Silver Bullets

A Doctor’s Manual of Top Products in the Nutri-West Line

By Ken Edwards, D.C.

- Ingredients
- Supportive functions
- Applications
- Research
- Testimonials/Tidbits
- Dosages
- Bottle sizes
- Retail Price
- Veg/Non-veg
- Contraindications

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“For a bull’s eye in targeting nutritional support, I use the Nutri-West line of products” Dr. Ken Edwards

* The nutrient suggestions listed in this manual are suggestions for Nutritional Support ONLY and should not be used to treat or cure disease. The FDA has not evaluated statements. A qualified health professional should be consulted in all health concerns.
ADRENO-LYPH PLUS

**Ingredients:** High Potency Adrenal with synergistic support. Each Tablet Supplies: 235 mg of tissue concentrate from bovine source (not extracts) as Adrenal 221mg, Pituitary 12mg, Parotid 2mg, Vitamin C 175mg, Bioflavonoid Complex 45mg, Pantothenic Acid (D-Calcium Pantothenate) 70mg, DL-Methionine 60mg, Choline Bitartrate 60mg, Vitamin B-1 15mg, Vitamin B-2 15mg, Vitamin B-6 15mg, Niacinamide 50mg, Magnesium 100mg.

**Supportive Function:** High-quality, concentrated adrenal glandular support is boosted by pituitary and parotid glandulars, along with the vitamins, minerals and amino acids that synergistically contribute to the healthy maintenance of these tissues.

**When is adrenal support effective?** Stress and conditions caused by stress, fatigue, lethargy, weakness, mental fuzziness, irritability, and inability to handle everyday tasks. May also be beneficial in hypotension problems.

**Clinical Applications/Research:** Glandulars are thought to provide precursor substances that the body can use to support and enhance the function of a specific gland. They may provide the potential “life force” the body needs to enhance function of a specific organ or gland.

**Vitamin C** is sometimes called “the anti-stress” vitamin. There is more vitamin C in the adrenal gland than any other tissue in the body. Studies have shown that rats exposed to the stress of radiation die unless a major drop in serum vitamin C is prevented. When the drop in vitamin C is prevented, the stress of radiation is handled until the body returns to homeostasis.

**B vitamins,** especially B-2, B-6, niacinamide and pantothenic acid are energy-producing vitamins and serve as precursors for vital energy/anti-stress glands, such as adrenals and thyroid.

**Pantothenic acid:** Vitamin B-5, or pantothenic acid, functions as part of the molecule called Co-enzyme A or CoA. It is vital for optimal adrenal activity (including increasing production of cortisone and other adrenal hormones), important for healthy skin and nerves, and supports the synthesis of acetylcholine (a neurotransmitter), fatty acids, cholesterol, steroids, and phospholipids. It is known as one of the main anti-stress vitamins and can be made by the bacterial flora in the intestines.

**Magnesium** is a cofactor for many enzymes, including those in energy metabolism. Magnesium is known for its relaxation qualities.

**Testimonials/Nutrient Tidbits:**

**Low back pain:** A doctor told me this story . . . “My pastor had a ten year history of severe low back weakness and problems. Although he was under regular spinal care, he still could not stand for longer than ½ hour without pain. My exam revealed weak adrenals. I placed him on Adreno-Lyph Plus and within two weeks he could stand without pain. This is a typical story about the results I see with Adreno-Lyph Plus.”

**Knee problems:** Adrenal glandular support produces great results in cases of chronic knee pain. Another product, Sago-C 500, may be beneficial in chronic knee pain, elbow pain, etc. if an infection is involved.

**Levels of Adrenal support:** One doctor pointed out . . . For acute adrenal problems I use DSF Formula, for chronic adrenal problems I use Adreno-Lyph Plus, for minor adrenal problems I use the tincture Adreno Plus and for very minor problems and children I use Energizer Forte (Terry Hambrick, D.C.).

**Bacterial Problems:** A doctor reports . . . Immuno Plus in combination with Adreno Plus or Adreno-Lyph Plus works well for bacterial problems (Stephen Ediss, D.C.).

**Suggested Dosage:** 1 tablet 2 times daily

**Size:** 60 or 120 tablets

**Price:** € 29,15 en € 49,90

**Vegetarian:** No

**Contraindications:** Do not take during pregnancy. Pituitary glandular is contraindicated in cancer. High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease.
**ADRENO PLUS**

**Ingredients:** Contains 70% alcohol, Pure Tincture of Eleuthero, Licorice Root, Fo-Ti, Korean Ginseng, Dulse, Gotu Kola, Ginger, and Ginkgo Biloba.

**Supportive Function:** Support for the adrenal system during both hypo and hyper adrenal periods. Creates synergy within the entire endocrine system.

**When is adrenal support effective?** Stress and conditions caused by stress, fatigue, lethargy, weakness, mental fuzziness, irritability, and inability to handle everyday tasks.

**Clinical Applications/Research:**
- **Eleuthero (12%):** Supports the adrenal glands and acts as an energy tonic adaptogen. Increases resistance to stress.
- **Licorice Root (12%):** Increases the effectiveness of the adrenal hormones. Helps overcome adrenal fatigue.
- **Fo-Ti (12%):** Provides support for the kidneys, liver, blood, pancreas and spleen. Helps restore energy.
- **Korean Ginseng:** Strengthens the immune system and decreases fatigue.
- **Dulse:** Member of the kelp family. Dulse is high in iodine and trace minerals and other nutrients.
- **Gota Kola:** A neural tonic that slowly builds mental stamina and neural health. Helps liver and gallbladder congestion.
- **Ginger:** Aids in digestions and enhances the effectiveness of other herbs. Ginger is also a potent anti-inflammatory product.
- **Ginkgo Biloba:** Cerebral stimulant. Relaxes blood flow and increases brain circulation.

**Testimonials/Nutrient Tidbits:**
- **Levels of Adrenal support:** One doctor pointed out... For acute adrenal problems, I use DSF Formula, for chronic adrenal problems I use Adreno-Lyph Plus, for minor adrenal problems I use the tincture Adreno Plus and for very minor problems and children I use Energizer Forte (Terry Hambrick, D.C.).
- **Bacterial Problems:** A doctor reports... Immuno Plus in combination with Adreno Plus or Adreno-Lyph Plus works well for bacterial problems (Steve Ediss, D.C.).
- **Viral/Flu for Kids:** A doctor reports... take natural cranapple juice diluted with water. Add Immuno Plus and Adreno Plus and have the child drink it several times a day. Also, have the child take a lemon bath (a bath with natural lemon juice added) and then a steam and rinse off thoroughly. Works well!

**Suggested Dosage:** 5-20 drops in water 3 times per day or as directed

**Size:** 1 oz

**Price:** € 17,00

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy, hypertension, and with blood-thinning drugs. The combination of herbs in this herbal tincture work together in creating synergistic effects, and smaller amounts of the herbs are utilized for optimal effects.
**AMINO ALL**

**Ingredients:** Each Tablet Supplies: 1,000 mg of Natural Hydrolyzed Protein, which serves as a source of individual amino acids. This protein contains minimum nitrogen content of 16% and a minimum protein content of 92-97%. Only Bovine tissue sources are used. All of the amino acids in this preparation are of natural laevorotatory (L) form. Each 6 Tablets Typically Supplies: Isoleucine 66mg; Leucine 174mg, Lysine 216mg, Methionine 30mg, Phenylalanine 126mg, Threonine 120mg, Valine 168mg, Arginine 468mg, Histidine 36mg, Alanine 546mg, Tyrosine 24mg, Serine 198mg, Aspartic Acid 336mg, Glutamic Acid 582mg, Glycine 1,362mg, Hydroxylysine 60mg, Hydroxyproline 654mg, Proline 834mg.

**Supportive Function:** A comprehensive line-up of amino acids from natural hydrolyzed protein provides the building blocks for many of the body’s essential tissues, such as enzymes, hormones, antibodies, blood clotting factors, and muscle. Some may choose this supplement to increase the protein-to-carbohydrate ratio in a meal, aiding in achievement of a healthy blood sugar zone. Protein elicits glucagon secretion (the opposing hormone to insulin), which functions in times of low blood sugar to contribute to sugar homeostasis.

**When is amino acid support helpful?** Compromised immune systems, rheumatoid and osteoarthritis, degenerative diseases, psoriasis, mononucleosis, herpes, allergies, muscle/nerve health, hypoglycemia, pre and post surgery, amino acid nutrition for athletes and weight loss.

**Clinical Applications/Research:** Amino-All is a source for condroitin sulfate, which has received a lot of attention for its role in cartilage regeneration and arthritis relief. Pioneering studies by J. F. Prudden have shown it may be one of the most important upcoming nutrients used to boost the immune system. Keats Publishing now offers a text (April 1998), devoted solely to bovine cartilage, entitled: “Boost your health with bovine cartilage,” by Sally Eauclaire Osborne, MS. From the book, Sally says, “Paradoxically, it stimulates the immune system to fight cancer and viral diseases but suppresses it when necessary, as with allergies and rheumatoid arthritis.”

**Immune support:** Antibodies and enzymes are made up of proteins.

**Joint support:** Bovine cartilage has a high content of tracheal cartilage in it, which has received attention for its role in cartilage regeneration. The cartilage provides all of the right precursors to help the cellular growth and repair process.

**Weight loss:** Protein can be very helpful when added to foods and shakes, because the protein content will lower the glycemic index of a carbohydrate meal. The glycemic index rates carbohydrates for their ability to turn to sugar in the body and stimulate insulin secretion, which can start a roller coaster of carbohydrate cravings.

**Testimonials/Nutrient Tidbits:** Nocturnal Hypoglycemics: Doctors report . . . Amino-all really helps my patients with blood sugar handling problems to sleep through the night. It is also good to add Amino-All to their protein snack to help maintain blood sugar levels. We have severe Hypoglycemics snack on 2 tablets every hour between meals. These tablets digest slowly and help maintain blood sugar levels until balance returns.

**Energy:** A doctor reports . . . My patients rave about increased energy levels and they just feel better. Also, their joints don’t hurt as bad!

**Athletes:** Helps athletes concerned with adding protein to their diet.

**Kids:** A doctor reports . . . I tell my mothers to give this to their kids before school to help them with their blood sugar swings in school.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 120 tablets

**Price:** $18.00

**Vegetarian:** No

**Contraindications:** People taking MAO inhibiting drugs have to avoid tyramine-containing foods and have to be careful with protein supplements. Do not take in PKU (contains phenylalanine). People taking MAO-inhibitors should not supplement with tyrosine.
**Ingredients:** Each tablet supplies: Vitamin C 10 mg, Rutin 25 mg, L-Arginine 50 mg, Beta Carotene 5,000 units, Black Cherry Concentrate 250 mg, Liver 70 mg, Kidney 40 mg, Adrenal 20 mg, Thymus 20 mg, Parotid 1 mg, Rice Bran 40 mg, Beet Root 50 mg, Beet Leaf 30 mg, Cranberry 40 mg, Nettle Leaves 40 mg, Red Clover 40 mg, Papaya 40 mg, Alfalfa 30 mg, Tillandsia 30 mg, Rose Hips 25 mg, Cayenne 5 mg.

**Supportive Function:** This product helps support healthy uric acid levels and an anti-inflammatory environment.

**When is uric acid maintenance support helpful?** Gout, arthritic conditions due to high uric acid, etc.

**Clinical Applications/Research:** Arginine is a precursor for nitric oxide, which is essential to dilate blood vessels, allowing adequate blood flow to all tissues and organs, the heart, and to erectile tissues in both men and women. One of arginine’s major benefits is increasing circulation all over the body. In animal studies, arginine reduces cholesterol and atherosclerosis. It is necessary for the male’s production of sperm and comprises 85% of seminal fluid. Supplementation improves sperm count and quality and aids fertility. Arginine deficiency delays sexual maturity in both sexes and impairs the liver’s metabolism of fat. Taken on an empty stomach before sleep or 1 hour before vigorous exercise, arginine supplementation stimulates growth hormone production, which enhances the building and toning of muscle tissue and an enhanced immune response. It facilitates weight loss, reduction of body fat, and increases muscle mass. Arginine helps increase the size and activity of the thymus gland, aids in liver detoxification by neutralizing ammonia, and is involved with the production of the pituitary’s vasopressin. It is important to endocrine balance in both men and women. It stimulates the production of insulin and improves glucose tolerance. Arginine has beneficial effects on an overall sense of well-being, wound healing, and tissue repair.

**Vitamin C and bioflavonoids,** such as those found in black cherry, cranberry, and rutin, protect and strengthen capillaries, and help to support an anti-inflammatory environment. The bioflavonoids are closely associated with vitamin C and enhance the effect of vitamin C when used in treatment (Merck Index, ibid p. 1243). Bioflavonoids, “contribute to the maintenance of normal blood vessel conditions by decreasing capillary permeability and fragility” (Merck Index, ibid p. 1243).


**Black cherries** are an excellent source of flavonoids. The flavonoids in black cherries are known as proanthocyanidins, and have beneficial effects. Generally the darker the cherry, the more nutritious they are. They are high in iron, therefore they are an excellent blood builder. Black cherries aid in the elimination of toxic waste from the body and also provide laxative support. Consuming fresh cherries helps to lower uric acid levels and also helps to prevent gout. Black cherry juice is often used as a sugar replacement when flavoring teas. Black cherries remove toxins from tissues, which is important in gout, and helpful for the glandular system; they also aid in gall bladder and liver function (Balch, P.A. Prescription for Cooking 1987. PAB Books, Tx).

**Cayenne** contains a naturally occurring, photosynthetic bacterial carotenoid, capsorbin, which is a highly effective scavenger of singlet oxygen (reactive oxygen species) (Lipids 1994;29(2):149-50). Cayenne is considered a stimulant herb, which means it activates all parts or systems of the body, making it vital to the healing process. When all bodily systems, organs and glands are stimulated properly and efficiently, they will cleanse, heal and function as they were designed. The circulatory system is improved with cayenne and all arteries, veins and...
capillaries are nourished and strengthened so they retain their elasticity. Blood flow is also regulated with the use of cayenne, so the cardiovascular system is improved and blood cholesterol and triglyceride levels are reduced. Both high and low blood pressure are improved because cayenne normalizes the blood pressure. Capsaicin works as an anticoagulant, helping to reduce heart attacks and blood clots (Margen, S. MD. The Wellness Encyclopedia of Food and Nutrition. Random House, NY, NY 1992).

Nettle, or “Stinging nettle” is reported to be a diuretic, and also to be useful in arresting uterine hemorrhages. In addition, it is used as an aid for gout, asthma, and tuberculosis (Weiner MA. Herbs That Heal, Quantum Books, Mill Valley, Ca. 1994 p. 244). Stinging nettle is also used as a disinfectant, to improve digestion, promote milk flow, inhibit urinary tract bleeding, and stop excessive menstrual flow (Sharon M., M.D. Complete Nutrition. 1994. Prion Publ. London, England, p. 142). Nettle has also been used for asthma, diarrhea, hemorrhoids and arthritic problems. In Europe, nettle extracts are being employed in the treatment of urinary retention brought on by benign prostatic hypertrophy (BPH); clinical evidence supports this, and German health authorities allow it to be used for BPH (Zeitschrift fur Phytotherapie 1989;10:175-178; Bundesanzeiger, Jan. 5, 1989; March 6, 1990).

**Suggested Dosage:** 1-2 tablets 2-3 times daily or as directed.

**Size:** 90 tablets

**Price:** € 29,95

**Vegetarian:** No

**Contraindications:** People with herpes viral infections or during pregnancy/lactation should not take large doses of arginine.
**ASPARTIC-MAG**

**Ingredients:** Magnesium Aspartate Chelated Each Tablet Supplies: 500mg Magnesium Aspartate which yields: magnesium 70mg; L-Aspartic Acid 430mg.

**Supportive Function:** Magnesium is involved in over 200 biochemical reactions, many of which are involved in energy-producing biochemical reactions; magnesium chelated with aspartate allows for easy transport across cell membranes. Aspartate is necessary for the malate-aspartate shuffle, which is responsible for shuffling electrons into the electron transport chain in the mitochondria for energy.

**When is magnesium helpful?** Heart disorders, nervousness, confusion, irritability, depression, PMS, hypertension, leg cramps, twitching, asthma, intermittent claudication, fatigue, Fibromyalgia, kidney stones or gallstones, osteoporosis, pregnancy (toxemia, premature delivery and other complications), migraines and insomnia. Pyridoxine (vitamin B-6) requires magnesium for conversion to its active form (P-5-P).

**Clinical Applications/Research:**

- **Inflammation:** Magnesium increases the solubility and retention of calcium. Magnesium gets depleted in conditions of inflammation, and is integral to the healing process.

- **Injury:** Very important in preventing infection after trauma. Magnesium’s function in protein metabolism and rebuilding after injury makes it useful in providing ligamental nutrient support.


- **PMS:** Magnesium deficiency is strongly implicated as a causative factor in PMS. In a study cited in Obstetrics and Gynecology, women were given 350 mg Mg 3x/day during last two weeks of cycle, and experienced less moodiness, nervousness, bloating, aches and pains. 200 mg Mg/day reduced PMS/menstrual headaches in women.

- **Kidney Stones:** Magnesium can help decrease the occurrence of kidney stones and will help breakdown gallstones, aiding their passage through the bile duct. Use 1-2 weeks prior to a gallbladder flush.

**Testimonials/Nutrient Tidbits**

- **PMS:** Found to be very successful in PMS cramping or other muscle fatigue problems such as angina and tachycardia.

- **Heart Problems:** A doctor reports . . . I find this very helpful for all my cardiovascular patients.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed.

**Size:** 90 tablets

**Price:** € 14,60

**Vegetarian:** Yes

**Contraindications:** Some people experience diarrhea at doses of magnesium > 1,000 mg/day. Chronic large doses could possibly upset the mineral balance, especially calcium.
**B-12 LOZENGE**

**Ingredients:** Vitamin B-2 1,000mcg, Folic Acid 400mcg, Raw Bovine Tissue (not extract) from Stomach 10mg, Liver 10mg, natural spearmint added for flavor.

**Supportive Function:** An easily assimilated form of Vitamin B-12 (with complementary folic acid) dissolves under the tongue, entering the bloodstream directly without having to hook up with intrinsic factor (usually required for absorption in the small intestine). Vitamin B-12 functions in red blood cell formation, nervous system function, and RNA and DNA synthesis.

**When is B-12/folic acid helpful?** Fatigue, pernicious anemia, red blood cell formation, asthma, nervous system function, macronutrient metabolism, mood changes, menstrual problems, heart disease (homocysteine reduction), diabetic neuropathy, hepatitis, urticaria, pregnancy, dermatitis and bursitis.

**Clinical Applications/Research:** Vitamin B-12: (also known as cyanocobalamin) is essential in nervous system function, helps to build healthy red blood cells, increases energy level, stimulates utilization of carbohydrates, fats and proteins, and is important in DNA and RNA synthesis (the material that makes up our genetic code). The intrinsic factor, which is made in the stomach, is necessary for the absorption of B-12 into the small intestine. People who have low levels of HCL (hydrochloric acid is produced from the same cells that produce intrinsic factor) are at higher risk for inadequate B-12 absorption. People who do not biologically produce the intrinsic factor must get B-12 injections, which shoots the vitamin directly into the bloodstream, eliminating the need for intrinsic factor. Taking B-12 sublingually (under the tongue) also bypasses the small intestine and the need for intrinsic factor, so this method is also used for rapid absorption of B-12. Folic acid complements the actions of B-12 and synergistically boosts its activity, especially in red blood cell formation and homocysteine reduction.

**NOTE:** Vitamin B-12 deficiency can arise due to conditions that interfere with B-12 absorption, such as inflammatory bowel disease, or gastric surgery.

**Folic Acid:** Clinical applications: fatigue, stress, adrenal gland support, psoriasis, folic acid deficiency anemia, depression, heart disease (lowers homocysteine) and cervical tissue support.

