADH

<i>Preventive Intake Range:</i>	2.5-5 mg
<i>Therapeutic Intake Range:</i>	2.5-20 mg
<i>Useful in the Treatment of:</i>	Energy metabolism, brain function, Parkinson's, chronic fatigue, depression, heart, brain, and liver problems and virtually all chronic disease
<i>May Help Prevent:</i>	Parkinson's, many chronic and neurodegenerative diseases
<i>Synergistic Nutrients:</i>	CoQ10, carnitine, phosphatidyl serine, vitamins C and E, B complex, magnesium
<i>Condition Contraindications:</i>	Insomnia, mania of bipolar disorder
<i>Drug Contraindications:</i>	Sedative medications
<i>Preferred Form:</i>	NADH known as "ENADA" from various manufacturers such as Menuco
<i>Food Sources:</i>	None

Further Comments: An expensive supplement that is uniquely energizing. Must be taken on an empty stomach twenty minutes before meals.

Vitamin B-3:
Niacinamide

<i>Preventive Intake Range:</i>	50 mg
<i>Therapeutic Intake Range:</i>	100-2000 mg
<i>Useful in the Treatment of:</i>	Type I and II diabetes, osteoarthritis, anxiety, depression, ADD, alcoholism, schizophrenia
<i>May Help Prevent:</i>	Type I diabetes if given from age six months onward, perhaps other autoimmune ailments
<i>Synergistic Nutrients:</i>	B-complex, magnesium, phosphatidyl choline, lipoic acid
<i>Condition Contraindications:</i>	Liver damage
<i>Drug Contraindications:</i>	Liver damaging medications
<i>Preferred Form:</i>	Niacinamide, and time released forms if they are available
<i>Food Sources:</i>	Meat, poultry, dairy, seafood, nuts, seeds

Further Comments: Will not cause skin flushing, but high doses (over 1 g) could cause nausea or extreme drowsiness. Monitor liver enzymes in regular doses above 250 mg. Niacinamide does not have the cholesterol lowering effects of niacin.

Vitamin B3:

Niacin

<i>Preventive Intake Range:</i>	50-100 mg
<i>Therapeutic Intake Range:</i>	100-5,000 mg
<i>Useful in the Treatment of:</i>	High LDL, low HDL, high triglycerides, heart health, anxiety, cancer, schizophrenia, dementia, circulation problems, intermittent claudication
<i>May Help Prevent:</i>	Heart disease, cancer, dementia
<i>Synergistic Nutrients:</i>	B Complex, vitamin C, chromium, guggulipid, phosphatidyl choline, lipoic acid
<i>Condition Contraindications:</i>	Unstable cardiac arrhythmias, recent heart attack patients, liver damage, gout. May raise blood sugar in diabetics if used alone.
<i>Drug Contraindications:</i>	Liver damaging medications
<i>Preferred Form:</i>	Inositol hexanicotinate and regular niacin- Avoid all resin-bound time-released niacin. For those who want a niacin flush to stimulate circulation, regular niacin may be best.
<i>Food Sources:</i>	Red meat, nuts

Further Comments: May cause a harmless flushing reaction when doses over 50 mg taken. May irritate liver. Monitor liver enzymes in regular dosing above 100 mg.

Octacosanol

<i>Preventive Intake Range:</i>	1-5 mg
<i>Therapeutic Intake Range:</i>	5-25 mg
<i>Useful in the Treatment of:</i>	Nerve damage of any kind, lack of energy, MS, athletic endurance, neurological disorders, ALS
<i>May Help Prevent:</i>	Nerve damage
<i>Synergistic Nutrients:</i>	Antioxidants, ALC, PS, EFAs, B complex
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Prometabs from Viobin (5 mg per tablet)
<i>Food Sources:</i>	Wheat germ oil, though this oil may often be rancid

Further Comments: Octacosanol is really a family of alcohol compounds. To get the full spectrum of octacosanols, use the natural source wheat germ concentrate from Viobin, not the synthetic single octacosanols from other manufacturers.