Folic acid functions as a Co-enzyme that is important for cell reproduction. Its functions are similar to vitamin B-12. It aids in red blood cell (RBC) production, protein utilization, RNA and DNA synthesis, and is important in pregnancy since it is needed for the division of cells in the body. Fortification of foods with folate, starting Jan 1, 1998, emphasizes the newly recognized value of this B vitamin.

**Testimonials/Nutrient Tidbits:** Cervical Dysplasia/Folic Acid connection – Many doctors’ report . . . Folic acid in high doses works on most of my patients with abnormal pap smears.

**Tidbit:** B-12 needs to be combined with intrinsic factor in the stomach to be able to be absorbed in the small intestine, but the lozenge bypasses digestion and absorbs directly in to the bloodstream sublingually.

**Suggested Dosage:** 1-2 tablets per day or as directed

**Size:** 60 tablets

**Price:** € 21,80  
**Vegetarian:** No

**Contraindications:** Vitamin B-12 is non-toxic, even in doses that have exceeded the RDA by 10,000 times. Being water-soluble, excesses are excreted in the urine. Folic acid should not be given if a B-12 deficiency is suspected, because it can mask the symptoms. A rare congenital defect prevents the metabolism of cyanocobalamin. Medicinal amounts of any vitamin, mineral or specialty nutrient should only be taken with the advice of a trained licensed healthcare professional.
**B-COMPLEX**

**Ingredients:** Each 2 Tablets Supplies: Vitamin B-1 100mg, Vitamin B-2 100mg, Vitamin B-6 50mg, Niacinamide 100mg, Pantothentic Acid 100mg, Vitamin B-12 100mcg, Folic Acid 300mcg, Biotin 100mcg, Choline Bitartrate 100mg, Inositol 100mg, PABA 50mg.

**Supportive Function:** A total (hypoallergenic) formula that employs the synergistic action of all the B vitamins; additionally, it is boosted with choline and inositol, which are vitamin-like substances that participate in fat metabolism. People who are exposed to stressful situations or who have a poor dietary intake may choose to supplement with B Complex.

**When is a B-complex formula helpful?** Fatigue, depression, stress, glucose control, skin/hair/eyes/ and mouth problems, anxiety, insomnia, hyperactivity, PMS, menopausal symptoms, alcohol withdrawal, and long-term antibiotic application.

**Clinical Applications/Research:**

**Energy:** The B vitamins help give us the energy to function. They are known as the "catalytic spark plugs" of the body; they catalyze many biochemical reactions because of their role as Co-enzymes. The B vitamins are water-soluble (easily eliminated from the body) and must be constantly replenished. Bacteria in the large intestine can make most B vitamins in the body. A refined diet high in sugar, coffee, alcohol and refined flour can deplete the B vitamins, and long-term antibiotic therapy can reduce the population of beneficial bacteria that normally makes B vitamins in the large intestine.

**Brain Food:** The B vitamins are also important for the synthesis of our brain neurotransmitters, which are chemical signals that our brain uses to carry out physiological functions. The B vitamins are needed, for instance, for the synthesis of the neurotransmitters dopamine, norepinephrine, and serotonin. Treatment with the B vitamins B-1, B-2, and B-6, in a 4-week randomized, placebo-controlled, double-blind study resulted in trends of, "greater improvement in scores on ratings of depression and cognitive function," and these findings, "offer preliminary support for further investigation of B-complex vitamin augmentation in the treatment of geriatric depression" (Bell IR et al. J Am Coll Nutr. 1992; 11(2): 159-63).

**Glands/Organs:** The B vitamins are also essential for the proper functioning of the endocrine glands, most notably the adrenals and the thyroid. The B vitamins are needed for healthy liver functioning, and the liver is one of the highest concentrated areas of B vitamins. The organ we know as the skin depends on B vitamins for its healthy appearance. The B’s are also essential for hair, eyes and mouth; a deficiency of the B’s can manifest in patchy scaly skin around the mouth area. They are also necessary for normal functioning of the nervous system, and essential for maintenance of muscle tone in the gastrointestinal tract.

**Glucose Control:** Just as the B vitamins are used to make ATP (energy) from glucose, they are involved in every step of glucose metabolism, and are therefore helpful in regulating blood glucose levels.

**Testimonials/Nutrient Tidbits:**

**Adrenal Fatigue:** Helpful in combination with DSF Formula or Adreno-Lyph Plus in adrenal fatigue situations or low blood pressures (systolic drop on Ragland test)

**Anxiety or Stress:** Six tablets per day really helps decrease anxiety reactions, also helpful during times of stress.

**A doctor reports . . .** I always combine B Complex or Glyco-Lyph with my adrenal product (3 per day) to help balance out the adrenal glands.

**Suggested Dosage:** 1 - 2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 27.25

**Vegetarian:** Yes

**Contraindications:** Vitamin B-6 in amounts > 200 mg/day can possibly cause symptoms of neuropathy.
BLACK CURRANT SEED OIL

**Ingredients:** Black Currant Seed Oil 250mg. Containing (Fatty Acid Composition %): Gamma Linolenic 16.9%, Linoleic 45.2%, Oleic 12.7, Alpha Linolenic 11.7%, Palmitic 7.4%, Stearidonic 2.9%, Stearic 1.6%, Eicosenoic Acid 1.1%. Also contains Myristic, Arachidic, Behenic, Lignoceric, and Palmitoleic Acids with 5i.u. of Natural Vitamin E.

**Supportive Function:** The use of black currant seed oil has been well researched for its benefits. In addition to being a rich source of the popular gamma linolenic acid, it supplies a balanced amount of all the essential fatty acids (preserved with natural vitamin E).

**When is Black Currant Seed Oil helpful?** Chronic inflammatory conditions, dermatitis, eczema, rheumatoid arthritis, PMS, menstrual cramps, immune effects, and cardiovascular conditions, poor wound healing, sparse hair growth, dry eyes.

**Clinical Applications/Research: Immune effects:** Black currant seed oil (BCSO) has a profound effect on the immune system, and a correlation was found between the oil and the degree of developing resistance to infection and virus accumulation (Vopr Virusol 1993; 38:170-3).

**Rheumatoid arthritis (RA):** A study on rheumatoid arthritis patients showed, "A significant improvement in morning stiffness was noted in the rheumatoid arthritis patients receiving black currant seed oil" (British J Rheumatology 1993; 32:1055-8). A clinical trial with 37 RA patients showed such positive results that the authors concluded that gamma-linolenic acid, "is a well-tolerated and effective treatment for active RA" (Ann Int Med 1993; 119(9): 867-73). The beneficial effects of BCSO on RA may result from its ability to decrease inflammatory cytokine production, which would explain why it is so effective in RA. In a clinical trial where BCSO demonstrated improvement of RA symptoms, "The results suggest that the numerous beneficial effects of (BCSO) in inflammatory diseases such as RA may be due to a reduction in the secretion of the inflammatory cytokines II-1 and TNF-alpha..." (Br J Rheumtol 1993; 32(12): 1055-8).

**Cardiovascular effects:** The prostaglandins made by black currant seed oil counteract vessel constriction. Vessel wall thrombus formation (i.e. atherosclerotic lesions) was decreased when a diet rich in black currant seed oil was fed. "This latter effect was better obtained when gamma linolenic acid was present suggesting a secondary effect of this fatty acid...We conclude that both fish oil and black currant seed oil rich diets inhibit platelet/vessel wall adhesion" (Thromb Res 1990; 59(5): 819-30).

**Female conditions:** Anti-inflammatory substances produced by black currant seed oil, along with the beneficial immune effects, can have a favorable influence on many female conditions.

**Dermatitis:** Supplementation of oil containing 10% gamma linolenic acid was tested on dermatitis, and anti-inflammatory substances were increased. In another study of 12 volunteers, gamma linolenic acid-enriched oil not only inhibited the inflammatory substance LTB4, but the larger dose (1.5g) had a greater inhibition than the .5 g dose (AJCN 1992; 55:39-45).

**Testimonials/Nutrient Tidbits: Female problems: Doctors report**… extremely good results in PMS and fibrocystic breast problems. 3-4 tablets before bed at night are helpful in fibrocystic problems.

**Sjogren’s Disease: A doctor in Canada reports** … I prescribe 4-6 a day of BCSO and that is all that is needed to take care of the problem! (Dr. Lyons, D.C.)

**Essential fatty acids:** I use it routinely in combination with F-Complex to get a balanced ratio of series 1 prostaglandins (PGE1) and series 3 prostaglandins (PGE3) that influence the inflammatory response (Ben Markham, D.C.)

**Skin problems: Doctors report**…my 2 year old daughter who has serious eczema problems and is a very picky eater opens wide for 2-3 teaspoonsfuls of BCSO. She loves it and so does her skin!

**Another practitioner reports**…a small child with eczema problems on the ear took a three-week regime of BCSO and the eczema disappeared.

**Suggested Dosage:** 3-4 capsules before bed or as directed

**Size:** 60 or 120 capsules  
**Price:** € 24,50 en 46,3
BLACK WALNUT

**Ingredients:** Membrane from the inside of the black walnut shell.

**Supportive Function:** Black walnut hull is a Native American herb; the fruit is the hull and the seed is the nut. Unwanted visitors to the gastrointestinal tract drain energy and nutrient resources from the gut, while producing toxic substances, which interfere with overall health. Black walnut is a potent herb, which provides parasite support and contributes to a healthy intestinal environment.

**When is a Black Walnut helpful?** Parasites, warts, skin rashes, sore throats, poison ivy or oak, ringworm, eczema, wound healing, pain reduction on cuts and bruises, prevention of scarring, mild laxative, digestive problems

**Clinical Applications/Research:** Black walnut is an effective remedy for fungal infection (Heinerman, John. Heinerman’s Encyclopedia of Fruits, Vegetables and Herbs. Parker Publishing, West Nyack, NY p. 236). An external preparation may be applied to the skin for wart removal, skin rashes, poison ivy or oak, ringworm or eczema conditions. Black walnut is also a mild laxative and is helpful for liver disorders. The pharmacologically active ingredients in black walnut are the tannins and juglone (a quinone compound), which have antiseptic, astringent and vermifuge properties.

**Testimonials/Nutrient Tidbits:**

- **Cuts:** Applied directly to the cut, it will help it to repair quickly.
- **Acne:** Applied directly, it is beneficial.
- **Parasites:** Many doctors report …Black Walnut is a staple when treating parasites. Combined with other parasite formulas (Total Para, Para Dysbio Cleanz, or Parazym-A) it shows even greater promise!
- **Many uses:** This is one of my favorite products. I carry a bottle in my purse at all times. Its traditional use is internally for parasitic problems. It is an excellent topical and I use it for mosquito bites (right out of the bottle, full strength on the bite!) I use it for cuts, bruises, toothaches, canker sores, and scrapes – I’ve found that it helps stop bleeding, and cuts down on scarring. I’ve used this on nail fungus, athlete’s foot, and some rashes that never had a name. Doctors have called me and told me they have used it diluted as a douche for vaginal yeast problems, (10 drops per 4 cups of water). It also works the same with severe sunburn (same dilution). It does sting when you use it, but only for a couple of seconds. Think Black Walnut whenever you have any of the above. (Marcia White)

**Suggested Dosage:** 10 drops 3 times daily in water or as directed

**Size:** 1 oz. liquid tincture

**Price:** € 15,00

**Vegetarian:** Yes

**Contraindications:** Do not take during pregnancy.
C-1000 TR

**Ingredients:** Vitamin C (Ascorbic Acid) 1,000mg, Lemon Bioflavonoids 110mg.

**Supportive Function:** High-potency vitamin C is boosted by bioflavonoids and slowly released over time for maximum absorption.

**When is Vitamin C helpful?** Common cold, respiratory infections, hayfever, flu, antioxidant function, immune enhancement, adrenal and thyroid support, viral infections, inflammation, asthma, post-surgical support, substance addiction, heavy metal toxicities, infertility, diabetes, eye problems (antioxidant effect), hypertension and heart disease.

**Vitamin C:** Ascorbic acid was discovered in the 1700s when many British sailors died from scurvy. James Lind discovered that the juice of lemons and limes could prevent scurvy, and from that point on, the sailors were known as "limeys" because the ships were required to carry British West Indies limes to prevent scurvy. That is where ascorbic acid got its name, from its anti-scorbutic properties.

Vitamin C has many functions. It maintains collagen, wound healing, formation of red blood cells (RBCs), aids in absorption of iron, fights bacterial infections, enhances white blood cell (WBC) production, and promotes thymic hormone secretion. In addition to all of that, it is an antioxidant, aids in the metabolism of tyrosine, folic acid and tryptophan, stimulates adrenal function, aids in thyroid hormone production and cholesterol metabolism, acts as a detoxifier of certain metals and drugs, recycles other hydrogen donors such as vitamin E, and aids in phagocytosis (digestion of damaged, dead or foreign cells).

Vitamin C is necessary for the enzyme reactions of many physiological processes, including collagen synthesis. Unless vitamin C is present, a bridge forms in the collagen-building enzyme and inactivates it. If vitamin C is deficient, the collagen that is synthesized can't form fibers properly, resulting in skin lesions, blood vessel fragility, and poor wound healing - in other words, the symptoms of scurvy.

**Bioflavonoids** are found in plants; they are closely associated with vitamin C, and they boost the therapeutic effect of vitamin C, helping to build strong connective tissue, and create a protective barrier to infection.

**Clinical Applications/Research:**

**Heart Disease:** The presence of hypercholesterolemia, hypertension, and atherosclerosis is more frequent in humans with a low intake of vitamin C.

Administration of gram doses of vitamin C have led to substantial decreases in circulating triglycerides (Sokoloff, B, Hori, M, Saehof, CC et al. J Am Geriatr Soc. 14:1239-60, 1966; Ginter, E, N Engl J Med. 294:559-60, 1976. Gooly, KL, Diamond, L.H. Ann Intern Med. 93:511, 1980). Vitamin C's antioxidant function prevents the oxidation of LDL (the bad cholesterol), which has been shown to be instrumental in heart disease. Chronic subclinical deficiency of vitamin C may result in progressive oxidative damage, which may lead to permanent degenerative diseases in the heart (Mol Cell Biochem 1992 111:41-7). One puff on a cigarette can deplete the plasma vitamin C content by as much as 50%. This is why the RDA for vitamin C intake for smokers is six times that for non-smokers (Efstratopoulos AD & Voyaki SM J of Hypertension 1993 11(suppl 5): S112-113).

**Immune System:** One group, taking 600 mg supplements, had upper respiratory tract infections reduced by 50% (Amer. J. Clin. Nutr. 57:170-74).

**Asthma:** Vitamin C is a potent antioxidant which guards against the oxidant stress involved in the cause and progression of asthma (Hatch GE Am J of Clin Nutr 1995; 61(suppl): p. 628S). Vitamin C decreases histamine secretion and also blocks production of the potent vasoconstrictive leukotrienes, which are known to be involved in asthma (Werbach, M, MD. Healing through nutrition, Harper Collins Publishers, NY. p. 37).

**General Well-being:** A UCLA researcher, James Enstrom, says that 300 mg of vitamin C a day (half from supplements) will extend the life of men 5 or 6 years longer than those getting only 25 mg. Enstrom claims that the same amount will add two years to a woman's life (Fort Collins Coloradoan USA Weekend, Sept 30, 1994 p. 10).

**Testimonials/Nutrient Tidbits:** Female problems: A doctor reports …C-1000 TR in combination with Rutin Plus I truly believe has prevented miscarriages in woman who are prone to miscarriages. Also, 3 tablets a day of
C1000-TR may be beneficial in women with infertility problems. I have seen the birth of twins in women who were not able to conceive. I believe the uterus is not strong enough to hold the egg, and the vitamin C strengthens the collagen, allowing the egg to impregnate the woman.

**Hayfever:** A doctor reports . . . I personally take this product before bed during “hayfever season” to maintain relief.

**Give at night:** A doctor reports . . . It is extremely helpful to give this supplement at night to help with adrenal build-up and repair. The time-released formula will feed the glands during the night and balance the internal clock (helping patients who wake during the night due to overfatigued adrenal glands).

**Suggested Dosage:** 1-2 tablets daily or as directed

**Size:** 90 tablets

**Price:** € 29,95

**Vegetarian:** Yes

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease.
**Ingredients:** Each Tablet Contains: Vitamin C 25 mg, Vitamin D 25 i.u, Calcium (as aspartate, citrate) 70 mg, Magnesium (as aspartate, glycinate) 76.8 mg, Betaine HCL 20 mg.

**Supportive Function:** Calcium and magnesium act synergistically in hundreds of reactions in the body, and they must both be respected and taken in balance. Magnesium is called the forgotten mineral by some. For instance, as important as calcium is in muscle function, the contraction-relaxation phase cannot operate without magnesium. Bones also need healthy balances of both calcium and magnesium.

**When is calcium and magnesium helpful?** Calcium is suggested in any of the following conditions: Osteoporosis, cramps, anxiety, insomnia, colon problems, injury, hypertension, indigestion, kidney stones, pregnancy, PMS, periodontal disease, and rickets.

Magnesium is beneficial for: Inflammation, injury, cardiovascular function, PMS, osteoporosis, gastrointestinal complaints, kidney stones, pregnancy, cramps, anxiety, hypertension, chronic fatigue syndrome, Fibromyalgia and diabetes.


**Inflammation:** Calcium helps transport essential minerals to the site of inflammation. After periods of trauma, the system tends to be alkaline, and it is important for an acid-calcium to deliver healing nutrients to binding sites. Calcium significantly improves symptoms of pouchitis (chronic and/or acute inflammation of the ileal reservoir) (Ann Chiro 1993; 47(10): 1049-53). An acid environment solubilizes and ionizes the insoluble calcium salts in the body (calcium has to be ionized in the intestines in order to be absorbed). Hydrochloric acid (Hcl) is needed for proper calcium absorption. Vitamin D also increases calcium absorption.

**Calcium Balance:** Eating a red meat/high protein diet may leach calcium from the system (controversial). Sodium and the phosphoric acid in soda drinks also leach calcium. High fiber foods may increase calcium excretion and should be taken into consideration, especially when assessing requirements for the elderly.

**Inflammation:** Magnesium increases the solubility and retention of calcium. Magnesium gets depleted in conditions of inflammation, and is integral to the healing process.

**Injury:** Very important in preventing infection after trauma. Magnesium’s function in protein metabolism and rebuilding after injury makes it useful in providing ligamental nutrient support.


**PMS:** “Magnesium deficiency is strongly implicated as a causative factor in premenstrual syndrome...The deficiency is characterized by excessive nervous sensitivity, with generalized aches and pains and a lower premenstrual pain threshold. In a study cited in Obstetrics and Gynecology, women were given 350 mg 3x/day during last two weeks of cycle, and experienced less moodiness, bloating, aches and pains (cited in Mindell, E. Earl Mindell’s Food as Medicine. Simon & Schuster, NY, NY. 1994, p.78). 200 mg Mg/day reduced headaches in women, especially before/during their period (Mindell, p. 78).

**Kidney Stones:** Magnesium supplementation can help decrease the occurrence of kidney stones and will help breakdown gallstones, to help aid their passage through the bile duct. Use magnesium 1-2 weeks prior to a gallbladder flush to help breakdown stone formation. (A gallbladder flush should only be attempted under the
supervision of a licensed professional, as biliary colic can ensue if the stones are too large to pass through the duct. Ultrasound can help determine gallstone size.)

**Testimonials/Nutrient Tidbits:**

- **PMS:** Works great!
- **Cramps/Charley Horse complaints:** I have had many cases of cramping, “charlie horse” type of complaints that clear with Cal/Mag and have used it a lot for structural support in reoccurring subluxation and when I needed muscle relaxation and pain control. (Ben Markham, D.C.)

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 120 tablets

**Price:** € 24,50

**Vegetarian:** Yes

**Contraindications:** Magnesium in amounts over 1,000 mg/day may cause diarrhea in some people.
**CARBO-MET**

**Ingredients:** Each Tablet Supplies: Tissue concentrates (not extracts) of bovine source from Pancreas 25mg, Parotid 1mg, and Chromium Picolinate 150mcg, Zinc Chelate 40mg, Manganese Glycerophosphate 6mg, Primary Yeast 200mg, Cinnamon 20mg, Turmeric 10mg, Cloves 10mg, Cayenne 250mcg.