PABA

<i>Preventive Intake Range:</i>	250-500 mg
<i>Therapeutic Intake Range:</i>	6-12 grams
<i>Useful in the Treatment of:</i>	Menopausal symptoms, scleroderma, Peyronie's disease, joint disorders, skin discoloration, fatigue (in some), adrenal exhaustion, inflammation, thyroiditis, chemical sensitivities, oxidative damage from ozone, GI damage from allergies to gluten
<i>May Help Prevent:</i>	Sunburn
<i>Synergistic Nutrients:</i>	B complex, magnesium
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	PABA
<i>Food Sources:</i>	Many, but none deliver therapeutic amounts

Pancreatic Enzymes

<i>Preventive Intake Range:</i>	None
<i>Therapeutic Intake Range:</i>	1-3 capsules taken one hour after a meal
<i>Useful in the Treatment of:</i>	Food malabsorption based symptoms, leaky gut, gluten-intolerance, lactose-intolerance, food allergy
<i>May Help Prevent:</i>	Food allergies, leaky gut
<i>Synergistic Nutrients:</i>	Zinc, herbal bitters, betaine HCL in some
<i>Condition Contraindications:</i>	Ulcers
<i>Drug Contraindications:</i>	NSAIDS
<i>Preferred Form:</i>	Animal derived pancreatic enzymes and the fungal enzymes from <i>Aspergillus oryzae</i>
<i>Food Sources:</i>	None

Further Comments: Laboratory test are the best way to determine a deficiency of pancreatic enzymes, however, gas or bloating an hour or so after eating a fatty meal may signal the need as well.

Pantethine

<i>Preventive Intake Range:</i>	100-300 mg
<i>Therapeutic Intake Range:</i>	300-900 mg
<i>Useful in the Treatment of:</i>	Heart disease, arthritis, colitis, Crohn's Disease, allergies, candida, chemical sensitivities, adrenal problems, any condition requiring anti-inflammatory drugs, autoimmune disorders, acne, skin health, gout, obesity
<i>May Help Prevent:</i>	Heart disease, syndrome X
<i>Synergistic Nutrients:</i>	B-Complex, carnitine, EPA, magnesium, molybdenum
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Pantethine is more effective than pantothenic acid in most circumstances
<i>Food Sources:</i>	None

Pantothenic Acid

<i>Preventive Intake Range:</i>	50-100 mg
<i>Therapeutic Intake Range:</i>	100-5000 mg
<i>Useful in the Treatment of:</i>	Fatigue, adrenal exhaustion, inflammation, gout, osteoarthritis, weight loss
<i>May Help Prevent:</i>	Fatigue, adrenal exhaustion, gout
<i>Synergistic Nutrients:</i>	B-complex, magnesium, carnitine, EPA
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Calcium pantothenate
<i>Food Sources:</i>	Meat, poultry, nuts, seeds

Phosphatidyl Choline
Also called "Lecithin"

Preventive Intake Range: 500-1000 mg

Therapeutic Intake Range: 1-20 grams

Useful in the Treatment of: Elevated homocysteine levels, impaired liver function, assault against the liver by alcohol and other toxins, uterine fibroids, fibrocystic breasts, endometriosis, weight loss, acetylcholine production for nerve nutrition (trembling, slurred speech) Huntington's disease, and Tourette's syndrome

May Help Prevent: Liver disorders, nervous system damage, heart disease, breast and endometrial cancer

Synergistic Nutrients: Vitamin C and Calcium

Preferred Form: Phosphatidyl choline from lecithin granules (35%) or from PC softgels

Food Sources: Egg yolks, soybeans, dandelion greens, nuts, seeds

Potassium

<i>Preventive Intake Range:</i>	99-495 mg (suppl.)/5-10 g (diet)
<i>Therapeutic Intake Range:</i>	5-10 grams (diet)
<i>Useful in the Treatment of:</i>	Fatigue, heart conditions, high blood pressure, muscle tone and energy, nerve health, athletic performance, muscle weakness, leg cramps, cancer
<i>May Help Prevent:</i>	Heart disease, high blood pressure, cancer, fatigue
<i>Synergistic Nutrients:</i>	Magnesium
<i>Condition Contraindications:</i>	Kidney failure
<i>Drug Contraindications:</i>	ACE inhibitors, Amiloride (all potassium-sparing diuretics), Cortrimoxazole,
<i>Preferred Form:</i>	Food, potassium citrate, liquid potassium preparation, green drinks
<i>Food Sources:</i>	Yogurt, leafy greens, vegetable juice, baked potato, almonds, sunflower seeds, halibut, cod, turkey, chicken