**Supportive Function:** Nutritional support for blood sugar balance; glandulars support pancreas function, and various herbs, minerals and vitamins (especially the natural B vitamins from primary yeast) are vital to carbohydrate metabolism. Chromium functions as part of the body’s glucose tolerance factor (GTF), which serves to enhance normal insulin sensitivity.

**When are chromium and B vitamins helpful?** Diabetes (mostly type II because of insulin sensitivity), hypoglycemia, refined carbohydrate diet

**Clinical Applications/Research:** Chromium is one of the biggest nutrients to be in short supply in the American diet. Chromium has been shown to be beneficial in persons suffering from diabetes, hyperlipidemia and obesity. Chromium has been shown to have an anabolic (muscle building) effect in athletes. Chromium, which is part of the “glucose tolerance factor”, is a needed potentiator of insulin function.

Zinc: Found in the islets of Langerhans (distal tail of the pancreas) in large amounts; zinc is released with insulin from the beta cells of the pancreas.

Manganese: Important trace mineral that supports glucose metabolism and insulin activation.

Yeast: High in natural B vitamins, which are necessary for carbohydrate metabolism.

Herbs: Studies have demonstrated that cinnamon, cloves, turmeric and bay leaves have affected insulin sensitivity.

**Testimonials/Nutrient Tidbits:** High blood sugar: Several doctors’ report . . . I have seen several patients who either did not need to start insulin after taking the supplement, or whose insulin needs dropped while on the product.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed.

**Size:** 90 tablets

**Price:** € 20,40

**Vegetarian:** Yes

**Contraindications:** Do not take in pregnancy. Some people may be allergic to yeast.
CARDIO-LYPH CHELATE

**Ingredients:** Each 3 Tablets Supplies: Vitamin A (Palmitate) 3,000i.u, Beta Carotene 7,500 units, Vitamin D-3 100i.u, Vitamin C (Sago) 300mg, Vitamin B-1 30mg, Vitamin B-2 30mg, Vitamin B-6 75mg, Vitamin B-12 500mcg, Niacin 60mg, D Calcium Pantothenate (Pantothenic Acid) 150mg, Folic Acid 300mcg, Vitamin E (Succinate) 300i.u, Iodine (Kelp) 100mg, P.A.B.A. 100mg, Lecithin 120mg, Choline Bitartrate 250mg, Cysteine HCL 250mg, L-Methionine 75mg, L-Lysine 100mg, Bromelaine 30mg, Lemon Bioflavonoid 900mg, Rutin 30mg, Inositol 75mg, Garlic 120mg, Cayenne 30mg, Hawthorn Berries 100mg, Pancreatin 6X 25mg, Thymus 30mg, Spleen 30mg, Heart 30mg, Adrenal (Nutritrophic) 30mg, Whole Pituitary 30mg, Papain 30mg, L-Glycine 75mg, Calcium Gluconate 37mg, Manganese Ascorbate 7.8mcg, Copper Gluconate 7.8mcg, Molybdenum (chelate) 12mcg, Chromium Gluconate 10mg, Selenium Chelate 30mg, Calcium Ascorbate 100mg, Calcium Aspartate 100mg, Potassium Aspartate 25mg, Magnesium Aspartate 75mg, Ferrous Gluconate 15mg, Zinc Aspartate 15mg; in a base containing: Calcium Phosphate, Magnesium Phosphate, Calcium Fluoride, Ferric Phosphate Kali Phosphate, Sillicea, Chlorinum, Peppermint Leaves, Black Cohosh, Scullcap, Licorice Root, Watercress, Eleuthero, Red Beet Root, Parsley.

**Supportive Function:** A comprehensive assortment of vitamins, minerals, herbs, glandulars and specially selected nutrients are synergistically combined for optimal support of all aspects of the circulatory system.

**When is heart support helpful?** Heart disease, hypertension, angina, thrombophlebitis, and all heart-related conditions. Nutrient supplementation is a good preventive measure for maintaining a healthy heart.

**Clinical Applications/Research: Structure:** Vitamin A is a highly important cellular regeneration vitamin for the epithelial cells, which comprise tissue in our heart and vessels. Vitamin E protects and strengthens all cell membranes. The cells making up the tissue of the heart and blood vessels are kept strong yet flexible by the collagen and connective tissue that binds them like glue. Vitamin C has an important role in building and protecting the integrity of that tissue. Bioflavonoids, such as lemon bioflavonoids and rutin, boost the power of vitamin C to build strong connective tissue, and have the power by themselves to strengthen vessels (especially the smaller capillaries).

**Atherosclerosis (hardening of the arteries):** The cardiovascular system is highly susceptible to free radical attack (reactive oxygen molecules which damage cells). In fact, recent research within the last few years indicates that oxidation from free radicals may be more important than cholesterol as a risk factor for heart disease, since the oxidation makes the arteries massively suck up the cholesterol, where it then forms foam cells, blocking blood flow. If enough antioxidant protection is available, however, it will prevent this cholesterol oxidation and subsequent hardening of the arteries. Potent antioxidants include vitamin C, vitamin E, beta-carotene and selenium. The antioxidants all work in different capacities and are synergistic in action to each other. The antioxidants prevent cellular damage and prevent the oxidation of cholesterol responsible for clogging the arteries (Mol Cell Biochem 1992 111:41-7).

**Bromelain and papain:** Bromelain and papain are proteolytic enzymes, derived from fruits (pineapple and papaya, respectively) that have similar actions. They have fibrinolytic (breaks down clots) activity that is useful for cardiovascular disease. Bromelain has been shown to inhibit platelet aggregation, reduce angina, and relax vasoconstriction, making it particularly useful for angina and thrombophlebitis (J Int Assoc Prev Med 1979; 6:139-151). Pancreatin is a combination of digestive enzymes, which aids in debris cleanup as well as in fat metabolism.

**Testimonials/Nutrient Tidbits: A doctor reports...** I gave Cardio-lymph Chelate to my dog after having had a stroke and the dog lived to 17 (usual age 12) – the docs were amazed! (Antoinette Nowakowski, D.C. Durango, CO.).

**Multiple vitamins... Many doctors have reported...** they love Cardio-lymph Chelate so well that they use it as a multiple vitamin type of support in mid-older age people.
M.S patient/Heavy metal detoxification… We have a doctor who is using Cardio-lyph Chelate with MS patients with great success. She uses a Biotron unit that is similar to a Vega machine and finds that the product tests really well. She has two MS patients who have made good progress with Cardio-lyph Chelate. She thinks that it is helping to detoxify mercury and silver from their amalgam fillings (Nutri-West England).

**Suggested Dosage:** 1 tablet 3 times daily for the first bottle; 2 tablets 3 times daily until balance is achieved and then back off slowly to 1-2 tablets daily.

**Size:** 120 tablets

**Price:** € 42,20

**Vegetarian:** No

**Contraindications:** Caution during pregnancy. High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease. Hyperparathyroidism or sarcoidosis patients should avoid vitamin D supplementation. As a word of caution, high amounts of vitamin E (> 400 IU) and garlic are contraindicated with anticoagulant drugs such as coumadin. Hawthorn berries, licorice root, and Eleuthero are contraindicated in hypertension and/or when taking heart medications. Pituitary glandular is contraindicated in cancer. This formula does not contain large amounts of any of these ingredients.
**CHINA WEST #2**

**SINO FORMULA**

**Ingredients:** (NASAL WIND-HEAT) Each Tablet Supplies: Chrysanthemum Ye Ju Hua 48mg, Houttuynia Yu Xing Cao 48mg, Pogostemon Huo Xiang 48mg, Schizonepeta Jing Jie 48mg, Xanthium Cang Er Zi 48mg, Forsythia Lian Qiao 42mg, Lonicera Jin Yin Hua 42mg, Angelica Bai Zhi 36mg, Magnolia Xin Yi Hua 36mg, Moutan Mu Dan Pi 36mg, Phellodendron Huang Bai 36mg, Siler Fang Feng 36mg, Platycodon Jie Geng 36mg, Glycerrhiza Gan Cao 24mg, Liver Concentrate 5mg, Liver Protein Fraction 5mg, Quercetin 70mg, Vitamin C 70mg.

**Supportive Function:** Sino Formula is combination of Chinese herbs and vitamins, which act to support the respiratory system and help build the immune system. This formula is helpful for sinus support and histamine reaction support.

**When is SINO-Formula helpful?** Sinus congestion, hayfever, sneezing, itchy eyes, and pollen allergies.

**Testimonials/Nutrient Tidbits:** Several doctors’ report...First choice for sinus congestion, hayfever or sinus-lung combination support. Can combine with Sino-Lung Formula for extra support. Some people may need 3 tablets every 3 hours until they obtain relief.

**Suggested Dosage:** 3 tablets every three hours; or, 3 times daily as needed; discontinue when symptoms have gone.

**Size:** 60 tablets

**Price:**

**Vegetarian:** No

**Contraindications:** Safe during pregnancy.
CHILDREN’S XANTHIUM FORMULA

**Ingredients:** (EUSTACHIAN PHLEGM ACCUMULATION) Each one-ounce bottle contains 5 grams of powdered formula: Xanthium Cang Er Zi 300mg, Coptis Huang Lian 450mg, Gardenia Zhi Zi 450mg, Lonicera Jin Yin Hua 450mg, Phellodendrom Huang Bai 450mg, Angelica Bai Zhi 300mg, Bupleurum Chai Hu 300mg, Forsythia Lian Qiao 300mg, Magnolia Xin Yi Hua 30mg, Moutan Mu Dan Pi 300mg, Pogostemon Huo Xiang 300mg, Arisaema Dan Nan Xing 300mg, Pinellia Ban Xia 300mg, Vitex Man Jing Zi 300mg, Glycerrhiza Gan Cao 200mg.

**Supportive Function:** Children’s Xanthium Formula is a combination of herbs used by Chinese herbalists for eustachian phlegm accumulation. According to Chinese herbalists, this formulation helps open nasal passages; decrease phlegm, and assists in ear and sinus support.

**When is Children’s Xanthium helpful?** Acute pediatric ear infection; acute sinus congestion.

**Testimonials/Nutrient Tidbits:** Most doctors report . . . this formula is amazing for kid’s ear infections. The kids hate the taste, but boy does it work! Another suggestions for the taste . . . take it directly out of the bottle . . . place 1/8 tsp. to applesauce every 2-3 hours. Many doctors say this also works very well for adult patients.

**Suggested Dosage:** Fill bottle with boiling water; do not cover; wait 10-15 minutes; tighten cap and shake vigorously; 4 droppers full of liquid to back of throat, or in juice, every 2 to 3 hours; for adults, double the recommended dosage. Adults: 7 droppers full per dose.

**Size:** 1 oz

**Price:** $13.20

**Vegetarian:** Yes

**Contraindications:** Use may cause loose stools.
CHINA WEST #15
ILEX FORMULA

Ingredients: (TOXIC HEAT INVASION) Each Tablet Supplies: Gypsum Shi Gao 70mg, Rehmannia Sheng Di Huang 70mg, Ilex Mao Dong Qing 54mg, Andrographis Chuan Xin Lian 46mg, Chrysanthemum Ju Hua 46mg, Lonicera Jin Yin Hua 46mg, Notopterygium Qiang Huo 46mg, Pueraria Ge Gen 46mg, Vitex Man Jing Zi 46mg, Isatis Da Qing Ye 39mg, Coptis Huang Lian 31mg, Ceanothus (Red Root) 39mg, Baptisia (Wild Indigo) 31mg, Vitamin A Acetate 10,000i.u, Vitamin C 54mg.

Supportive Function: Ilex Formula is a Chinese herbal formulation for removing toxic heat, helping to build the immune system and open and detoxify the lymphatic channels. According to Chinese herbalists, Ilex, also known as holly, is effective for acute immune support.

When is Ilex helpful? Flu (second to sixth day); lymph congestion.

Testimonials/Nutrient Tidbits: A doctor reports… “The Chinese herbs contained in ChinaWest #15, Ilex formula appear to me to be an effective treatment modality for the flu. Personally, I have not experienced the full manifestation of influenza in the past 10 years. …My personal experience, which has reportedly also been experienced by 100% of my patients, is that I awoke the following morning without any feelings of discomfort, fever, aches, phaengitis, and throat or ear discomfort. Essentially, all of the indications of influenza were gone” (Ken Edwards, DC, DACBN, CCN).

Suggested Dosage: 3 tablets every three hours for the course of one week. Ken Edwards, D.C., suggests: “At the first hint of influenza infestation, begin by taking two tablets of the Ilex formula. Continue with one tablet each hour until retirement.”

Size: 60 tablets

Price:

Vegetarian: No

Contraindications: Safe during pregnancy.
CHLOROPHYLL PLUS

**Ingredients:** Oil Soluble Chlorophyll with Synergistic Support Each Capsule Supplies: Vitamin A* 11,000i.u, Vitamin D 250i.u, Natural Vitamin E 3i.u, Chlorophyll (Oil Soluble) 10mg, Lecithin 248mg, PumpkinSeed Oil 45mg, Sesame Seed Oil 22mg. (*From Shark Liver Oil, Halibut Liver Oil and Skip Jack Oil.)

**Supportive Function:** Considered the “blood of plant life,” chlorophyll is literally the life force of plants. Often referred to as “nature’s green magic,” its valuable nutrients are easily assimilated by the human body. Chlorophyll is the substance responsible for the green color found in plants. Chlorophyll is the main component of the plant’s blood, just as hemoglobin is the main component in human blood. Magnesium is the center of the chlorophyll molecule, just as iron is the core of the hemoglobin molecule; thus chlorophyll is high in magnesium. Chlorophyll provides intestinal nourishment and has a soothing effect on the lining of the mucosa.

**When is oil soluble chlorophyll helpful?** Anemia, blood clotting (high in vitamin K), heavy menstrual cycles, PMS, natural cleansing nutrient, intestinal detoxifier, heavy metal binder, ulcers, inflammation, colitis, ileocecal concerns, constipation.

**Clinical Applications/Research:** Chlorophyll: Research has found that its molecular structure is very similar to the molecular structure of the human red blood cell, hemoglobin, associating it as a natural blood builder and an excellent support nutrient in anemia. In combination with iron and copper, it promotes red blood cell formation. It is also high in vitamin K, an important nutrient in blood clotting. For this reason, chlorophyll is helpful in women with heavy menstrual cycles.

Chlorophyll has been shown to help control and regulate calcium levels in the blood, thus being very effective during monthly menstrual cycles. It has a two-fold benefit in a cleansing diet as it cleans the cell wall while the minerals build new cell life. Chlorophyll acts as an effective natural healer and cleanser for chronic conditions, both internally and externally. It retards growth and development of toxic bacteria (Keith, V., and Gordon, M., The How To Herb Book, Mayfield Publications, Pleasant Grove, Utah, 1988, pg. 22). It is an intestinal detoxifier and can bind heavy metals.

**Testimonials/Nutrient Tidbits:** ICV problems and ulcers: A doctor reports … I have used this product very successfully for years for ICV problems and ulcer patients.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** $25.90

**Vegetarian:** No

**Contraindications:** If digestive upset is present, check gallbladder function to rule out the possibility of biliary colic (obstruction of the bile duct). Vitamin D is fat-soluble, but is not toxic unless doses exceed 2400 IU/day. Due to high vitamin A content, do not use in pregnancy.
CHLOROPLEX

**Ingredients:** Water Soluble Chlorophyll Each Tablet Supplies: Chlorophyll 10mg, Chlorella 100mg, Aloe Vera 5mg, Vitamin E (Succinate) 3i.u. (*10%), Lemon Bioflavonoids 20mg, Yogurt Powder 50mg, deglycerrhized Licorice Root 50mg, Parsley 100mg, Apple Pectin 50mg, Alfalfa 100mg, Wheat Grass Juice Powder 50mg, Cabbage 10mg, 1 million units of each Lacto Bacillus Acidophilus, Lacto Bacillus Bifidus, Lacto Bacillus Bulgaricus; with natural orange flavor.

**Supportive Function:** A soothing, water-soluble formula with vitamin-packed chlorella, chlorophyll, phytochemically rich plant nutrients, and immune-supporting Lactobacillus probiotics; soothing to the gastrointestinal area.

**When is chlorella helpful?** Increased energy, immune system repair and restoration, irritated ileocecal valves, ulceration’s and other intestinal irritations including ulcerative colitis

**Clinical Applications/Research:** Chlorella is known as a potent detoxifier and promoter of beneficial bacteria growth in the intestinal tract. Chlorella is also very effective in removing heavy metals from the body and provides relief for intestinal gas and chronic constipation.

**Testimonials/Nutrient Tidbits:** Many doctors report . . . Chloroplex is excellent for patients with such chronic digestive complaints that you don’t know where to start to resolve their symptoms. This formula soothes and comforts the whole digestive tract and makes the person feel much better.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed; Chloroplex is readily dispersible in warm water so it can be used as a throat gargle or taken in liquid form.

**Size:** 60 tablets

**Price:** € 20,40

**Vegetarian:** Yes

**Contraindications:** Alfalfa contains L-canavanine, which is suspected of causing allergic reactions in some people. Chlorella is considered to be non-toxic, but if taken in severely excess dosages (greater than 60 grams per day for long periods of time), it may cause vitamin A toxicity. Medicinal amounts of any vitamin, mineral or specialty nutrient should only be taken with the advice of a trained licensed healthcare professional.
**CLM-NRV**

**Ingredients:** Contains 74% alcohol; pure tincture of Passion Flower, Scullcap, St. John's Wort, Valerian, Wood Betony, Black Cohosh, Wild Yam, Blue Cohosh, Milk Thistle, and Eleuthero.

**Supportive Function:** A calming and relaxing tonic for the entire body.

**When are calming herbs helpful?** Nervous tension, emotional stress, insomnia, panic attacks, hysteria

**Clinical Applications/Research:**

- **Passion Flower (12%)**: Acts as an antispasmodic, mild sedative and is helpful for insomnia, nervousness, anxiety and neuralgia.
- **Scullcap (12%)**: A sedative and antispasmodic that helps relax nervous tension and induce inner calm.
- **St. John’s Wort (12%)**: Acts as a sedative, anti-inflammatory and antidepressant. Assists in anxiety and depression.
- **Valerian Root**: Helps with insomnia, stress, nervousness and pain and assists in balancing the nervous system.
- **Wood Betony**: Used for chronic headaches and nervousness, neuralgia and anxiety. Balances the nerves.
- **Black Cohosh**: Used for all nervous conditions. Relieves nerve pain, numbness and neuralgia.
- **Wild Yam**: Antispasmodic and anti-inflammatory.
- **Blue Cohosh**: Antispasmodic
- **Milk Thistle**: Liver protector and regenerator.
- **Eleuthero**: Antispasmodic properties; supports the adrenal glands.

**Testimonials/Nutrient Tidbits:** Many doctors report . . . This is my “mellow out” formula. It is excellent for anxiety and insomnia type problems.

**Suggested Dosage:** 5-20 drops in water 3 times per day or as directed

**Size:** 1 oz

**Price:**

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy. Ginseng should not be taken in high doses (this formula does not contain a high dose). St. John's Wort should not be taken with antidepressant drugs; concerns about sun sensitivity only exist with high doses. Cautions of MAO-inhibiting effects appear to be unfounded.
**CO-Q-10 PLUS**

**Ingredients:** Each tablet supplies: Vitamin E (succinate) 10i.u, Co-Enzyme Q-10 50mg, Olive Oil 5mg, Quercetin 3.5mg, Alpha Lipoic Acid 2.5mg.

**Supportive Function:** A potent antioxidant, co-enzyme Q-10 is one of the electron carriers in the energy-producing mitochondria. Its many effects include support of cardiac function.

**When is Co-enzyme Q-10 helpful?** Heart disease, periodontal disease, antioxidant properties, increasing blood flow and oxygen delivery to tissues, brain function, Alzheimer's, hypertension, mitral valve prolapse, angina, cardiomyopathy, congestive heart failure, mitochondrial encephalomyopathy, mitochondrial function, exercise performance and post surgical healing.

**Clinical Applications/Research:** Co-enzyme Q-10: a vitamin-like nutrient that is vital to the production of energy. As one of the electron carriers in the electron transport system, it helps cells utilize oxygen. If you have ever wondered how we get energy from food, or why we have to breathe oxygen, it is because the body strips food of electrons and transports them to an electron acceptor, which is oxygen. Co-Q-10 facilitates this process, providing one of the “spark plugs” for the creation of cellular energy. Without Co-Q-10, we would not have enough energy to fuel the physiological reactions we need to survive (Folkers K & Wolaniuk A. Drugs Exp Clin Res. 1985; 11(8): 539-45). Dr. Folkers notes that Co-Q-10 levels falling to 75% may cause illness, whereas falling to 25% may cause death (Folkers, ibid).

Co-enzyme Q-10 concentration in the mitochondria (which are sometimes called the “powerhouses” of the cell) is not believed to be saturated, which is one of the reasons researchers think that supplementation is having beneficial effects (Clin Investig 1993; 71(8 Suppl): S66-70). Numerous therapeutic effects of Co-enzyme Q-10 have been reported, most notably in areas where oxygen transport is critical, for instance heart disease, aging and periodontal disease. Since an adequate supply of oxygen is necessary for tissue repair and immune function, many applications have been reported in these areas. Additionally, Co-enzyme Q-10 has therapeutic potential because of its antioxidant properties (fights damaging free radicals). Co-enzyme Q-10 has a wide variety of functions and applications in the body.

**Testimonials/Nutrient Tidbits:** Chronic Fatigue Syndrome: A doctor reports … I always use this in my chronic fatigue patients who are having problems with energy metabolism.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 54,40

**Vegetarian:** Yes

**Contraindications:** High doses of Co-enzyme Q-10 may interfere with the effectiveness of anticoagulant drugs such as coumadin. In one study, Swedish researchers have observed that patients taking Co-enzyme Q-10 and Coumadin at the same time had their bleeding time changed, and the Coumadin was less effective.
Ingredients: Each tablet supplies: Biotin 33 mcg, Magnesium (as chelate) 5 mg, Manganese (as chelate) 200 mcg, Acetyl L-Carnitine HCL 170 mg, Alpha Lipoic Acid 60 mg, Co-enzyme Q-10 2.5 mg, Phosphatidyl Serine 2 mg, Pyridoxal-5-Phosphate 2 mg, L-Ornithine Ketoglutarate 5 mg.

Supportive Function: Superior mitochondrial support and protection; evidence-backed research demonstrates the power of these nutrients. The mitochondria are “powerhouses of the cell” that produces energy. Supporting and protecting these powerhouses has played an integral role in cell protection, overall health and the aging process.

When is mitochondrial support helpful? General fatigue, chronic fatigue, wherever enhanced energy support is indicated; aging and degenerative diseases correlated to dysfunctional mitochondria. Mitochondrial decay can be a major contributor to the aging process.

Clinical Applications/Research: Alpha lipoic acid and Acetyl-L-carnitine: Two very important nutrients that enhance mitochondrial function are alpha lipoic acid and acetyl-L-carnitine. Research demonstrates that these nutrients support and protect the mitochondria. Acetyl-L-carnitine optimizes mitochondrial function, while alpha lipoic acid not only acts as a building block, it possesses dynamic strength as an antioxidant protector. Studies report a superior ability of these nutrients to enhance the mitochondria that supply the ATP (energy) that drives all the biochemical reactions in our bodies to keep us alive and well. In fact, many researchers state that supplementation of alpha lipoic acid and acetyl-L-carnitine can decrease mitochondrial decay, and actually restore function and the velocity of key enzyme reactions that have been diminished by oxidative free radicals (Ames BN, Liu J. Delaying the mitochondrial decay of aging with acetyl carnitine. Ann N Y Acad Sci. 2004 Nov;1033:108-16.)

Co-enzyme Q-10: Another integral and synergistic nutrient for mitochondrial function is Co-enzyme Q-10 (Co-Q-10). Co-Q-10 is an electron acceptor in the Kreb’s Cycle, which means that it is vital to the process of making ATP in the mitochondria. It also acts as an antioxidant, which is highly important, because the leakage of free radicals from the mitochondria, that is such a main source of oxidative damage, happens at the very site where Co-Q-10 functions. Since oxidative damage to the mitochondria are suspected in the etiology of many degenerative diseases, it would make sense that we would see Co-Q-10 show up as a nutrient receiving focus in scientific studies on mitochondrial health and protection. That is exactly the case, and one review in particular states that “in Co-enzyme Q-10 therapy, especially in areas where this therapeutic approach is completely new; the findings highlight the beneficial role of Co-enzyme Q-10 as coadjuvant in the treatment of syndromes characterized by increased oxidative stress and impaired mitochondrial bioenergetics…”; many improvements were cited, from cardiovascular/vascular effects and neuroprotective mechanisms, to “migraines and age-related macular degeneration – in whose pathophysiology mitochondrial dysfunction may play a role” (Littarru GP & Tiano L Clinical aspects of Co-enzyme Q-10: an update. Curr Opin Clin Nutr Metab Care, 2005; 8(6): 641-6.)


Alpha lipoic acid and Co-enzyme Q-10 in macular degeneration: Many degenerative diseases, including macular degeneration, are thought to evolve as a result of aging and oxidative damage. Researchers have suggested that nutrients such as acetyl-L-carnitine, Co-enzyme Q-10 and fish oil, which “affect mitochondrial
lipid metabolism, may improve and subsequently stabilize visual functions and it may also improve fundus alterations in patients affected by early macular degeneration” (Feher J et al. Improvement of visual functions and fundus alterations in early age-related macular degeneration treated with a combination of acetyl-L-carnitine, n-3 fatty acids, and Co-Q-10. Ophthalmologica. 2005 May-Jun; 219(3): 154-66.)

Other synergistic nutrients in Complete A-G: Many other nutrients help to maintain the function and health of our energy-producing mitochondria. Among them, some of the most important that stand out are the B vitamins biotin and pyridoxal-5-phosphate (activated B-6, involved in energy co-enzymes), magnesium (needed for over 200 biological reactions, including energy production), and manganese (needed for co-enzymes and the antioxidant enzyme SOD). When the lipid metabolism and mitochondrial enzyme function of the aging brain was studied, researchers demonstrated that supplementation with phosphatidyl serine “was able to balance the enzymatic functions altered by aging in several of the areas examined” (Gatti C et al. Effect of chronic treatment with phosphatidyl serine on phospholipase A1 and A2 activities in different brain areas of 4 month and 24 month old rats. Farmaco [Sci]. 1985 Jul; 40(7): 493-500.) L-Ornithine Ketoglutarate is one of the amino acids known to help release GH. Supplementation of ornithine has been reported to stimulate the release of GH from the pituitary (Pearson, D and Shaw, S. Life Extension. New York: Warner Books, 1982:289-290.) Growth hormone decline with aging has been suggested to be tied to the cause of aging (Harman SM. Use of growth hormone for prevention of effects of aging. Ann N Y Acad Sci. 2005 Dec; 1055:229-30.)

Testimonials/Nutrient Tidbits: Everyone who has taken this product has experienced increased energy and just raves about this product! (M. White, Douglas, WY.)

Suggested Dosage: 1 tablet with each meal, 3 tablets per day, or as directed

Size: 60 tablets

Price: € 49,00

Vegetarian: Yes

Contraindications: None known.
COMPLETE CHILDREN’S CO-FACTORS

Ingredients: Each chewable tablet supplies: Vitamin B12 (methylcobalamin) 25 mcg, Reduced L-Glutathione 5 mg, Vitamin C 25 mg, Vitamin B-1 4 mg, Vitamin B-2 4 mg, Vitamin B-6 4 mg, Folic Acid 75 mcg, Magnesium (as chelate) 3 mg, Co-enzyme Q-10 250 mcg, Alpha Lipoic Acid 250 mcg, natural orange flavor, sweetened with natural agave nectar, xylitol, and honey.

Supportive Function: Provides the proper absorption and utilization of Omega 3 fatty acids. Also supports the heart, mitochondria, in addition to being an excellent anti-oxidant formula. Contains NO Excitotoxins! Take with Complete Children’s DHA/EPA for best results.

When are Complete Children’s Co-factors helpful? Co-factors help the absorption and utilization of omega 3 fish oils. Additionally, the co-factors offer protection against cell damage, and optimize the nutritional protection that vitamins, minerals and anti-oxidants can provide to growing children. Vitamins and minerals are vital to all biochemical functions in the body, and therefore are helpful in most things related to health; beneficial in impaired immune status and vitamin/mineral deficiencies. Magnesium is a co-factor in a multitude of enzymatic reactions.

Clinical Applications and Research:

The B vitamins are water-soluble, necessary for many biochemical reactions, and are essential for energy, mental well-being, and the health of hair, skin, eyes, mouth, liver, etc. Most of them are made by the intestinal flora of the gut. They are particularly important for nervous system function and adrenal/thyroid glands in infants/children. They are destroyed by heat and microwaving, making it even more difficult to extract them from food. Stress and sugar are both notorious for robbing the body of necessary B vitamins. Vitamin B-1 (Thiamine) is associated with proper growth and energy production in children, and contributes to normal Hcl production. Vitamin B-2 (riboflavin) is important for the production of two Co-enzymes that are essential to many reactions, including metabolism of food macronutrients, energy production, and normal cell growth. Vitamin B-6 (pyridoxine) is especially correlated with normal function of the nervous system, fluid balance, and synthesis of red blood cells, antibodies, and DNA. Vitamin B-6 can lower homocysteine levels, a toxic substance that is increasingly noticed in children, and indeed, “Risk factors established at young ages may set the stage for later cardiovascular disease (CVD)” (Papoutsakis C, et al. Plasma homocysteine concentrations in Greek children. J Nutr. 2005 Mar; 135(3): 383-8). Folic acid is needed for all dividing cells (especially RNA/DNA), it helps prevent neural tube birth defects, and it also lowers homocysteine levels. Vitamin B-12 is also essential to nervous system and energy function, and lowers homocysteine levels, too. Deficiencies in folic acid or vitamin B-12 can manifest in anemias.

Vitamin C is necessary for a lot of processes, but it is most widely known for its integral function in the development of collagen (strong tissues) and its effect on the immune system. It is a powerful antioxidant and protects cells from oxidative destruction. Typical overconsumption of carbonated drinks can crowd out much needed fruits and vegetables from the diet that provide a good source of vitamin C. Eating inadequate amounts of fresh fruit or vegetables can cause symptoms of asthenia (lack of energy), weak blood vessels, bleeding, and gum abnormalities. Musculoskeletal symptoms can consist of arthralgia, myalgia, hemorrhiosis (blood in a joint or synovial cavity), and muscular hematomas. Vitamin C depletion is responsible for structural collagen alterations, defective bone matrix formation, and increased bone resorption. Imaging studies may show osteolysis, osteoporosis, joint space loss, bone cell death, and osteopenia. Children can experience severe lower limb pain related to subperiosteal bleeding (bleeding under the periosteum, specialized connective tissue covering all bones).

Magnesium increases the solubility of calcium. It is present as a cofactor in many enzymes, especially in energy production. It plays an important role in muscle contraction-relaxation, regulates pH and body
temperature, it is **essential for rebuilding after injury, and it gets depleted in inflammatory states.**


**Alpha Lipoic Acid (ALA):** ALA enhances glucose conversion for cell protection, maintenance, and rebuilding. In diabetes, cells starve from unconverted glucose, resulting in diabetic complications to tissues and organs. Lipoic Acid protects against capillary damage. Lipoic Acid helps regenerate and recycle other antioxidants, especially C, E, and glutathione. It protects against arterial plaque and oxidative damage to LDL cholesterol. It helps neutralize toxins in alcohol and tobacco smoke, mobilize and detoxify heavy metals. Lipoic Acid protects liver from damage, enhances glucose disposal in Type II diabetes, improves insulin sensitivity; and protects against diabetic complications of nerve damage. It has been shown to improve nerve blood flow, reduce oxidative stress, improve distal nerve conduction, and improve reduced levels of deficient glutathione and deficient E in the nerves of diabetics. It binds with the DNA of some viruses and prevents replication. Viral causes are implicated in some cases of diabetes. Supplements have been shown to improve neuropathy and reduce nerve pain.

**Co-enzyme Q-10:** Co-Q-10 is a vitamin-like nutrient that is vital to the production of energy. As one of the electron carriers in the electron transport system, it helps cells utilize oxygen. If you have ever wondered how we get energy from food, or why we have to breathe oxygen, it is because the body strips food of electrons and transports them to an electron acceptor, which is oxygen. Co-Q-10 facilitates this process, providing one of the “spark plugs” for the creation of cellular energy. Without Co-Q-10, we would not have enough energy to fuel the physiological reactions we need to survive (Folkers K & Wolaniuk A. Drugs Exp Clin Res. 1985; 11(8): 539-45). Dr. Folkers notes that Co-Q-10 levels falling to 75% may cause illness, whereas falling to 25% may cause death (Folkers, ibid).

Co-enzyme Q-10 concentration in the mitochondria (which are sometimes called the “powerhouses” of the cell) is not believed to be saturated, which is one of the reasons researchers think that supplementation is having beneficial effects (Clin Investig 1993; 71(8 Suppl): S66-70). Numerous therapeutic effects of Co-enzyme Q-10 have been reported, most notably in areas where oxygen transport is critical, for instance heart disease, aging and periodontal disease. Since an adequate supply of oxygen is necessary for tissue repair and immune function, many applications have been reported in these areas. Additionally, Co-enzyme Q-10 has therapeutic potential because of its antioxidant properties (fights damaging free radicals). Co-enzyme Q-10 has wide variety of functions and applications in the body.

**Reduced-L-Glutathione** is a potent antioxidant, conjugator (detoxer) and cell protector, especially in the liver. Glutathione is most powerful in a reduced or non-oxidized form. Glutathione is a major protector of microglial cells resident immune cells of the central nervous system. These cells defend the central nervous system against invading microorganisms and clear the debris from damaged cells helping to repair damaged brain cells. (Dringen R. Oxidative and antioxidative potential of brain microglial cells. Antioxid Redox Signal. 2005 Sep-Oct; 7(9-10): 1223-33.)

Xylitol is a naturally occurring sweetener, present in some fruits, that exhibits the ability to act as a sweetener and actually reduce dental caries (Catillo JL et al. Children's acceptance of milk with xylitol or sorbitol for dental caries prevention BMC Oral Health. 2005 Jul 22; 5(1): 6.) Xylitol has antibacterial characteristics, and may increase saliva production, enhancing its usefulness for dental applications; researchers believe that xylitol is “not only a means of stabilizing some pathologies (diabetes, obesity) but also a **weapon in the prevention of dental caries**” (Grillaud, M. The polyols in pediatric dentistry: advantages of xylitol. Arch Pediatr. 2005 Jul; 12(7): 1180-6.)

**Suggested Dosage:** Children ages one to three, 1 tablet per day, ages three to six, 2 tablets per day (one in the AM and one in the PM), ages six to twelve, 1 tablet 3 x per day, or as directed.

**Size:** 60

**Price:** € 39,90

**Vegetarian:** Yes

**Contraindications:** None known
**COMPLETE CHILDREN’S DHA/EPA**

**Ingredients:** Each Two Chewable Soft Gelatin Capsules Supplies: DHA 162.50 mg, EPA 62.50 mg, ALA (Alpha-Linolenic Acid) from Flaxseed 12.5 mg, GLA (Gamma Linolenic Acid) from Black Currant Seed Oil 12.5 mg, Vitamin E (D-Alpha Tocopherol-natural) 25 i.u. In a pleasantly fruit flavored soft gel chewable capsule.

**Supportive Function:** Support for a healthy immune system. Also supports the cardiovascular system, normal brain function and kidney support. Take with Complete Children’s Co-Factors for best results.

**When is Complete Children’s DHA helpful?** Nutritional support for a healthy immune system. Also supports normal brain and nervous system development/ the cardiovascular system, function, kidney provides nutritional support for conditions of pain/inflammation, asthma, allergy, ADD/ADHD, depression, vaccination, behavioral problems, dermatitis, colitis, cholesterol/triglycerides, autoimmune disease, etc.

**Clinical Applications/Research:**

**Allergy:** Many believe that changes in the typical diet, that include decreased consumption of omega 3 fatty acids, may explain the increase in the prevalence of atopic diseases, such as asthma, eczema and allergic rhinitis (Black PN, Sharpe S. Dietary fat and asthma: is there a connection? Eur Respir J. 1997 Jan; 10(1): 6-12.) Dietary intake of the omega 6’s (arachidonic acid) was positively associated with seasonal allergic rhinoconjunctivitis (Wakui, K. et al. seasonal allergic rhinoconjunctivitis and fatty acid intake: A cross-sectional study in Japan. Ann Epidemiol 2001 Jan; 11(1): 59-64.) Omega 3’s from fish oil competitively inhibit the production of all the inflammatory mediators from omega 6’s. Other atopic diseases such as bronchial asthma and atopic dermatitis are characteristically associated with an imbalance between different types of T cells and cytokines, leading to an increase of IgE and histamine, which gives rise to allergic symptoms (Strannegard O and Strannegard I.L. Allergy 2001; 56(2): 91-102). Omega-3 polyunsaturated fatty acid supplementation “may reduce omega-6-derived allergic inflammation and inflammation-perpetuated sensitization to multiple allergens, and may be beneficial in the prevention of allergy” (Dietary Fatty Acids and Allergy, Kankaanpaa P, et al, Ann Med, 1999; 31:282-287.)

**Asthma:** Fish oils make anti-inflammatory substances. Fish oil can block some of the inflammatory leukotrienes, and leukotrienes are responsible for most of the inflammation that is involved in asthma attacks. Leukotrienes are 1,000 times more potent as stimulators of bronchial constriction than histamine (Murray M and Pizzorno J, Encyclopedia of Natural Medicine, Prima Publishing, CA. p. 152). It is believed that asthma sufferers may have an imbalance in fatty acid metabolism, subjecting them to risk for elevated leukotriene production (Yen SS and Morris HG. Biochem Biophys Res Com 1981; 103:774-79). Fish oil is a competitive substrate for arachidonic acid, thereby reducing inflammatory mediators (Oily fish and asthma - A fishy story? Thien, F et al., Medical Journal of Australia, February 5, 1996; 164:135-36). A study on children found that those eating fresh, oily fish had ¼ the risk of asthma as children who did not eat oily fish (Hodge et al., Consumption of oily fish and childhood asthma risk. Med J Australia 1996; 164:137-40). Canned fish, non-oily fish, and total fish intake were not found to be protective against asthma. Oily fish include Atlantic salmon, anchovy, sardine, blue mackerel, rainbow trout, cod, yellowtail, and several others with greater than 2% fat content. Aside from the production of anti-inflammatory substances, the reported effects of fish oil and omega 3’s on the immune system could also be playing a role in ameliorating symptoms.

Eczema and other inflammatory conditions: Dietary supplements ranging 1-8 g per day of omega 3 fatty acids have been reportedly beneficial in the treatment of eczema, psoriasis, IBD (inflammatory bowel disease) and rheumatoid arthritis... treatment with omega-3 long-chain PUFA reduces mucosal damage (Gil A. Polyunsaturated fatty acids and inflammatory diseases. Biomed Pharmacother. 2002 Oct; 56(8): 388-96; Jensen RG Possible alleviation of atopic eczema in a breast fed infant by maternal supplementation with a fish oil concentrate. J Pediatr Gastroenterol Nutr. 1992 May; 14(4): 474-5.)