Pregnenolone

<i>Preventive Intake Range:</i>	5-20 mg
<i>Therapeutic Intake Range:</i>	10-40 mg
<i>Useful in the Treatment of:</i>	Pain and swelling from rheumatoid arthritis, anxiety, fatigue, MS, asthma, depression, memory enhancement, getting off of prednisone
<i>May Help Prevent:</i>	Age related decline
<i>Synergistic Nutrients:</i>	DHEA
<i>Condition Contraindications:</i>	Progesterone dominance
<i>Preferred Form:</i>	Pregnenolone
<i>Food Sources:</i>	None

Further Comments: Make sure to have a doctor check blood levels first before starting therapeutic amounts of pregnenolone. Bloating and fluid retention indicates that the dose is too high.

Phosphatidyl Serine (PS)

<i>Preventive Intake Range:</i>	100-300 mg
<i>Therapeutic Intake Range:</i>	100-500 mg
<i>Useful in the Treatment of:</i>	Age related mental decline, Alzheimer's, poor memory, cerebral endurance, ADHD, emotional and physical stress, seasonal depression, exercise recovery
<i>May Help Prevent:</i>	Memory loss, stress-related damage to the brain, Alzheimer's, Parkinson's, alcohol's influences on brain function
<i>Synergistic Nutrients:</i>	Acetyl-L-carnitine, vitamins C and E, B vitamins, magnesium, selenium, NADH
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Phosphatidyl Serine in softgels
<i>Food Sources:</i>	Brain, but don't eat it.

Further Comments: Most should start with 300 mg per day for a month and then move to 100 mg per day as maintenance.

Policosanol

Therapeutic Intake Range: 5 mg daily with dinner
This may be increased to 5 mg twice daily with lunch and dinner

Useful in the Treatment of: Cholesterol and platelet aggregation reduction, intermittent claudication

May Help Prevent: Atherosclerosis

Synergistic Nutrients: Aspirin

Condition Contraindications: Those taking Warfarin and hemophiliacs. Should be stooped before surgery

Drug Contraindications: None known

Preferred Form: Capsule

Food Sources: Waxes found in sugar cane and yams

Further Comments: Mild gastrointestinal side effects, skin rash, headache, insomnia and weight loss have been reported. Incidence to adverse reactions is low. Generally well tolerated

Pyruvate

<i>Intake Range:</i>	5-6 gms daily
<i>Useful in the Treatment of:</i>	Obesity, high blood pressure, elevated lipid levels, exercise endurance
<i>May Help Prevent:</i>	Damage from ischemia, insulin resistance
<i>Synergistic Nutrients:</i>	Acetyl-L-carnitine
<i>Condition Contraindications:</i>	None known
<i>Drug Contraindications:</i>	None known
<i>Preferred Form:</i>	Capsules, powder, tablets

Further Comments: Greater than 5 gms per day have reported abdominal discomfort and bloating, gas and diarrhea.

Royal Jelly

Preventive Intake Range:	¼ tsp. on empty stomach
Therapeutic Intake Range:	Same
<i>Useful in the Treatment of:</i>	Low energy, weak adrenal glands, weak immune system, increasing nutrient absorption, diabetes, bacterial infections, cancer
<i>May Help Prevent:</i>	Cancer, fatigue
<i>Synergistic Nutrients:</i>	Bee propolis, bee pollen
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	Non-freeze dried royal jelly that has been kept refrigerated
<i>Food Sources:</i>	Royal Jelly

Further Comments: Increase in energy and other benefits may take weeks or months of supplementation before they are noticed.

S-adenosyl-L-methionine-SAMe

Preventive Intake Range: 200 mg
Therapeutic Intake Range: 400 mg 3-4 times/day
Useful in the Treatment of: Osteoarthritis, depression, liver conditions, fibromyalgia

May Help Prevent: Slow progression of osteoarthritis, “chondroprotective” agent

Synergistic Nutrients: Methionine, folate, or vitamin B12 deficiencies can reduce SAME levels

Condition Bipolar disease should avoid, as it can trigger manic episodes

Contraindications:

Drug Contraindications: Those taking antidepressants or levodopa should avoid unless under medical supervision

Preferred Form: Softgel

Food Sources: Not found in significant quantities in foods

Selenium

<i>Preventive Intake Range:</i>	200-400 mcg
<i>Therapeutic Intake Range:</i>	400 mcg-1,000 mcg
<i>Useful in the Treatment of:</i>	AIDS, cancer, heart disease, rheumatoid arthritis, asthma, heavy metal poisoning, pancreatitis, Crohn's, colitis, IBS, any inflammatory condition, hypothyroid, male and female reproductive health
<i>May Help Prevent:</i>	Cancer, asthma, arthritis, immune weakness, miscarriage, sudden infant death, MS
<i>Synergistic Nutrients:</i>	Vitamin E, vitamin C, lipoic acid, NAC, all antioxidants
<i>Condition</i>	Garlicky breath and hair loss associated with selenium toxicity
<i>Contraindications:</i>	
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Selenomethionine or "Selenomax"(tabs) Sodium Selenite (liquid)
<i>Food Sources:</i>	Brewer's yeast, seafood, vegetables grown in selenium-rich soil

Further Comments: Taking 200 mcg of selenium per day cuts cancer risk by 50% according to research in 1312 people over 10 years. Soil content of selenium can vary by 1000 fold only one acre away.

Silicon

<i>Preventive Intake Range:</i>	2-5 mg
<i>Therapeutic Intake Range:</i>	5-10 mg
<i>Useful in the Treatment of:</i>	Skin, nail and hair health, bone and cartilage development
<i>Useful in the Prevention of:</i>	Arthritis, Alzheimer's?
<i>Synergistic Nutrients:</i>	All minerals, vitamin C
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Liquid, capsules, or horsetail extract
<i>Food Sources:</i>	Apples, unrefined grains, legumes, root vegetables

Taurine

<i>Preventive Intake Range:</i>	500-1,000 mg
<i>Therapeutic Intake Range:</i>	1-3 grams
<i>Useful in the Treatment of:</i>	High blood pressure, bloating, arrhythmias, congestive heart failure, epilepsy, asthma, diabetes, macular degeneration, vision impairment, liver and kidney disease, ovarian cancer, immune weakness, cystic fibrosis, breathing constriction, lung ailments
<i>May Help Prevent:</i>	Cardiac arrhythmias, epileptic seizures, diabetes, oxidative stress, macular degeneration, congestive heart failure, blood clots
<i>Synergistic Nutrients:</i>	Magnesium, zinc, B complex
<i>Condition Contraindications:</i>	Ulcers: taurine may increase in stomach acid secretion
<i>Drug Contraindications:</i>	Taurine will lower blood pressure in hypertensives, and their medication will often need to be reduced
<i>Food Sources:</i>	Clams, shellfish, seafood, meat

Tocotrienols

<i>Preventive Intake Range:</i>	50-200 mg
<i>Therapeutic Intake Range:</i>	100-400 mg
<i>Useful in the Treatment of:</i>	Elevated blood lipids, atherosclerosis, inflammation, poor circulation
<i>May Help Prevent:</i>	Atherosclerosis, heart disease, cancer
<i>Synergistic Nutrients:</i>	Vitamins E and C, selenium, zinc, lipoic acid, all carotenoids
<i>Condition Contraindications:</i>	None
<i>Drug Contraindications:</i>	Do not use in doses over 50 mg with blood thinning drugs
<i>Preferred Form:</i>	The alpha and gamma tocotrienol fractions seems to be the most therapeutic
<i>Food Sources:</i>	Rice bran and unrefined rice bran oil, but this will not deliver therapeutic amounts

Trimethylglycine (Betaine)

<i>Preventive Intake Range:</i>	100 mg
<i>Therapeutic Intake Range:</i>	500-1,000 mg
<i>Useful in the Treatment of:</i>	Elevated homocysteine (above 10), fatigue
<i>May Help Prevent:</i>	Cancer, heart disease, atherosclerosis, liver disorders, fatigue
<i>Synergistic Nutrients:</i>	Folic acid, B6, B12.
<i>Condition Contraindications:</i>	None
<i>Preferred Form:</i>	Trimethylglycine
<i>Food Sources:</i>	Beets