**Bipolar disorder/depression:** Omega 3 fatty acids improved the short-term course of illness in a preliminary study of patients with bipolar disorder. The omega 3 group performed better for nearly every outcome measure (Stoll, A.L. et al. Omega 3 fatty acids in bipolar disorder: a preliminary double blind, placebo-controlled trial. Arch Gen Psychiatry 56(5): 407-12).
“Fish oil blocked the abnormal signaling in the brain which we think is present in mania and depression” – Andrew Stoll, lead researcher in a study published by the Am Med Assoc Arch Gen Psychiatry (Fatty oil in fish eases depression. Reuters May 14, 1999). Also, “Stoll said omega 3 fatty acids boost levels of the neurotransmitter serotonin in the brain – similar to the effect of popular anti-depressants such as Prozac”. One of the mechanisms may be that the omega 3’s replenish the lipid bilayer surrounding brain cells that receive signals from chemical transmitters. As Dr. Murphy points out, the fat we eat affects the ability of neurotransmitters like serotonin and dopamine to dock on membrane receptor sites and initiate their respective physiological functions.

**Brain development/regeneration of nerve cells:** Consumption of omega 3’s by eating fish once a week significantly reduces risk of Alzheimer’s (Barberge-Gateau, P. et al. British Medical Journal 2002; 325 Oct 26:932-933). This article also noted a specific role of the omega 3 fatty acids in the regeneration of nerve cells.

**General Immune System:** The fatty acids in fish oil can influence the immune system by their effect on cytokines, macrophages, and other immune molecules. Cytokines and macrophages are immune defense molecules highly involved in the inflammatory response (Kremer, JM (ed.) Progress in Inflammation Research: Medicinal fatty acids in inflammation. Birkhauser Verlag, 1998).

**Autoimmune disease:** The fatty acids in fish oil can influence the autoimmune system by their effect on cytokines, macrophages, and the MHC II complex. The MHC class II complex is a genetically set cell coding system that determines susceptibility to autoimmune disease. Fish oil affects T-cells, adhesion molecule expression, signal transduction and MHC class II expression (reduces the expression of these autoimmuno-susceptible cells) (Immunoregulatory and anti-inflammatory effects of omega 3 polyunsaturated fatty acids. Brazilian Journal of Medical and Biological Research 1998 Apr;31(4):467-90, as cited by Dan Murphy, DC, DABCO). Omega 3-induced effects may be of use as a therapy for “disorders which involve an inappropriately-activated immune response” (Kremer, JM (ed.) Progress in Inflammation Research: Medicinal fatty acids in inflammation. Birkhauser Verlag, 1998, as sited by Dan Murphy, DC, DABCO).

**ADD/ADHD:** It is believed that ADD patients may suffer from altered fatty acid metabolism. For instance, one well controlled clinical trial found that 53 subjects with ADHD had significantly lower concentrations of key fatty acids in their plasma, and in red blood cell lipids, than did the 43 control subjects (Stevens LJ et al. AJCN 1995; 62:761-768). In the same study, a subgroup of 21 subjects with ADHD exhibited symptoms of actual essential fatty acid deficiency. All ADHD subjects were lower than controls in the long chain omega 3 fatty acids (EPA and DHA found in fish oil).

Autism: “Phospholipid fatty acids are major structural components of neuronal cell membranes, which modulate membrane fluidity and hence function. Evidence from clinical and biochemical sources have indicated changes in the metabolism of fatty acids in several psychiatric disorders. We examined the phospholipid fatty acids in the plasma of a population of autistic subjects compared to mentally retarded controls. Our results showed a marked reduction in the levels of DHA (23%) in the autistic subjects, resulting in significantly lower levels of total omega 3 polyunsaturated fatty acids (PUFA) (20%), without significant reduction in the omega 6 series, and consequently a significant increase in the omega-6/omega-3 ratio (25%)” (Vancassel S. et.al. Plasma fatty acid levels in autistic children. Prostaglandins Leukot Essent Fatty Acids. 2001 Jul; 65(1): 1-7.)

**Vaccination:** Vaccination has been observed to increase the expression of cells, which code for autoimmune susceptibility (Koppang EO et al. Vaccination induces major histocompatibility complex II expression in the Atlantic salmon eye. Scand J Immunol. 2003 Jul; 58(1): 9-14.), and fish oil has been observed to decrease expression (Immunoregulatory and anti-inflammatory effects of omega 3 polyunsaturated fatty acids. Brazilian Journal of Medical and Biological Research 1998 Apr;31(4):467-90, as cited by Dan Murphy, DC, DABCO). Fish oil may be able to reduce harmful effects of vaccination by its influence on the immune system.

*Please Note: Dr. Murphy recommends that you also take the sister product COMPLETE CHILDREN’S CO-FACTORS™* 

**Testimonials:** “A friend gave us a bottle of both the complete children’s DHA/EPA and Complete Childrens Co-Factors. We have also changed our daughter’s diet to include more protein and less carbs. There has been a dramatic change in her personality, span in school and overall learning ability, which has been a major problem over the past year.” (Tim Kimpton)
**Suggested Dosage:** 2-4 capsules daily or as recommended. Refrigerate after opening for best results.

**Size:** 120 chewable capsules

**Price:** € 35.40

**Vegetarian:** No

**Contraindications:** (*Note that generally, the dose is so low on the children’s fish oils that the contraindications do not apply, and generally children are not on blood thinners, however the contraindications are listed here for safety purposes): Fish oil can thin the blood and should not be combined with blood thinning drugs. Thinning the blood is normally considered to be advantageous because of the effect on reduced risk for blood clots/heart attack. Although blood thinning can hypothetically raise risk for hemorrhage/stroke, fish intake has been associated with reduced risk for stroke (Hiroyasu I, et al. Intake of fish and omega 3 fatty acids and risk of stroke in women. JAMA 2001; 285(3) Jan 17:304-312.)
COMPLETE F-M

**Ingredients:** Each Two Tablets Supplies: Malic Acid 588 mg, Magnesuim (as malate, citrate) 118 mg, Calcium (as citrate) 20 mg, Zinc (as malate) 12 mg, Grapeseed extract 8 mg, Betaine HCL 13 mg, Silymarin Extract (20% silybin) 8 mg, Bromelaine24 mg, Papain 24 mg, Trypsin (chymotrypsin) 4 mg, Lipase 12 mg, Amylase 16 mg, Pancreatins 6x 44 mg, Lecithin (phosphatidyl choline 12 mg) 26 mg, L-Leucine 22 mg, L-Valine 22 mg, Glucosamine Sulfate 50 mg, N-Acetyl Glucosamine 20 mg, Ornithine Alpha Keto-glutarate 20 mg.

**Supportive Function:** Nutritional support for healthy muscles and joints.

**When is Complete F-M helpful?** Muscle/connective tissue pain and/or inflammation, sleep disturbances, fatigue, Fibromyalgia

**Clinical Applications and Research:**

**Malic Acid:** Malic acid is a necessary intermediate factor for the Kreb’s cycle, which fuels our energy production. Several studies have found that it can be helpful for fibromyalgic support. In one randomized, double blind, placebo controlled, crossover pilot study published in the Journal of Rheumatology, significant reductions in the severity of all three primary pain/tenderness measures were obtained. A dose of 1200 mg of malic acid daily achieved the desired results, and the study concluded that malic acid was safe and may be beneficial in the treatment of patients with FM (Russell IJ et al. Treatment of Fibromyalgia syndrome with Super Malic: a randomized, double blind, placebo controlled, crossover pilot study. (J Rheumatol. 1995 May; 22(5): 953-8.)

**Magnesium (as Malate, citrate):** Calcium and magnesium ions play a key role in the physiology of muscular contraction/relaxation, and also general muscle health. FM patients have low magnesium, which is needed for over 200 biochemical reactions in the body, including energy production and muscle tissue repair. Magnesium is especially effective in FM when it is chelated to a Kreb cycle intermediate, such as malate or citrate.

**Calcium (as Citrate):** Chelated to citrate, a Kreb cycle intermediate, calcium provides double support for muscle homeostasis. There is evidence that an imbalance of calcium and magnesium may be involved in the etiology of the Fibromyalgia syndrome. “Changes in calcium ions concentration may be involved in the pathogenesis of Fibromyalgia. … The results obtained show that in Fibromyalgia patients the intracellular calcium and magnesium concentration seems to be a peculiar characteristics of Fibromyalgia patients and may be potentially responsible for muscular hypertonus” (Magaldi M, et al. Changes in intracellular calcium and magnesium ions in the physiopathology of the Fibromyalgia syndrome Minerva Med. 2000 Jul-Aug; 91(7-8): 137-40.)

**Zinc (as malate):** Zinc stimulates the release of growth hormone, and is essential for all of the body’s protein synthesis. It regulates the contraction of muscle, and has also been reported to accelerate healing time, and promote growth and mental alertness (Mindell, E, (RPh, Ph.D.), *Earl Mindell’s Vitamin Bible*. New York: Warner Books, 1991:94).


**Betaine HCL:** Many fibromyalgics have poor digestion and assimilation. HCL assists in protein breakdown and functions as a signaling mechanism for pancreatic enzyme release and bile release from the gall bladder. Hcl provides the proper pH to discourage bacterial/parasitic invasion. Proper pH also allows for absorption and solubility of calcium.

**Silymarin Extract (20% Silybin):** Silymarin is a component of milk thistle, and is traditionally utilized to promote liver detoxification. Metals, environmental toxins, dysbiosis, food allergens, and other factors can
present a toxic assault that overwhelms the detox systems of the body, and allows deposits of toxins in tissues that cause pain and discomfort. Offending toxins interfere with normal muscle and tissue health. **Bromelain, Papain, Trypsin (chymotrypsin), Lipase, Amylase, Pancreatin**: Proteolytic enzymes support anti-inflammatory mechanisms (clear debris that attracts inflammation), while other enzymes (lipase and amylase) can be beneficial for digestive support of fats and starches. Lipase has been utilized in studies with “significant improvement”, including reduction of energy loss (Arch Dis Child 1993 68(2):227-30). Bromelain, found in pineapple, “has therapeutic effects in the treatment of inflammation and soft tissue injuries”, and was found to reduce skeletal muscle injury (Med. Sci. Sports Ex. 1992; 24:20-5). **Lecithin (Phosphatidylcholine)**: Lecithin is made up mostly of phosphatidylcholine (PC). It emulsifies and breaks down fat deposits in the body, which makes it a key player in healthy heart and healthy liver functioning. PC is also a component of the brain neurotransmitter, acetylcholine, and is needed for normal brain functioning. Lecithin, being a major component of all cell membranes, supports all cell structures. **L-Leucine and L-Valine**: The branched chain amino acids L-Leucine and L-Valine increases growth hormone release naturally. Growth hormone administration was found to be effective for relief of Fibromyalgia when 18 randomized controlled trials were reviewed (Systemic drug treatment for chronic musculoskeletal pain. Moulin DE. Clin J Pain. 2001 Dec; 17(4 Suppl): S86-93.) While use of the actual growth hormone poses risks that vary from side effects to death, natural supplementation has not shown to cause side effects. **Glucosamine Sulfate**: Glucosamine is a well-known nutrient used for support of connective tissue health. A building block necessary for joint and tissue health, glucosamine is a helpful nutrient for fibromyalgics. **N-Acetyl Glucosamine**: N-Acetyl Glucosamine (NAG) is a building block for extracellular tissue. It decreases bacterial growth by strengthening intestinal mucosa, promoting growth of bifidobacteria (Gaulhe A. et al., Arch Biochem Biophys 1954; 48:214), and reduces adherence of organisms such as Candida albicans to the gut wall, a common occurrence in Fibromyalgia. It prevents cell damage (Int J Parasitol. 1991 Dec; 21(8): 941-4), and blocks the release of the leukocyte elastase enzyme (elastase is an enzyme which breaks down elastin connective tissue (Clin Exp Rheumatol. 1991 Jan-Feb; 9(1): 17-21). **Ornithine Alpha Keto-glutarate**: Supplementation of ornithine alpha keto-glutarate has been reported to stimulate the release of GH from the pituitary (Pearson, D and Shaw, S. Life Extension. New York: Warner Books, 1982:289-290). **Suggested Dosage**: 2 tablets 3 times daily or as directed

**Size**: 120

**Price**: € 47,65

**Vegetarian**: No

**Contraindications**: High doses of glucosamine sulfate (1500 mg) can cause high blood sugar levels and/or GI distress (however smaller synergistic amounts are used in this formula and there are no reported problems).
Ingredients: Each Table Supplies: Vitamin B-1 15 mg, Vitamin B-6 15 mg, Vitamin B-12 (methylcobalamin) 100 mcg, Niacin 10 mg, Pantotenonic Acid (as d-calcium pantothenate) 30 mg, Biotin 30 mcg, Folic Acid 100 mcg, Chromium (as chelate) 50 mcg, Selenium (as chelate) 20 mcg, Zinc (as chelate) 1.5 mg, Manganese (as malate) 1.6 mg, Manganese (as chelate) 500 mcg, Potassium (as chelate) 3 mg, Benfotiamine (lipid soluble derivative of Vitamin B-1) 35 mg, Alpha Lipoic Acid 2.5 mg, Quercetin 5 mg, Inositol 25 mg, Niacinamide 20 mg, Co-Enzyme Q-10 2.5 mg, Protease (vegetable) 5 mg, Lipase (vegetable) 5 mg, Amylase (vegetable) 5 mg, Vanadyl Sulfate (vanadium 50 mcg) 160 mcg, Acetyl L-Carnitine 10 mg, L-Taurine 30 mg, L-Glutamine 30 mg, Bitter Mellon (fruit) 25 mg, Gymnema Sylvestre (leaf) 60 mg, Panax Ginseng (root) 20 mg, Fenugreek (seed) 15 mg, Eleuthero (root) 30 mg.

Supportive Function: Use as part of the diet to help maintain healthy blood sugar levels, normal nerve growth and maintenance.

When is Complete Gluco-D helpful? High blood-sugar problems; insulin insensitivity; tissue damage (especially kidney, nerve, eye etc. due to high blood glucose levels); provides antioxidant/cell protection.

Clinical Applications and Research:

Benfotiamine: Exciting research on a new form of an old nutrient (vitamin B-1) has been putting benfotiamine in the spotlight. There are three major biochemical pathways implicated in the pathogenesis of hyperglycemia induced vascular damage: 1. The advanced glycation end product (AGE) formation pathway; 2. The hexosamine pathway and 3. The diacylglycerol (DAG)-protein kinase C (PKC) pathway. They are all activated by increased availability of sugar metabolites. Researchers have discovered that, “the lipid-soluble thiamine derivative benfotiamine can inhibit these three pathways by activating the pentose phosphate pathway enzyme transketolase. In retinas of diabetic animals, benfotiamine treatment inhibited these three pathways and also prevented experimental diabetic retinopathy.”

Accumulation of sugar by-products called triosephosphates resulting from high glucose concentrations is a trigger for biochemical dysfunction leading to the development of diabetic nephropathy - a common complication of diabetes associated with a high risk of cardiovascular disease and mortality. By stimulating the pentosephosphate pathway with benfotiamine, the accumulation of triosephosphates was countered, and development of nephropathy was inhibited. This inhibition “was associated with decreased activation of protein kinase C and decreased protein glycation and oxidative stress - three major pathways of biochemical dysfunction in hyperglycemia. Benfotiamine also inhibited diabetes-induced hyperfiltration… benfotiamine therapy is a potential novel strategy for the prevention of clinical diabetic nephropathy.”

Why is it important to think of benfotiamine and not just thiamine? In a rat study, nerve conduction velocity was nearly normalized after six months of benfotiamine application but not with thiamine. “Furthermore, benfotiamine induced a major inhibition of neural imidazole-type AGE formation and completely prevented diabetes induced glycoxidation products. Unlike treatment with water-soluble thiamine, timely administration of liposoluble benfotiamine was effective in the prevention of functional damage and of AGE formation in nerves of diabetic rats.”

Bitter Melon: People in tropical regions have utilized bitter melon for nutritional support of diabetes for many years, and beneficial results have been reported in some clinical trials.
At least three sets of constituents in bitter melon have been reported to have potential benefit. These include steroidal saponins known as charantin, insulin-like peptides, and alkaloids. Researchers report that, “Components of bitter melon extract appear to have structural similarities to animal insulin. Antiviral and antineoplastic activities have also been reported in vitro. Four clinical trials found bitter melon juice, fruit, and dried powder to have a moderate hypoglycemic effect.”

**Fenugreek:** Fenugreek seeds contain alkaloids (mainly trigonelline) and protein (it is high in lysine and L-tryptophan.) The steroidal saponins (diosgenin, yamogenin, tigogenin, and neotigogenin) and mucilaginous fiber are believed to account for many of the beneficial effects. The ingredients in fenugreek, especially the soluble fiber, may help lower blood sugar levels. One human study discovered that fenugreek can help lower cholesterol and blood sugar levels in people with moderate atherosclerosis and non-insulin-dependent (type 2) diabetes. Preliminary and double-blind trials have found that fenugreek helps improve blood sugar control in both patients with insulin-dependent (type 1) and non-insulin-dependent (type 2) diabetes. Double-blind trials have shown that fenugreek lowers elevated cholesterol and triglyceride levels in the blood and this has also been found in a controlled clinical trial with diabetic patients exhibiting elevated cholesterol. Additionally, fenugreek does not lower the good cholesterol (HDL).

**Siberian ginseng:** Siberian ginseng is known as an adaptogen, which means it works to stabilize and bring the body into homeostasis, especially in stress-related incidences. Siberian ginseng is thought to enhance mental acuity and possibly improve the use of oxygen by the working muscle. Healthy people supplementing with Siberian ginseng have been shown to have increased numbers of immune cells (T4 lymphocytes). Panax ginseng: Panax ginseng is another “adaptogenic” herb, which is also commonly used for mental and physical vitality. Ginseng is composed of ginsenosides, and also “panaxans”, which may help lower blood sugar, and the polysaccharides (complex sugar molecules), which are believed to support immune function. A double-blind trial found that Panax ginseng improved blood sugar levels in people with type 2 (non-insulin-dependent) diabetes.

**Chromium:** Chromium is part of the GTF, or Glucose Tolerance Factor; it helps to regulate insulin utilization and blood sugar levels. Chromium has been shown in studies to improve insulin sensitivity “…Accordingly, ingestion of chromium and antioxidants which improve insulin sensitivity and/or lessen free radical formation could theoretically ameliorate these basic disorders and lessen signs and symptoms of chronic age-related disorders.”

**Acetyl-L-carnitine:** Carnitine is known for its ability to bring fats across the mitochondrial membrane to be oxidized for energy. A deficiency in carnitine has been associated with impaired ability to utilize these fats, and may even result in accumulation of fatty acids, which is detrimental to nerve health. Acetyl-L-carnitine has been researched for potential neuroprotective characteristics. In the prevention study, the nerve-conduction defect was 73% prevented and structural abnormalities attenuated. Intervention with acetyl-L-carnitine resulted in 76% recovery of the conduction defect and corrected neuropathologic changes characteristic of 4 mo. diabetic rats. Acetyl-L-carnitine treatment promoted nerve fiber regeneration, which was increased two-fold, compared to nontreated diabetic rats. These results demonstrate that acetyl-L-carnitine has a preventive effect on the acute Na+/K+-ATPase defect and a preventive and corrective effect on PGE1”. Treatment with acetyl-L-carnitine “reduces the functional, structural, and biochemical changes associated with hyperglycemia that occur in the myelin sheath.”

The acetyl group that is part of acetyl-L-carnitine contributes to the production of the nerve transmitter acetylcholine, which is required for mental function. Several double blind clinical trials suggest that acetyl-L-carnitine delays the progression of Alzheimer’s disease. One double-blind trial has found that acetyl-L-carnitine may be helpful for people with degenerative cerebellar ataxia, a loss of muscular coordination affecting the hind part of the brain that controls muscle tone and balance.

**Gymnema sylvestre:** Gymnema sylvestre is native to the Indian tropical forests. Studies on Type 2 diabetics indicate that gymnema sylvestre “significantly reduced blood glucose, glycosylated hemoglobin, and glycosylated proteins. These data suggest that the beta cells (that produce insulin in the pancreas) may be
regenerated/repaired in Type 2 diabetic patients on supplementation”. Animal studies indicate that gymnema sylvestre may also stimulate insulin production in type I diabetics.

**Co-enzyme-Q-10:** Co-Q-10 stimulates insulin production. It has been shown to reduce fasting blood sugar levels and ketone bodies by 30%.