Tyrosine

<i>Preventive Intake Range:</i>	500-mg
<i>Therapeutic Intake Range:</i>	1-3 grams
<i>Useful in the Treatment of:</i>	Stress, ADD, PMS, depression, thyroid function, Parkinson's, hypothyroidism, cocaine withdrawal
<i>May Help Prevent:</i>	Depression
<i>Synergistic Nutrients:</i>	Acetyl-L-Carnitine, EPA/DHA, vitamin B-6 and C
<i>Condition Contraindications:</i>	Malignant melanomas or a history of malignant melanomas. This cancer feeds off tyrosine. May also be best avoided (along with phenylalanine) in all cancers.
<i>Drug Contraindications:</i>	L-Dopa
<i>Preferred Form:</i>	L-Tyrosine or in severe depression, N-Acetyl-Tyrosine (NAT dosage: 300-600 mg per day for severe depression)
<i>Food Sources:</i>	Meat, poultry, fish

Further Comments: Doses over 2,000 mg should be given under doctor's supervision in case of blood pressure or pulse increase.

Vanadium

<i>Preventive Intake Range:</i>	60 mcg
<i>Therapeutic Intake Range:</i>	5-100 mg
<i>Useful in the Treatment of:</i>	Diabetes I and II, high blood sugar
<i>May Help Prevent:</i>	Diabetes
<i>Synergistic Nutrients:</i>	Chromium, zinc, manganese, magnesium, biotin, CoQ10, niacinamide
<i>Condition Contraindications:</i>	Lowers need for insulin and blood sugar lowering medications
<i>Drug Contraindications:</i>	MAO inhibitors
<i>Preferred Form:</i>	BMOV over vanadyl sulfate
<i>Food Sources:</i>	Fruits, vegetables, meats and seafood contains trace amounts

Further Comments: Doses of vanadyl sulfate over 20 mg should only be used to treat diabetics under a doctor's supervision. Treatment using BMOV requires much less (1 mg) for benefits. Long term effects of high dose vanadium are unknown. Most docs now using it only use it short term to get patients off medications.

Vitamin A

<i>Preventive Intake Range:</i>	5,000-25,000 IUs
<i>Therapeutic Intake Range:</i>	25,000-300,000 IUs (Only for 3-6 weeks, not near pregnancy)
<i>Useful in the Treatment of:</i>	Bronchial and sinus infections, cold, flue, AIDS, cancer, skin health, acne, heavy menstrual bleeding, PMS, hormone balance, hot flashes (along with folic acid and boron), bone health, wound healing, surgery, low thyroid, mucus secretions, GI tract problems, topically for herpes lesions, chicken pox, ulcers, retinitis pigmentosa
<i>May Help Prevent:</i>	Cancers (oral, lung, prostate), heart disease, respiratory infections, ulcers, malaria and measles (in those deficient)
<i>Synergistic Nutrients:</i>	Vitamin E (except for retinitis pigmentosa), vitamin C, lipoic acid, all carotenoids and antioxidants
<i>Condition Contraindications:</i>	Not over 5,000 IUs during pregnancy or 3 months before, and not for alcoholics or those with liver damage
<i>Drug Contraindications:</i>	Liver damaging drugs
<i>Preferred Form:</i>	Mycellized vitamin A, cod liver oil
<i>Food Sources:</i>	Liver, butter, egg yolks, whole milk, cream

Further Comments: High doses of beta carotene will **not** yield therapeutic amounts of vitamin A.

Vitamin B-12

<i>Preventive Intake Range:</i>	50-500 mcg
<i>Therapeutic Intake Range:</i>	1,000 mcg-60 mg.
<i>Useful in the Treatment of:</i>	Elevated homocysteine, MS, bursitis, nerve damage, depression, dementia, asthma, allergies, nerve pain, low blood pressure, infertility, cancer
<i>Can Help Prevent:</i>	Pernicious anemia, heart disease, Alzheimer's, dementia, osteoporosis, nerve damage
<i>Synergistic Nutrients:</i>	Folic acid, B-complex, betaine HCL
<i>Condition Contraindications:</i>	Megaloblastic anemia unless combined with high doses of folate
<i>Preferred Form:</i>	Hydroxycobalamin in capsules, chewable tablets, sublingual lozenges, liquid preparations or injections. Methylcobalamin in doses of 60 mg for MS patients.
<i>Food Sources:</i>	Animal foods

Further Comments: Critical for vegetarians, the elderly, and AIDS patients. B12 absorption is often poor, especially in the elderly. Doses of 1,000 mcg and higher are absorbed via a non-intrinsic factor route.