**Vitamin B-6:** The B vitamins are involved in all aspects of glucose metabolism. Vitamin B-6 in particular prevents the glycation process. Solomon and co-workers determined that administration of high dose B-6 for six weeks decreased levels of hemoglobin A1C and that, “B-6 supplementation has a beneficial role for persons with diabetes”.

**Manganese, magnesium, and potassium:** These minerals can be depleted in diabetes. Manganese is an important cofactor in key enzymes of glucose metabolism. A deficiency has resulted in diabetes in animals, and many human diabetics have ½ the manganese levels of non-diabetics.

**Zinc** is involved in all aspects of insulin metabolism - synthesis, secretion, and utilization. “Zinc can help prevent diabetes complications through its intracellular activation of the enzyme sorbitol dehydrogenase (SDH)”.

References available on request.

**Testimonials/Tidbits:** “Complete-Gluco-D is my favorite; I use it exclusively and it is the only one I have to use for my diabetic patients. It really works well” (Dr. Holm DC, Ac, Denver, CO.)

**Suggested Dosage:** 1-2 tabs, 2-3 times daily

**Size:** 90

**Price:** € 59.50

**Vegetarian:** Yes

**Contraindications:** Contraindicated in hypoglycemia (low blood sugar) and pregnancy. Use caution with other diabetic drugs (i.e. glipizide); monitor for hypoglycemia. Fenugreek and ginseng are used synergistically in small amounts to enhance this formula.
**COMPLETE GLUTATHIONE**

**Ingredients:** Each tablet supplies: Vitamin B-1 10 mg, Vitamin B-2 10 mg, Vitamin B-6 5 mg, Vitamin B-12 50 mcg, Vitamin C 75 mg, Folic Acid 50 mcg, Vitamin E (as succinate) (CONTAINS WHEAT) 10 i.u., Magnesium (as chelate) 500 mcg, Zinc (as chelate) 500 mcg, Selenium (as chelate) 10 mcg, N-Acetyl Cysteine 60 mg, Alpha Lipoic Acid 10 mg, L-Glutamine 15 mg, Super Oxide Dismutase Type-G (glutathione) 25 mg, Catalase 20 mg, Glutathione (reduced) 5 mg, Milk Thistle 50 mg, Silybin 10 mg, Rosemary 75 mg, Turmeric 10 mg.

**Supportive Function:** Glutathione is a powerful antioxidant, immune nutrient, and detoxifier. Complete glutathione is the nutritional answer for raising glutathione in the cells without a whey source. In convenient tablet form.

**When is glutathione support helpful?** Helpful for general health, stress, athletic performance, skin disorders, detoxification, fatigue, digestion, pregnancy/lactation, sleep, psychoneurobiology, trauma and burns, seizures, stomach/bowel conditions, kidney issues, arthritis, eyesight, hearing loss, sinusitis, lung problems, MS, lung disease, hepatitis, diabetes, heart disease, ear infections, stroke, cholesterol, BPH, Parkinson’s, Alzheimer’s, PSA levels, balding/hair loss, infertility...and many other conditions where decreased levels of glutathione are suspected of being a problem.

**Clinical Applications/Research:** N-acetyl cysteine raises glutathione levels in the body by increasing cellular cysteine, the rate-limiting step to glutathione synthesis: Glutathione (GSH) is a potent intracellular antioxidant that is backed by strong research describing its dramatic health benefits. The biggest roadblock in glutathione supplementation is the breakdown of glutathione in the digestive tract (it is quickly broken down and eliminated), lowering the efficiency of glutathione supplementation. However, many nutrients, such as the glutathione precursor N-acetyl cysteine (NAC), are able to bypass the normal roadblocks to successful cellular glutathione production by increasing glutathione production once it reaches the cell. NAC is a readily absorbable building block for glutathione, and since cysteine is the rate-limiting amino acid in glutathione, NAC supplementation increases the glutathione concentration.

Supplementation of the glutathione precursor cysteine in several clinical trials improved skeletal muscle functions, decreased the body fat/lean, body mass ratio, decreased inflammatory cytokines, and improved immune functions. “As all these parameters degenerate with age, these findings suggest: (i) that loss of youth, health and quality of life may be partly explained by a deficit in cysteine and (ii) that the dietary consumption of cysteine is generally suboptimal and everybody is likely to have a cysteine deficiency sooner or later” Droge W. Oxidative stress and ageing: is ageing a cysteine deficiency syndrome? Philos Trans R Soc Lond B Biol Sci. 2005 Dec 29; 360(1464): 2355-72. **Supplementation with N-acetyl cysteine is more efficient and absorbable** than cysteine supplementation, and some people are sensitive to straight cysteine supplementation – it can be toxic and not easily transported into cells. When patients suffer from Tylenol poisoning, they are given N-acetyl cysteine, the best known and fastest way to raise cellular glutathione levels; the glutathione in turn binds to the toxic by-products of the excess Tylenol and prevents tissue damage. **N-acetyl cysteine** is well known as a life-saving nutrient when it comes to acetaminophen (Tylenol) poisoning. If someone takes excessive acetaminophen and they are rushed to the hospital, they are immediately administered n-acetyl cysteine, because n-acetyl cysteine is the fastest, most effective way to raise intracellular levels of glutathione. It is a membrane-permeable precursor to cysteine and glutathione. Being membrane-permeable, N-acetyl cysteine is more readily absorbed than either cysteine by itself, or glutathione. As the rate-limiting amino acid in glutathione synthesis, it readily provides the necessary building block to the cells, and glutathione concentrations are increased.

Excessive acetaminophen burdens the liver’s ability to remove the toxic by-products, and extensive cell damage or even death may occur. As long as there is enough glutathione in the liver to take care of this damaging intermediate product of acetaminophen, the glutathione will hook onto it and draw it out of the...
system. This happens in what is called phase II detoxification in the liver. Glutathione binds many toxic substances in this way and targets them for removal from the body. In phase II, where the body is preparing to make the toxin water-soluble, a highly toxic, reactive substance is formed as an intermediary by-product, and it is much more toxic than the original form of acetaminophen. As the quantity of acetaminophen increases, the amount that is detoxified in this pathway increases, and the highly toxic, reactive by-products are left unbound, depleting the body’s stores of glutathione and causing extensive major cell damage and liver injury.

NAC has been reported to have many benefits, from antioxidant properties to restoration of nitric oxide bioavailability in the circulation (Xia Z, Antioxidant N-acetylcysteine restores systemic nitric oxide availability and corrects depressions in arterial blood pressure and heart rate in diabetic rats. Free Radic Res. 2006 Feb; 40(2): 175-84.) NAC has a very strong protective effect on cell health. Brain neurons with reduced glutathione content were found to have increased oxidant levels and increased susceptibility to injury, however this situation was reversed with NAC supplementation (Aoyama K, et al. Neuronal glutathione deficiency and age-dependent neurodegeneration in the EAAC1 deficient mouse. Nat Neurosci. 2006 Jan; 9(1): 119-26.)


NAC and neuronal health:

In an interesting study conducted by brain researchers, they noted “Oxidative stress caused by various stimuli lead to oxidation of glutathione (GSH), the major redox (antioxidant) power of the cell. Amyloid beta is one of the key components of senile plaques surrounding nerves, and is involved in the initiation and triggers of Alzheimer's disease (AD). Lower GSH levels correlated with the activation of protein kinases (enzymes) have been demonstrated in AD, Parkinson's disease (PD) and other neurodegenerative disorders and have been proposed to play a central role in the deterioration of the aging and neurodegenerative brain.” The same study concluded that N-acetyl cysteine replenished GSH levels, and the cell death induced by amyloid beta in primary neuronal cells was reversed by N-acetyl cysteine. “Likewise, protein oxidation, loss of mitochondrial function and DNA fragmentation all returned to control levels by pretreatment” (Bartov O, et al. Low molecular weight thiol amides amides attenuate MAPK activity... Brain Res. 2005 Dec 28.)

Selenium is an integral nutrient for the production of glutathione peroxidase, an important antioxidant enzyme that also contains glutathione. Acting as a component in this enzyme is the main biological function of selenium in our bodies. Many of the health characteristics of selenium and glutathione are actually attributed to the glutathione peroxidase enzyme. Supplementation of selenium is reported to have many benefits, including an ability to promote cell-mediated immunity in humans (Yu B, Wang M, Li D. Zhonghua Wai Ke Za Zhi. 1996 Jan; 34(1): 50-3. (The relationship between selenium and immunity in large bowel cancer).

Alpha lipoic acid, like many of the antioxidants, works synergistically with glutathione to protect the body from oxidative stress, elevates the GSH-peroxidase enzyme, and specifically prevents the depletion of GSH (Shila s. et al. Arsenic intoxication-induced reduction of glutathione level and of the activity of related enzymes in rat brain regions: reversal by DL-alpha-lipoic acid. Arch Toxicol. 2005 Mar; 79(3): 140-6.) Alpha lipoic acid and N-acetyl cysteine have been shown to reverse oxidative damage caused by zinc deficiency (Mackenzie G G et al. alpha-Lipoic acid and N-acetyl cysteine... Free Radic Res. 2006 Jan; 40(1): 75-84.) Additionally, alpha lipoic acid contains precursors for cysteine and glutathione.

Kwashiorkor is a severe form of malnutrition and has been reported to be associated with oxidative stress. Even though the therapy of kwashiorkor is still ineffective, a pilot study tested the hypothesis that raising glutathione status would be beneficial for the clinical recovery of kwashiorkor patients. “Both glutathione and alpha-lipoic acid supplementation had positive effects on survival... The data strongly suggest that a therapy restoring the antioxidative capacity by applying cysteine equivalents in the form of glutathione and/or alpha-lipoic acid is beneficial for biochemical and clinical recovery of kwashiorkor patients” (Becker K, Redox Rep. 2005;10(4):215-26.)

40
Glutamine is an amino acid that can balance pH, protect the intestinal lining, and exhibit strong antioxidant properties. Research has shown that glutamine can entirely prevent the decrease in glutathione, which normally happens after an oxidative stress challenge (Gonzalez S, et al. World J Gastroenterol. 2005 Jun 21; 11(23): 3533-8.)

Milk Thistle is an herb historically known for cleansing and supporting the liver. One of its main components, silybin, is a highly active ingredient that has been shown to increase patient serum levels of glutathione and glutathione peroxidase, while protecting against glutathione depletion (Wellington K, Jarvis B. Silymarin…BioDrugs. 2001; 15(7): 465-89.) and protect against GSH depletion; Campos R, et al. Silybin dihemisuccinate protects against glutathione depletion and lipid peroxidation induced by acetaminophen on rat liver. Planta Med. 1989 Oct; 55(5): 417-9.)


Superoxide dismutase (Type G glutathione) is a natural free-radical scavenging enzyme. It mops up the superoxide free radical, and works synergistically with many of the antioxidants in the oxidative defense system of the body, particularly glutathione. The superoxide radical produces oxidative stress associated with tissue damage and dysfunction of physiological signals. Molecular studies reveal that insulin receptor activity (associated with aging) is increased by this oxidative stress, and decreased by certain antioxidants such as glutathione (Droge W. Oxidative stress and ageing: is aging a cysteine deficiency syndrome? Philos Trans R Soc Lond B Biol Sci. 2005 Dec 29; 360(1464): 2355-72.) Catalase is a radical fighting enzyme that turns potentially dangerous hydrogen peroxide into harmless water and oxygen.

Anti-inflammatory, natural cox-2 inhibitors: The Cox 2 enzyme causes inflammatory substances to be produced in the body and is also the enzyme targeted by the cox-2 inhibitor drugs such as Vioxx and Celebrex.


Glutathione (GSH) functions as a natural cox-2 inhibitor because adequate levels of glutathione affect this gene expression of the cox-2 enzyme. Reduced Gluthathione is the preferred form of glutathione, because it is the active form. When glutathione is oxidized, it needs to be recycled into its reduced form. As a supplement, GSH breaks down in digestion and is not the most effective way to raise glutathione in the cells, HOWEVER, oral glutathione supplementation has been shown to have some effect on GSH concentration in the liver because of the efficient extraction by the liver of the cysteine that originated from the breakdown of GSH in the gut (Grattagliano I, et al. Effect of oral glutathione monoethyl ester and glutathione on circulating and hepatic sulfhydrils in the rat. Pharmacol Toxicol. 1994 Dec; 75(6): 343-7.) Glutathione protects not only individual cells but also the tissues of the arteries, brain, heart, immune cells, kidneys, lenses of the eyes, liver, lungs, and skin.

In addition to glutathione, the following nutrients ALSO inhibit inflammatory cox-2 naturally, and they have been added to the Nutri-West Complete Glutathione formula because their high antioxidant activity protects glutathione levels, plus they boost the anti-inflammatory support of the formula:

Turmeric is a spice with high antioxidant activity, and possesses the ability to preserve glutathione levels and to recycle oxidized glutathione. The curcumin in turmeric plays a particularly important regulatory role in this process (Dickinson DA Biol Chem. 2003 Apr; 384(4): 527-37. Cytoprotection against oxidative stress and the regulation of glutathione synthesis). Curcumin also possesses powerful cox-2 inhibiting activity. “Curcumin has been described as a potent antioxidant and anti-inflammatory agent. Evidence has also been presented to suggest that curcumin can suppress tumor initiation, promotion and metastasis... All of these studies suggest that curcumin has enormous potential in the prevention and therapy of cancer” (Aggarwal BB, Kumar A, Bharti AC. Anticancer potential of curcumin: pre-clinical and clinical studies. Anticancer Res. 2003 Jan-Feb; 23(1A): 363-98.) It has also been suggested that curcumin’s “anti-inflammatory and anti-oxidant actions may be useful in the prevention-treatment of neurodegenerative diseases, e.g. Alzheimer's and Parkinson's Diseases” (Ambegaokar SS, et al. Neuroendocrinol Lett. 2003 Dec; 24(6): 469-73).

Rosemary contains carnosol, rosmanol, and epirosmanol, which all demonstrate high antioxidant activity (Zeng HH, et al. 2001), and additionally, carnosol is a potent inhibitor of cox 2 (Subbaramaiah K. et al. 2002). Rosemary reduces pathogenic substances such as bacteria, raises detoxification enzymes in the liver, and decreases inflammation and liver cell injury (Ahn J. et al. 2004; Sotelo-Felix JI, et al. 2002.) Rosemary can specifically raise glutathione levels.

Suggested Dosage: 1 tablet daily or as directed
**Size:** 60 tablets

**Price:** € 39,50

**Vegetarian:** No

**Contraindications:** None known.
COMPLETE HI-POTENCY
OMEGA-3 LIQUID

**Ingredients:** Each Teaspoonful Supplies: EPA (Eicosapentainoic Acid) 1600 mg, DHA (Docosahexaenoic Acid) 800 mg, ALA (Alpha-Linolenic Acid) (from 100 mg Flaxseed oil) 55 mg, GLA (Gamma Linolenic Acid) (from 50 mg Black Currant Seed Oil) 7 mg, Vitamin E (D-Alpha Tocopherol-natural) 50i.u., Natural fruit flavor.

**Supportive Function:** Nutritional support for non-specific inflammatory response and a healthy immune system. Also supports the cardiovascular system, normal brain and nervous system development/function and kidneys. Use as part of the diet to help maintain healthy cholesterol and triglyceride levels. Mood enhancer. Take with Complete Omega-3 Co-Factors for best results.

**When is Complete Hi-Potency Omega 3 Liquid helpful?**
Complete Hi-Potency is helpful whenever fish oil supplementation is indicated, and the liquid form allows for larger quantities to be taken easily. One tsp. is equivalent to 2.4 grams of fish oil (EPA & DHA). Nutritional support for a multitude of health categories, including chronic pain/swelling; inflammation; cardiovascular; osteoarthritis; normal brain and nervous system development/function; immunoregulation; disc herniation; depression; autoimmune (i.e. RA, Lupus, etc.); diabetes; insulin sensitivity; Alzheimer’s; colitis; anti-aging; cholesterol; triglycerides; plaque formation; MS; asthma; allergies; psoriasis; dermatitis; organ transplant survival; kidney function; vaccination, C reactive protein, etc.

**Clinical Applications and Research: Health benefits:** One long detailed article (23 pages), containing 172 references, touts some of the many health benefits of fish oil. The benefits include positive influences on: Inflammation, pain, swelling, kidney function, MS, rheumatoid arthritis, psoriasis, autoimmune diseases, cardiovascular disease, organ transplant, asthma, diabetes, inflammatory bowel, hypersensitivity/allergy, non-rheumatoid joint inflammation, gene expression, immune cells, fever, erythma, vascular permeability, edema, and others (Calder PC. Immunoregulatory and Anti-inflammatory Effects of n-3 Polyunsaturated Fatty acids. Brazilian J Med and Biol Res 1998; 31(4): 467-90.)

This article also pointed out that fish oil acts on receptor operated calcium channels. Calcium channel blocker drugs, used to regulate high blood pressure, operate on a similar mechanism. Additionally, the effect on gene expression, of factors such as cytokines, adhesion molecules, and nitric oxide synthase, can affect cell membrane receptor proteins, which alters the membrane’s sensitivity to inflammatory mediators. This is yet another way in which fish oil can modulate the inflammatory response.

“Chronic inflammation, which is detrimental to tissues, is the basic pathogenic mechanism of hypersensitivity reactions against xenobiotics. Other frequent pathologies, for instance atherosclerosis, chronic hepatitis, inflammatory bowel disease (IBD), liver cirrhosis, lung fibrosis, psoriasis, and rheumatoid arthritis are also chronic inflammatory diseases…. Dietary supplements ranging 1-8 g per day of omega 3 fatty acids have been reportedly beneficial in the treatment of IBD (inflammatory bowel disease), eczema, psoriasis and rheumatoid arthritis... treatment with omega-3 long-chain PUFA reduces mucosal damage (Gil A. Polyunsaturated fatty acids and inflammatory diseases. Biomed Pharmacother. 2002 Oct; 56(8): 388-96).

**Fibromyalgia/chronic fatigue:** Patients with Fibromyalgia/chronic fatigue are suspected of having blood coagulation defects, where their blood is too thick and not able to deliver nutrients appropriately, or remove toxins efficiently. Blood coagulation has been tied to the fatigue experienced by these patients (Kop WJ et. al. Relationship of blood coagulation and fibrinolysis to vital exhaustion. Psychosom Med 1998 May-Jun; 60(3): 352-8). The blood thinning effect of fish oil allows more oxygen delivery to the tissues and therefore more support for tissue repair. “Most symptoms of Gulf War Illness (GWI) are similar to Chronic Fatigue Syndrome (CFS) and/or Fibromyalgia (FM). We investigated whether these symptoms are associated with an activated coagulation system as has been reported in some cases of CFS/FM. … Our findings show activation of the coagulation system in GWI. This evidence of a hypercoagulable state suggests that symptoms may be due to poor blood flow and, therefore, a basis for the potential utility of anticoagulant therapy” (Hannan KL, et. al. Activation of the coagulation system in Gulf War Illness: a potential pathophysiologic link with chronic fatigue syndrome. A laboratory approach to diagnosis. Blood Coagul Fibrinolysis 2000 Oct; 11(7): 673-

**Allergy:** Dietary intake of the omega 6’s (arachidonic acid) was positively associated with seasonal allergic rhinoconjunctivitis (Wakai, K. et al. Seasonal allergic rhinoconjunctivitis and fatty acid intake: A cross-sectional study in Japan. Ann Epidemiol 2001 Jan; 11(1): 59-64.) Omega 3’s from fish oil competitively inhibit the production of all the inflammatory modulators from omega 6’s. Other atopic diseases such as bronchial asthma and atopic dermatitis are characteristically associated with an imbalance between different types of T cells and cytokines, leading to an increase of IgE and histamine, which gives rise to allergic symptoms (Strannegard O and Strannegard I.L. Allergy 2001; 56(2): 91-102).