Vitamin B1 Thiamin

<i>Preventive Intake Range:</i>	25-50 mg
<i>Therapeutic Intake Range:</i>	50-500 mg
<i>Useful in the Treatment of:</i>	Lead poisoning, alcoholism, diabetic neuropathy, schizophrenia, depression, enhancing mental function and capacity, emotional disturbances, Alzheimer's
<i>May Help Prevent:</i>	Heart disease, nerve damage, fibromyalgia, learning disabilities, Alzheimer's.
<i>Synergistic Nutrients:</i>	B complex, magnesium, carnitine, CoQ10, lipoic acid
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Thiamin HCL fine for most applications. Allithiamine is useful for lead poisoning (Ecological Formulas)
<i>Food Sources:</i>	Whole grains, seeds, nuts, meat, liver

Vitamin B2 - Riboflavin

<i>Preventive Intake Range:</i>	10-50 mg
<i>Therapeutic Intake Range:</i>	50-500 mg
<i>Useful in the Treatment of:</i>	Migraines, eye disorders, thyroid under-functioning, ailments requiring increased antioxidant protection
<i>May Help Prevent:</i>	Heart disease, cataracts, migraines
<i>Synergistic Nutrients:</i>	B complex, magnesium, carnitine, CoQ10, lipoic acid, omega 3 fats
<i>Drug Contraindications:</i>	None
<i>Preferred Form:</i>	Riboflavin is fine for most applications. Riboflavin-5-phosphate is the phosphorylated form, but its advantages are not clear
<i>Food Sources:</i>	Milk, whole grains, seeds, nuts

Vitamin B6 - Pyridoxine

<i>Preventive Intake Range:</i>	50-100 mg
<i>Therapeutic Intake Range:</i>	50-500 mg
<i>Useful in the Treatment of:</i>	Heart disease, high homocysteine, weak immune system, HIV, arthritis, chronic fatigue, PMS, menopause, female hormone disturbance, bloating, carpal tunnel syndrome and joint or hand pain, diabetes, candida, kidney stones, epilepsy, brain health, ADD, schizophrenia, depression, autism, memory impairment, asthma, acne, dermatitis, malignant melanoma
<i>Useful in the Prevention of:</i>	Heart disease, cancer, diabetes, candida
<i>Synergistic Nutrients:</i>	B-complex, magnesium
<i>Condition Contraindications:</i>	Sensory neuropathy. Sensory neuropathy can rarely be caused by B6 if taken in doses of 200 mg or higher without the correspondingly higher doses of the rest of the B-complex
<i>Drug Contraindications:</i>	L-Dopa
<i>Preferred Form:</i>	Activated form of P5P may work in cases where patients do not respond to B6
<i>Food Sources:</i>	Whole grains, liver, seafood, nuts and seeds, bananas
<i>Further Comments:</i>	Pregnant women and those on birth control pills deplete B-6 more quickly.

Vitamin C

<i>Preventive Intake Range:</i>	500-1,000 mg
<i>Therapeutic Intake Range:</i>	1,000 mg - 50 g or to bowel tolerance
<i>Useful in the Treatment of:</i>	Cancer, heart disease, asthma, high blood pressure, arthritis, allergies, inflammation, immune function, pneumonia, HIV, increased life span, infections, bacterial or viral invasion, weight loss, gout, gallstones, vision disorders, drug addiction
<i>May Help Prevent:</i>	Cholesterol oxidation, skin damage from sun, infections, all conditions listed above
<i>Synergistic Nutrients:</i>	Vitamin E, B vitamins, carnitine, lipoic acid, bioflavonoids, magnesium, zinc, copper, selenium, CoQ10, carotenoids
<i>Condition Contraindications:</i>	Rare enzymatic defects, low doses in hemochromatosis (combines well with desferroxamine)
<i>Drug Contraindications:</i>	
<i>Preferred Form:</i>	Ascorbic acid, magnesium ascorbate for those wanting a buffered form
<i>Food Sources:</i>	Fresh vegetable juice, vegetables and fruits of all kinds, esp. lemon juice, red peppers, tomatoes, cabbage, broccoli, citrus fruits, strawberries, and cantaloupe

Vitamin D

<i>Preventive Intake Range:</i>	400-800 IUs
<i>Therapeutic Intake Range:</i>	400-2,000 IUs (natural sources for high doses, and always combined with magnesium)
<i>Useful in the Treatment of:</i>	Psoriasis, bone health, Crohn's, ulcerative colitis, MS, diabetes, high blood pressure, arthritis, breast, prostate cancer and other cancers, back pain, perhaps syndrome X.
<i>May Help Prevent:</i>	Osteoporosis, insulin resistance, cancer
<i>Synergistic Nutrients:</i>	Magnesium
<i>Condition Contraindications:</i>	Tissue calcification, magnesium deficiency
<i>Drug Contraindications:</i>	
<i>Preferred Form:</i>	20 minutes sunlight per day or cholecalciferol
<i>Food Sources:</i>	Liver, seafood, fortified cereals and dairy products

Further Comments: Milk and other foods contain unreliable amounts of vitamin D. Vegetarians, low-fat dieters, the elderly, those who stay indoors during the day, and those with dark skin are more likely to need supplemental sources of vitamin D.

Vitamin E

<i>Preventive Intake Range:</i>	100-400 IUs
<i>Therapeutic Intake Range:</i>	400-2,000 IUs
<i>Useful in the Treatment of:</i>	Heart disease, cancer, diabetes, immune weakness, blood clots, hot flashes, inflammation, menopausal symptoms, cataracts, bronchial disease, Alzheimer's, Parkinson's
<i>May Help Prevent:</i>	Cancer, cervical dysplasia, strokes, heart disease, vision loss, all conditions listed above
<i>Synergistic Nutrients:</i>	Selenium, zinc, vitamin C, lipoic acid, all carotenoids
<i>Condition Contraindications:</i>	Hypertension, rheumatic heart disease, 2 weeks pre- and post-surgery
<i>Drug Contraindications:</i>	Those on blood pressure drugs should start with 50-100 IUs and work up to 400 IUs. Do not use with blood thinning drugs.
<i>Preferred Form:</i>	Natural mixed tocopherols. In acute infections, mycellized versions. In cancer, half natural d-alpha tocopherol, half succinate.
<i>Food Sources:</i>	Nuts and seeds, but they do not deliver a preventive or therapeutic dose. They actually increase the need for more E.

Vitamin K

<i>Preventive Intake Range:</i>	75-150 mcg
<i>Therapeutic Intake Range:</i>	100-300 mcg
<i>Useful in the Treatment of:</i>	Blood clotting, osteoporosis, chronic diarrhea, Crohn's, colitis.
<i>May Help Prevent:</i>	Osteoporosis, cancer, pregnancy related nausea (menadione form along with vitamin C), late hemorrhagic disease in newborns
<i>Synergistic Nutrients:</i>	Beneficial bacteria (esp. bifidobacteria)
<i>Condition Contraindications:</i>	Post-stroke and heart attack patients, those on blood thinners
<i>Drug Contraindications:</i>	Blood thinning medications such as Coumadin
<i>Preferred Form:</i>	From food and beneficial bacteria
<i>Food Sources:</i>	Leafy green vegetables, kale, parsley and beneficial bacteria

Further Comments: Many heart disease patients are given 'blood-thinning' drugs which destroy vitamin K. Also, antibiotics, chemotherapy, and anti-seizure medications all destroy vitamin K. Vitamin K is made by beneficial bacteria in our GI tract which is where most Americans get the bulk of their vitamin K.

Zinc

Preventive Intake Range: 15-25 mg

Therapeutic Intake 15-150 mg

Range:

Useful in the Treatment of: Wound healing, weak immune system, eating disorders, schizophrenia, lack of taste or smell, mood disorders,

epilepsy, MS, Huntington's dyslexia, dementia, ADHD, ulcers, eye health, GI problems, bowel disorders, rheumatoid arthritis, chemical sensitivities, macular degeneration

May Help Prevent: Problem pregnancies, heart disease, diabetes, Alzheimer's, prostate enlargement, cataracts, PMS, colds, brain and nervous system deterioration, ulcers, osteoporosis, skin problems, fatigue, lack of appetite

Synergistic Nutrients: Vitamin A, taurine, copper, vitamin C

Preferred Form: Zinc liquid sulfate heptahydrate or zinc picolinate tablets

Food Sources: Oysters, shellfish, red meat, pumpkin seeds

Further Comments: Zinc is a very important nutrient for pre- and post- surgery.