**Asthma:** Fish oils make anti-inflammatory substances. Fish oil can block some of the inflammatory leukotrienes, and leukotrienes are responsible for most of the inflammation that is involved in asthma attacks. Leukotrienes are 1,000 times more potent as stimulators of bronchial constriction than histamine (Murray M and Pizzorno J, Encyclopedia of Natural Medicine, Prima Publishing, CA. p. 152). It is believed that asthma sufferers may have an imbalance in fatty acid metabolism, subjecting them to risk for elevated leukotrienes production (Yen SS & Morris HG. Biochem Biophys Res Com 1981; 103:774-79).

**Stroke:** In a study of almost 80,000 women in the Nurses’ Health Study, those with higher intakes of fish had a lower risk of stoke. In a subgroup of the study, significantly reduced risk of thrombotic infarction was found in the women who ate fish 2 or more times per week. Mechanisms may include: inhibition of platelet aggregation, lowered blood viscosity, suppressed formation of leukotrienes, reduction of plasma fibrinogen blood pressure levels, and reduction of insulin resistance (Hiroyasu I, et al. Intake of fish and omega 3 f.a. and risk of stroke in women (JAMA 2001; 285(3) Jan 17:304-312).

**Bipolar disorder/depression:** Omega 3 fatty acids improved the short-term course of illness in a preliminary study of patients with bipolar disorder. The omega 3 group performed better for nearly every outcome measure (Stoll, A.L. et al. Omega 3 fatty acids in bipolar disorder: a preliminary double blind, placebo-controlled trial. Arch Gen Psychiatry 58(5): 407-12).

It is generally believed that liquid fish oil is the best form of support for depression, because researchers believe that “Studies likely will require escalating doses of DHA, eventually reaching high levels so as to ensure that patients will avoid a potentially ineffective subclinical dose” (Mischoulon D & Fava M. Docosahexanoic acid and omega-3 fatty acids in depression. Psychiatr Clin North Am. 2000 Dec; 23(4): 785-94.). A typical dose would start in the vicinity of 10 g per day.

“Fish oil blocked the abnormal signaling in the brain which we think is present in mania and depression” – Andrew Stoll, lead researcher in a study published by the Am Med Assoc Arch Gen Psychiatry (Fatty oil in fish eases depression. Reuters May 14, 1999). Also, “Stoll said omega 3 fatty acids boost levels of the neurotransmitter serotonin in the brain – similar to the effect of popular anti-depressants such as Prozac”. One of the mechanisms may be that the omega 3’s replenish the lipid bilayer surrounding brain cells that receive signals from chemical transmitters. As Dr. Dan Murphy points out, the fat we eat affects the ability of neurotransmitters like serotonin and dopamine to dock on membrane receptor sites and initiate their respective physiological functions.

**Brain development/regeneration of nerve cells:** Consumption of omega 3’s by eating fish once a week significantly reduces risk of Alzheimer’s (Barberger-Gateau, P. et al. BMJ 2002; 325 Oct 26:932-933). This article also noted a specific role of the omega 3 fatty acids in the regeneration of nerve cells.

**Sudden death/arrhythmia:** A randomized trial suggested that dietary supplements of omega 3’s might reduce the risk of sudden death among survivors of a heart attack. The main cause of sudden death among these men in the study was cardiac arrhythmia. Other evidence supports the association of the omega 3’s with reduced risk of sudden death among men who have not experienced prior cardiovascular disease (Albert, C. et al. Blood levels of long chain n-3 fatty acids and the risk of sudden death. NEJM Apr 11, 2002; 346(15): 1113-1118.) The DHA in fish oil could have a positive influence in heart failure by increasing efficiency of camp and increasing the force of contraction (Grynberg A et. al. Effect of docosahexaenoic acid and eicosapentaenoic acid in the phospholipids of rat heart muscle cells on adrenoceptor responsiveness and mechanism. J Mol Cell Cardiol 1995 Nov; 27(11): 2507-20).

**Cholesterol/Triglycerides:** Omega 3’s lower LDL cholesterol, and also have a favorable effect on reducing triglycerides (Hu, F.B. JAMA 2002; 288(20): 2569-2578). Since hormone replacement therapy (HRT) can raise triglycerides significantly, “Taking omega-3 supplements might be good co-therapy for women taking HRT” says Ken D. Stark, a doctoral candidate at the University of Guelph, in Canada and lead researcher of a study published in the American Journal of Clinical Nutrition. The 35 women in the study, half of whom were on HRT, each were given a daily dose of fish oil concentrate containing 4 grams of omega-3 fatty acids.
Osteoarthritis: Supplementation with omega 3’s reduced the release of proteoglycan metabolites from articular cartilage and abolished aggrecanase and collagenase activity (Curtis, C.L. Arthritis and Rheumatism 2002; 46(6): 1544-1553). Also, as Dr. Murphy points out, supplementation of omega 3’s can be important in both quiescent and active osteoarthritis.

Back Pain/Disc Herniation: PGE2 is the principal mediator related to the induction of sciatica and low back pain. It provokes ectopic firing of nerve roots, indicating that it may play a part in the chemical irritation of nerve roots. Dorsal root ganglion neurons can be sensitized by PGE2. “PGE2 possesses the capability of causing pain, or enhancing pain-inducing substances such as bradykinin…it is suggested that COX-2 may be involved in the pathogenesis of lumbar disc herniation through upregulation of PGE2 production” (Miyamoto, H et al. Spine 2002; 27(22): 2477-2483).

C reactive Protein: DHA is associated with reduced C reactive protein, which is an independent risk factor for heart disease, and an important marker of inflammation that is being related to several diseases with suspected inflammation etiology. “The inverse correlation between CRP and DHA may reflect an anti-inflammatory effect of DHA in patients with stable coronary artery disease and suggest a novel mechanism by which fish consumption may decrease the risk of coronary artery disease” (Madsen T et al. C-reactive protein, dietary n-3 fatty acids, and the extent of coronary artery disease. Am J Cardiol 2001 Nov 15; 88(10): 1139-42).

General Immune System: The fatty acids in fish oil can influence the immune system by their effect on cytokines, macrophages, and other immune molecules. Cytokines and macrophages are immune defense molecules highly involved in the inflammatory response.

“Inclusion in the diet of high levels of omega 3’s significantly reduces the movement of human monocytes towards chemotactic agents and the production of proinflammatory cytokines by human mononuclear phagocytes… Such omega 3-induced effects may be of use as a therapy for acute and chronic … disorders” (Kremer, JM (ed.) Progress in Inflammation Research: Medicinal fatty acids in inflammation. Birkhauser Verlag, 1998, as sited by Dan Murphy, DC, DABCO).

Autoimmune disease: The fatty acids in fish oil can influence the autoimmune system by their effect on cytokines, macrophages, and the MHC II complex. The MHC class II complex is a genetically set cell coding system that determines susceptibility to autoimmune disease. Fish oil affects T-cells, adhesion molecule expression, signal transduction and MHC class II expression (reduces the expression of these autoimmune-susceptible cells) (Immunoregulatory and anti-inflammatory effects of omega 3 polyunsaturated fatty acids. Brazilian Journal of Medical and Biological Research 1998 Apr;31(4):467-90, as cited by Dan Murphy, DC, DABCO). Omega 3-induced effects may be of use as a therapy for “disorders which involve an inappropriately-activated immune response” (Kremer, JM (ed.) Progress in Inflammation Research: Medicinal fatty acids in inflammation. Birkhauser Verlag, 1998, as sited by Dan Murphy, DC, DABCO). Part of a non-pharmacological approach to SLE (lupus) is to “treat both symptoms and the underlying inflammation”, and a diet high in fish oil is part of the recommended protocol (Ioannou Y, Isenberg DA. Current concepts for the management of systemic lupus erythematosus in adults: a therapeutic challenge. Postgrad Med J. 2002 Oct; 78(924): 599-606.)

Suggested Dosage: Dosage is dependent on the support sought; average dose is from 1 to 10 tsp. per day, going higher as recommended by a licensed professional. Refrigerate after opening for best results.

Size: 8 oz

Price: € 79,50

Vegetarian: No

Contraindications: Fish oil can thin the blood and should not be combined with blood thinning drugs. Thinning the blood is normally considered to be advantageous because of the effect on reduced risk for blood clots/heart attack. Although blood thinning can hypothetically raise risk for hemorrhage/stroke, fish intake has been associated with reduced risk for stroke (Hiroyasu I, et al. Intake of fish and omega 3 fatty acids and risk of stroke in women. JAMA 2001; 285(3) Jan 17:304-312.)
COMPLETE OMEGA-3
CO-FACTORS

**Ingredients:** Each Two Tablets Supplies: Vitamin B-12 (methylcobalamin) 400 mcg, Reduced L-Glutathione 50 mg, Vitamin C 500 mg, Folic Acid 800 mcg, Co-Enzyme Q-10 5 mg, Alpha Lipoic Acid 5 mg, Policosanol Extract 90% 5 mg, Selenium (as methionine 99 mcg) 1 mcg, Magnesium (as chelate) 150 mg.

**Supportive Function:** Co-Factors provide for the proper absorption and utilization of Omega 3 fatty acids. Co-factors also support the heart and the mitochondria, in addition to being an excellent anti-oxidant/aging formula. Take with Complete Omega-3 Essentials for best results.

**When are Complete Omega 3 Co-Factors helpful?** Co-factors help support the absorption and utilization of the fish oils. Additionally, co-factors are necessary for the antioxidant protection of the double bonds in the fish oil and they offer protection against health risk factors.

**Clinical Applications and Research: Policosanol:** A randomized, double blind study was undertaken to compare the efficacy and tolerability of policosanol (10 mg/day) and lovastatin (20 mg/day) in patients with hypercholesterolemia and noninsulin dependent diabetes mellitus. After 6 weeks on a lipid lowering diet, 53 patients were randomized to receive either policosanol or lovastatin tablets that were taken for 12 weeks under double-blind conditions. Both groups significantly (p < 0.001) lowered low-density lipoprotein (LDL)-cholesterol, total cholesterol and the ratio of LDL-cholesterol to high-density lipoprotein (HDL)-cholesterol. Comparison between groups showed that changes in HDL-cholesterol induced by policosanol were significantly greater (p < 0.01) than those induced by lovastatin. Lovastatin significantly (p < 0.05) increased levels of aminotransferase, creatine phosphokinase and alkaline phosphatase. Adverse reactions were more frequent in the lovastatin group (p < 0.01) than in the policosanol group. In conclusion, policosanol administered at 10 mg/day produces more advantageous changes in HDL-cholesterol and has a better safety and tolerability profile than lovastatin 20 mg/day (Crespo N et al. Int J Clin Pharmacol Res 1999; 19(4): 117-27 Comparative study of the efficacy and tolerability of policosanol and lovastatin in patients with hypercholesterolemia and noninsulin dependent diabetes mellitus).

**Alpha Lipoic Acid:** ALA enhances glucose conversion for cell protection, maintenance, and rebuilding. In diabetes, cells starve from unconverted glucose, resulting in diabetic complications to tissues and organs. Lipoic Acid protects against capillary damage and cataract formation. Lipoic Acid helps regenerate and recycle other antioxidants, especially C, E, and glutathione. It protects against arterial plaque and oxidative damage to LDL cholesterol. It helps neutralize toxins in alcohol and tobacco smoke, mobilize and detoxify heavy metals. Lipoic Acid protects liver from alcohol damage, enhances glucose disposal in adult onset, Type II diabetes, improves insulin sensitivity; and protects against diabetic complications of nerve damage. It has been shown to improve nerve blood flow, reduce oxidative stress, improve distal nerve conduction, and improve reduced levels of deficient glutathione and deficient E in the nerves of diabetics. Lipoic Acid prevents cataracts in animals by increasing levels of C, E, and glutathione in the lens. It binds with the DNA of some viruses and prevents replication. Viral causes are implicated in some cases of diabetes. Supplements have been shown to improve neuropathy and reduce nerve pain.

**Co-enzyme Q-10:** Co-Q-10 is a vitamin-like nutrient that is vital to the production of energy. As one of the electron carriers in the electron transport system, it helps cells utilize oxygen. If you have ever wondered how we get energy from food, or why we have to breathe oxygen, it is because the body strips food of electrons and transports them to an electron acceptor, which is oxygen. Co-Q-10 facilitates this process, providing one of the “spark plugs” for the creation of cellular energy. Without Co-Q-10, we would not have enough energy to fuel the physiological reactions we need to survive (Folkers K & Wolaniuk A. Drugs Exp Clin Res. 1985; 11(8): 539-45). Dr. Folkers notes that Co-Q-10 levels falling to 75% may cause illness, whereas falling to 25% may cause death (Folkers, ibid).

Co-enzyme Q-10 concentration in the mitochondria (which are sometimes called the “powerhouses” of the cell) is not believed to be saturated, which is one of the reasons researchers think that supplementation is having beneficial effects (Clin Investig 1993; 71(8 Suppl): S66-70). Numerous therapeutic effects of Co-enzyme Q-10...
have been reported, most notably in areas where oxygen transport is critical, for instance heart disease, aging and periodontal disease. Since an adequate supply of oxygen is necessary for tissue repair and immune function, many applications have been reported in these areas. Additionally, Co-enzyme Q-10 has therapeutic potential because of its antioxidant properties (fights damaging free radicals). Co-enzyme Q-10 has a wide variety of functions and applications in the body.

**Selenium:** Selenium is an essential trace element involved in several key metabolic activities by way of selenoproteins, enzymes that are essential to protect against oxidative damage and to regulate immune function. Selenium also has other health benefits unrelated to its enzymatic functions. “It may provide important health benefits to people whose oxidative stress loads are high, such as those with inflammatory or infectious diseases like rheumatoid arthritis or human immunodeficiency virus/acquired immunodeficiency syndrome, or who are at high risk for cancers, particularly prostate cancer” (Ryan-Harshman M and Aldoori W. The relevance of selenium to immunity, cancer, and infectious/inflammatory diseases. Can J Diet Pract Res. 2005 Summer; 66(2): 98-102).

Selenium has been demonstrated to reduce the risk of cancer (Finley JW et al. Selenium enrichment of broccoli: interactions between selenium and secondary plant compounds. J Nutr. 2005 May; 135(5): 1236-8). A total of 974 men were randomized to either a daily supplement of 200 microg of selenium or a placebo. Patients were treated for a mean of 4.5 years and followed for a mean of 6.5 years The selenium-treated group had substantial reductions in the incidence of prostate cancer, and total cancer incidence and mortality (Clark, LC et al. Decreased incidence of prostate cancer with selenium supplementation: results of a double-blind cancer prevention trial. Br J Urol. 1998 May; 81(5): 730-4).

**Vitamin B-12 and Folic acid** are B vitamins associated with lowering homocysteine levels, and hence lowering the risk for complications of high homocysteine levels (heart disease, osteoporosis, placental abruption, weak capillaries, etc.) (Vitamin therapy may reduce hip fracture risk. Folate, B12 appear to reduce homocysteine levels. Health News. 2005 Jun; 11(6): 8.)

**Reduced Glutathione** is a potent antioxidant, conjugator (detoxer) and cell protector, especially in the liver. Glutathione is most powerful in a reduced or non-oxidized form. Glutathione is a major protector of microglial cells, resident immune cells of the central nervous system. These cells defend the central nervous system against invading microorganisms and clear the debris from damaged cells helping to repair damaged brain cells. (Dringen R. Oxidative and antioxidant potential of brain microglial cells. Antioxid Redox Signal. 2005 Sep-Oct; 7(9-10): 1223-33.)

**Vitamin C** is an antioxidant, an immune nutrient, a chelator (especially metals), a detoxer, and possesses many healthful characteristics, including an ability to keep glutathione in a reduced form. It has protective qualities, and has been associated in the literature with favorable effects on many conditions, ranging from heart disease (Knekt P et al. Antioxidant vitamins and coronary heart disease risk: a pooled analysis of 9 cohorts. Am J Clin Nutr. 2004 Dec; 80(6): 1508-20.)


To photoaging and dermatological indications (Farris PK. Topical vitamin C: a useful agent for treating photoaging and other dermatologic conditions. Dermatol Surg. 2005 Jul; 31(7 Pt 2): 814-7; discussion 818), among others.

**Magnesium** helps calcium absorption, regulates muscle relaxation cycles, and is important as a protective factor in heart disease; magnesium has been described as having an “anti-infarct characteristic” (Ebrahimi S. Anti-infarct effect of magnesium is not mediated by adenosine A1 receptors in rat globally ischaemic isolated hearts. Clin Exp Pharmacol Physiol. 2004 Dec; 31(12): 868-72.) Magnesium intake deficiency increases not only vaso-spasms of the coronary artery, but also exacerbates several coronary risk factors such as hypertension, diabetes mellitus, and mental stress (Ueshima K. Magnesium and ischemic heart disease. Clin Calcium. 2005 Feb; 15(2): 175-80). Deficiency also decreases ATPase. It is not unusual for magnesium intake to be below the recommended dietary allowance.

**Suggested Dosage:** 2 tablets daily or as directed

**Size:** 60

**Price:** € 39,90

**Vegetarian:** Yes

**Contraindications:** Large amounts of Co-Enzyme Q-10 may interfere with the efficacy of blood thinners, however only small amounts are utilized in this formula.
**COMPLETE OMEGA-3 ESSENTIALS**

**Ingredients:** Each Two Soft Gelatin Capsules Supplies: EPA 600 mg, DHA 300 mg, ALA (Alpha-Linolenic Acid) 100 mg, Vitamin E (D-Alpha Tocopherol) (natural) 100 i.u., Mixed Natural Tocopherols 4 mg.

**Supportive Function:** Nutritional support for non-specific inflammatory response and a healthy immune system, normal brain and nervous system development/function and kidneys. Use as part of the diet to help maintain healthy cholesterol and triglyceride levels. Mood enhancer. Take with Complete Omega-3 Co-Factors for best results.

**When is Complete Omega 3 Essentials helpful?** Nutritional support for a multitude of health categories, including chronic pain/swelling; inflammation; cardiovascular; osteoarthritis; normal brain and nervous system development/function; immunoregulation; disc herniation; depression; autoimmune (i.e. RA, Lupus, etc.); diabetes; insulin sensitivity; Alzheimer’s; colitis; anti-aging; cholesterol; triglycerides; plaque formation; MS; asthma; allergies; psoriasis; dermatitis; organ transplant survival; kidney function; vaccination, C reactive protein, etc.

**Clinical Applications and Research:**

**Health benefits:** One long detailed article (23 pages), containing 172 references, touts some of the many health benefits of fish oil. The benefits include positive influences on: Inflammation, pain, swelling, kidney function, MS, rheumatoid arthritis, psoriasis, autoimmune diseases, cardiovascular disease, organ transplant, asthma, diabetes, inflammatory bowel, hypersensitivity/allergy, non-rheumatoid joint inflammation, gene expression, immune cells, fever, erythema, vascular permeability, edema, and others (Calder PC. Immunoregulatory and Anti-inflammatory Effects of n-3 Polyunsaturated Fatty acids. Brazilian J Med and Biol Res 1998; 31(4): 467-90.)

This article also pointed out that fish oil acts on receptor operated calcium channels. Calcium channel blocker drugs, used to regulate high blood pressure, operate on a similar mechanism. Additionally, the effect on gene expression, of factors such as cytokines, adhesion molecules, and nitric oxide synthase, can affect cell membrane receptor proteins which alters the membrane’s sensitivity to inflammatory mediators. This is yet another way in which fish oil can modulate the inflammatory response.

“Chronic inflammation, which is detrimental to tissues, is the basic pathogenic mechanism of hypersensitivity reactions against xenobiotics. Other frequent pathologies, for instance atherosclerosis, chronic hepatitis, inflammatory bowel disease (IBD), liver cirrhosis, lung fibrosis, psoriasis, and rheumatoid arthritis are also chronic inflammatory diseases. Dietary supplements ranging 1-8 g per day of omega 3 fatty acids have been reportedly beneficial in the treatment of IBD (inflammatory bowel disease), eczema, psoriasis and rheumatoid arthritis... treatment with omega-3 long-chain PUFA reduces mucosal damage (Gil A. Polyunsaturated fatty acids and inflammatory diseases. Biomed Pharmacother. 2002 Oct; 56(8): 388-96.)

**Fibromyalgia/chronic fatigue:** Patients with Fibromyalgia/chronic fatigue are suspected of having blood coagulation defects, where their blood is too thick and not able to deliver nutrients appropriately, or remove toxins efficiently. Blood coagulation has been tied to the fatigue experienced by these patients (Kop WJ et. al. Relationship of blood coagulation and fibrinolysis to vital exhaustion. Psychosom Med 1998 May-Jun; 60(3): 352-8). The blood thinning effect of fish oil allows more oxygen delivery to the tissues and therefore more support for tissue repair. Most symptoms of Gulf War Illness (GWI) are similar to Chronic Fatigue Syndrome (CFS) and/or Fibromyalgia (FM). We investigated whether these symptoms are associated with an activated coagulation system as has been reported in some cases of CFS/FM. … Our findings show activation of the coagulation system in GWI. This evidence of a hypercoagulable state suggests that symptoms may be due to poor blood flow and, therefore, a basis for the potential utility of anticoagulant therapy” (Hannan KL, et. al. Activation of the coagulation system in Gulf War Illness: a potential pathophysiologic link with chronic fatigue syndrome. A laboratory approach to diagnosis. Blood Coagul Fibrinolysis 2000 Oct; 11(7): 673-8). Symptoms of fatigue, myalgia and depression improved in another study after supplementation with fish oil (Horrobin, D.F., BCh, Essential Fatty Acids, Immunity and Viral Infections. Journal of Nutritional Medicine, 1990; 1:145-151).

**Allergy:** Dietary intake of the omega 6’s (arachidonic acid) was positively associated with seasonal allergic rhinoconjunctivitis (Wakai, K. et al. Seasonal allergic rhinoconjunctivitis and fatty acid intake: A cross-sectional study in Japan. Ann Epidemiol 1990; 4:45-50).
Omega 3’s from fish oil competitively inhibit the production of all the inflammatory modulators from omega 6’s. Other atopic diseases such as bronchial asthma and atopic dermatitis are characteristically associated with an imbalance between different types of T cells and cytokines, leading to an increase of IgE and histamine, which gives rise to allergic symptoms (Strannegard O and Strannegard I.L. Allergy 2001; 56(2): 91-102).

**Asthma:** Fish oils make anti-inflammatory substances. Fish oil can block some of the inflammatory leukotrienes, and leukotrienes are responsible for most of the inflammation that is involved in asthma attacks. Leukotrienes are 1,000 times more potent as stimulators of bronchial constriction than histamine (Murray M and Pizzorno J, Encyclopedia of Natural Medicine, Prima Publishing, CA. p. 152). It is believed that asthma sufferers may have an imbalance in fatty acid metabolism, subjecting them to risk for elevated leukotriene production (Yen SS & Morris HG. Biochem Biophys Res Com 1981; 103:774-79).

**Stroke:** In a study of almost 80,000 women in the Nurses’ Health Study, those with higher intakes of fish had a lower risk of stroke. In a subgroup of the study, significantly reduced risk of thrombotic infarction was found in the women who ate fish 2 or more times per week. Mechanisms may include: inhibition of platelet aggregation, lowered blood viscosity, suppressed formation of leukotrienes, reduction of plasma fibrinogen blood pressure levels, and reduction of insulin resistance (Hiroyasu I, et al. Intake of fish and omega 3 fatty acid and risk of stroke in women (JAMA 2001; 285(3) Jan 17:304-312).

**Bipolar disorder/depression:** Omega 3 fatty acids improved the short-term course of illness in a preliminary study of patients with bipolar disorder. The omega 3 groups performed better for nearly every outcome measure (Stoll, A.L. et al. Omega 3 fatty acids in bipolar disorder: a preliminary double blind, placebo-controlled trial. Arch Gen Psychiatry 56(5): 407-12).

“Fish oil blocked the abnormal signaling in the brain which we think is present in mania and depression” – Andrew Stoll, lead researcher in a study published by the Am Med Assoc Arch Gen Psychiatry (Fatty oil in fish cases depression. Reuters May 14, 1999). Also, “Stoll said omega 3 fatty acids boost levels of the neurotransmitter serotonin in the brain – similar to the effect of popular anti-depressants such as Prozac”. One of the mechanisms may be that the omega 3’s replenish the lipid bilayer surrounding brain cells that receive signals from chemical transmitters. As Dr. Murphy points out, the fat we eat affects the ability of neurotransmitters like serotonin and dopamine to dock on membrane receptor sites and initiate their respective physiological functions.

**Brain development/regeneration of nerve cells:** Consumption of omega 3’s by eating fish once a week significantly reduces risk of Alzheimer’s (Barberger-Gateau, P. et al. BMJ 2002; 325 Oct 26:932-933). This article also noted a specific role of the omega 3 fatty acids in the regeneration of nerve cells.

**Sudden death/arrhythmia:** A randomized trial suggested that dietary supplements of omega 3’s might reduce the risk of sudden death among survivors of a heart attack. The main cause of sudden death among these men in the study was cardiac arrhythmia. Other evidence supports the association of the omega 3’s with reduced risk of sudden death among men who have not experienced prior cardiovascular disease (Albert, C. et al. Blood levels of long chain n-3 fatty acids and the risk of sudden death. NEJM Apr 11, 2002; 346(15): 1113-1118.) The DHA in fish oil could have a positive influence in heart failure by increasing efficiency of pump and increasing the force of contraction (Grynberg A et. al. Effect of docosahexaenoic acid and eicosapentaenoic acid in the phospholipids of rat heart muscle cells on adrenoceptor responsiveness and mechanism. J Mol Cell Cardiol 1995 Nov; 27(11): 2507-20).

**Cholesterol/Triglycerides:** Omega 3’s lower LDL cholesterol, and also have a favorable effect on reducing triglycerides (Hu, F.B. JAMA 2002; 288(20): 2569-2578). Since hormone replacement therapy (HRT) can raise triglycerides significantly, “Taking omega-3 supplements might be good co-therapy for women taking HRT" says Ken D. Stark, a doctoral candidate at the University of Guelph, in Canada and lead researcher of a study published in the American Journal of Clinical Nutrition. The 35 women in the study, half of whom were on HRT, each were given a daily dose of fish oil concentrate containing 4 grams of omega-3 fatty acids.

**Osteoarthritis:** Supplementation with omega 3’s reduced the release of proteoglycan metabolites from articular cartilage and abolished aggrecanase and collagenase activity (Curris, C.L. Arthritis and Rheumatism 2002; 46(6): 1544-1553). Also, as Dr. Murphy points out, supplementation of omega 3’s can be important in both quiescent and active osteoarthritis.

**Back Pain/Disc Herniation:** PGE2 is the principal mediator related to the induction of sciatica and low back pain. It provokes ectopic firing of nerve roots, indicating that it may play a part in the chemical irritation of nerve roots. Dorsal root ganglion neurons can be sensitized by PGE2. “PGE2 possesses the capability of causing pain, or enhancing pain-inducing substances such as bradykinin…it is suggested that COX-2 may be involved in
the pathogenesis of lumbar disc herniation through upregulation of PGE2 production” (Miyamoto, H et al. Spine 2002; 27(22): 2477-2483).

**C reactive Protein:** DHA is associated with reduced C reactive protein, which is an independent risk factor for heart disease, and an important marker of inflammation that is being related to several diseases with suspected inflammation etiology. “The inverse correlation between CRP and DHA may reflect an anti-inflammatory effect of DHA in patients with stable coronary artery disease and suggest a novel mechanism by which fish consumption may decrease the risk of coronary artery disease” (Madsen T et al. C-reactive protein, dietary n-3 fatty acids, and the extent of coronary artery disease. Am J Cardiol 2001 Nov 15; 88(10): 1139-42).

**General Immune System:** The fatty acids in fish oil can influence the immune system by their effect on cytokines, macrophages, and other immune molecules. Cytokines and macrophages are immune defense molecules highly involved in the inflammatory response.

“Inclusion in the diet of high levels of omega 3’s significantly reduces the movement of human monocytes towards chemotactic agents and the production of proinflammatory cytokines by human mononuclear phagocytes… Such omega 3-induced effects may be of use as a therapy for acute and chronic … disorders” (Kremer, JM (ed.) Progress in Inflammation Research: Medicinal fatty acids in inflammation. Birkhauser Verlag, 1998, as cited by Dan Murphy, DC, DABCO).

**Autoimmune disease:** The fatty acids in fish oil can influence the autoimmune system by their effect on cytokines, macrophages, and the MHC II complex. The MHC class II complex is a genetically set cell coding system that determines susceptibility to autoimmune disease. Fish oil affects T-cells, adhesion molecule expression, signal transduction and MHC class II expression (reduces the expression of these autoimmune-susceptible cells) (Immunoregulatory and anti-inflammatory effects of omega 3 polyunsaturated fatty acids. Brazilian Journal of Medical and Biological Research 1998 Apr;31(4):467-90, as cited by Dan Murphy, DC, DABCO). Omega 3-induced effects may be of use as a therapy for “disorders which involve an inappropriately-activated immune response” (Kremer, JM (ed.) Progress in Inflammation Research: Medicinal fatty acids in inflammation. Birkhauser Verlag, 1998, as cited by Dan Murphy, DC, DABCO). Part of a non-pharmacological approach to SLE (lupus) is to “treat both symptoms and the underlying inflammation”, and a diet high in fish oil is part of the recommended protocol (Ioannou Y, Isenberg DA. Current concepts for the management of systemic lupus erythematosus in adults: a therapeutic challenge. Postgrad Med J. 2002 Oct; 78(924): 599-606.)

**Suggested Dosage:** 2 capsules daily or as directed

**Size:** 90

**Price:** € 47,65

**Vegetarian:** No

**Contraindications:** Fish oil can thin the blood and should not be combined with blood thinning drugs. Thinning the blood is normally considered to be advantageous because of the effect on reduced risk for blood clots/heart attack. Although blood thinning can hypothetically raise risk for hemorrhage/stroke, fish intake has been associated with reduced risk for stroke (Hiroyasu I, et al. Intake of fish and omega 3 fatty acids and risk of stroke in women. JAMA 2001; 285(3) Jan 17:304-312.)
COMPLETE WHEY-G
(PROTEIN POWDER)

**Ingredients:** Whey (undenatured) 7,500 mg, Quercetin 50 mg, Ginger 50 mg, Curcumin 25 mg, Boswellia 50 mg, Chamomile 50 mg, Luo Han Guo 25 mg, Superoxide Dismutase Type G (glutathione) 50 mg, Rice Bran 2,048 mg. **Calories:** 37; **Protein:** 5.86 g; **Fat:** 0.72 g; **Carb:** 0.228 g.

**Supportive Function:** Undenatured whey is indicated wherever it is helpful to raise glutathione levels in the cells. General support for immune health, post-surgery protocols, inflammation, detox, antioxidant status, weight management, and overall cell protection.

When is glutathione helpful? Helpful for general health, stress, athletic performance, skin disorders, detoxification, fatigue, digestion, pregnancy/lactation, sleep, psychoneurobiology, trauma and burns, seizures, stomach/bowel conditions, kidney issues, arthritis, eyesight, hearing loss, sinusitis, lung problems, MS, lung disease, hepatitis, diabetes, heart disease, ear infections, stroke, cholesterol, BPH, Parkinson’s, Alzheimer’s, PSA levels, balding/hair loss, infertility…and many other conditions where decreased levels of glutathione are suspected of being a problem.

When is undenatured whey helpful? Since undenatured whey raises glutathione, it is helpful for all the situations listed above where glutathione is helpful. Additionally, there are specific benefits to whey that are helpful, such as bone support, weight management, and protein boosting (needed for hormones, immune antibodies, enzymes, neurotransmitters, muscles, surgery recovery, etc.). By resting the gut with a liquid form of protein, protein drinks can be helpful in inflammatory conditions.

**Clinical Applications/Research:** Undenatured whey efficiently raises glutathione levels in the body: One of the reasons that undenatured whey is getting so much press is because it raises glutathione levels in the cells. Glutathione (GSH) is a potent intracellular antioxidant that is backed by strong research describing its dramatic health benefits. Undenatured whey, which avoids heat processing, is able to bypass the normal roadblocks to successful cellular glutathione production. The biggest roadblock is the breakdown of glutathione in the digestive tract (it is quickly broken down and eliminated), lowering the efficiency of glutathione supplementation.

Enter undenatured whey. The whey has bioactive proteins and contains cystine, which is two cysteine molecules held together by a bond that is resistant to digestion. Cysteine, being one of the three amino acids that make up glutathione, facilitates the production of glutathione inside the body’s cells because it is the limiting building block. It is deficient in many diets. It does not travel to the cell well unless it is part of a larger protein, and that’s where cystine comes in. Being a larger protein, the cystine in whey travels quickly to the cell and then splits into the two-cysteine molecules to provide the necessary precursor for glutathione production. The whey also contains an efficient delivery system to transport the cystine to the cells. Moreover, whey contains additional building blocks for glutathione. These building blocks, and the delivery system, are heat-sensitive, however the undenatured whey eliminates this roadblock since it has not been exposed to heat. Glutathione must be manufactured in the cells. Because of this, and because the optimal production of GSH is provided by transportation of these heat-sensitive precursors (cystine and glutamylcystine residues) by other heat-sensitive molecules (albumin, lactoferrin and alpha lactalbumin) all contained in whey, undenatured, unheated whey protein is THE best nutritional source for glutathione production.

There are reports of a wide range of health benefits to be gained from whey. In addition to being a good source of protein, whey demonstrates a multitude of “immune-enhancing properties” and “has the ability to act as an antioxidant, antihypertensive, antitumor, hypolipidemic, antiviral, antibacterial, and chelating agent… A number of clinical trials have successfully been performed using whey in the treatment of cancer, HIV, hepatitis B, cardiovascular disease, osteoporosis, and as an antimicrobial agent. Whey protein has

Whey has been utilized to help reduce the inflammation in critically ill trauma patients receiving nutritional support; C-reactive protein concentrations (marker of inflammation) and total inflammatory index dramatically fell in one study (Vehe KL et al. The prognostic inflammatory and nutritional index in traumatized patients receiving enteral nutrition support. J Am Coll Nutr. 1991 Aug; 10(4): 355-63).

**WHEY contains glycomacropeptide:** Glycomacropeptide (GMP) has anti-inflammatory, immunomodulatory and bacterial toxin binding effects. The intestinal anti-inflammatory activity of glycomacropeptide was assessed in colitis in a rat model. Pretreatment with glycomacropeptide had an anti-inflammatory effect, characterized by less colonic damage (65%). “The magnitude of the anti-inflammatory effect was generally comparable to that of sulfasalazine, an established drug used in the treatment of inflammatory bowel disease. It may play a role in the management of patients with inflammatory bowel disease” (Daddaoua A et al. Bovine glycomacropeptide is anti-inflammatory in rats with hapten-induced colitis. J Nutr. 2005 May; 135(5): 1164-70.) Research on GMP has focused on its ability to bind toxins, inhibit bacteria and viruses adhesion, promote growth of good gut bacteria, inhibit proliferation of pathogens and modulate immune system responses (Brody E.P. Biological activities of bovine glycomacropeptide. Br J Nutr. 2000 Nov; 84 Suppl 1:S39-46). Researchers have found GMP to be a potent immunoenhancer even at low concentrations (Li EW, Mine Y. Immunoenhancing effects of bovine glycomacropeptide and its derivatives on the proliferative response and phagocytic activities of human macrophagelike cells, U937. J Agric Food Chem. 2004 May 5; 52(9): 2704-8).

Whey supplies cysteine to the cells, and supplementation of the glutathione precursor cysteine in several clinical trials improved skeletal muscle functions, decreased the body fat/lean body mass ratio, decreased inflammatory cytokines, and improved immune functions. “As all these parameters degenerate with age, these findings suggest: (i) that loss of youth, health and quality of life may be partly explained by a deficit in cysteine and (ii) that the dietary consumption of cysteine is generally suboptimal and everybody is likely to have a cysteine deficiency sooner or later” (Droge W. Oxidative stress and ageing: is ageing a cysteine deficiency syndrome? Philos Trans R Soc Lond B Biol Sci. 2005 Dec 29; 360(1464): 2355-72.)

**Superoxide dismutase (Type G glutathione)** is a natural free-radical scavenging enzyme. It mops up the superoxide free radical, and works synergistically with many of the antioxidants in the oxidative defense system of the body, particularly glutathione. The superoxide radical produces oxidative stress associated with tissue damage and dysregulation of physiological signals. Molecular studies reveal that insulin receptor activity (associated with aging) is increased by this oxidative stress, and decreased by certain antioxidants (Droge W. Oxidative stress and ageing: is ageing a cysteine deficiency syndrome? Philos Trans R Soc Lond B Biol Sci. 2005 Dec 29; 360(1464): 2355-72.)

**Luo Han Guo,** or Lo Han Kuo (from the Momordicia grosvenori fruit) is a novel, natural sweetener that has many beneficial, health-promoting properties. The sweet elements, called triterpene glycosides, actually suppress the rise in blood glucose after a meal! (Suzuki YA t. al. 2005). Researchers have found the natural sweetener to exhibit significant anti-tumor activity by decreasing both initiation and promotion (Ukiya M. et al. 2002). Additionally, it prevents the oxidation of LDL (bad cholesterol) and may reduce the risk of heart disease by reducing the atherogenicity of the LDL (Takeo E. et al. 2002). Researchers have determined that it possesses many advantages, such as having high sweetness capability with low adherence (good news for the teeth!) (Mu, J. 1998).

**Anti-inflammatory, natural cox-2 inhibitors:**

**Undenatured whey inhibits cox-2 by raising GSH levels:** As mentioned above, whey possesses many properties, including anti-inflammatory characteristics. One of the ways in which whey demonstrates anti-inflammatory effects is by inhibiting the cox-2 enzyme. The Cox 2 enzyme causes inflammatory substances to be produced in the body and is also the enzyme targeted by the cox-2 inhibitor drugs such as Vioxx and Celebrex. Raising glutathione (for example by utilizing undenatured whey) has the ability to modulate cox-2 gene expression and prostaglandin (inflammatory substance) synthesis (Chen JX et al. Glutathione mediates LPS-stimulated COX-2 expression. J Cell Physiol. 2003 Oct; 197(1): 86-93.)

The following nutrients ALSO inhibit inflammatory cox-2 naturally, and they have been added to the **Complete Whey-G** formula to boost its anti-inflammatory support:

**Ginger** has 477 documented active ingredients, including several cox-2 inhibitors such as kaempferol. A moderate dose of ginger has been found to stop the formation of inflammatory and pain-causing prostaglandins,
and a University of Miami study demonstrated that 63 percent of patients with knee osteoarthritis showed improvement after taking ginger for just six weeks (Altman, RD & Marcussen, KC). Effects of a ginger extract on knee pain in patients with osteoarthritis. Arthritis Rheum 2001 Nov.)

**Curcumin** is an ingredient in the spice turmeric that possesses powerful cox-2 inhibiting activity. **Curcumin and ginger** were among the spices researched by the MD Anderson Cancer Center at the U of Texas that were determined to possess the ability to “inhibit the activation of a transcription factor linked with a variety of inflammatory diseases, including cancer, atherosclerosis, myocardial infarction, diabetes, allergy, asthma, arthrits, Crohn's disease, multiple sclerosis, Alzheimer's disease, osteoporosis, psoriasis, septic shock, and AIDS” (Aggarwal BB, Shishodia S. Suppression of the nuclear factor-kappaB activation pathway by spice-derived phytochemicals: reasoning for seasoning. Ann N Y Acad Sci, 2004 Dec; 1030:434-41.) “Curcumin has been described as a potent antioxidant and anti-inflammatory agent. Evidence has also been presented to suggest that curcumin can suppress tumor initiation, promotion and metastasis… All of these studies suggest that curcumin has enormous potential in the prevention and therapy of cancer” (Aggarwal BB, et al. Anti-cancer potential of curcumin: preclinical and clinical studies. Anticancer Res. 2003 Jan-Feb; 23(1A): 363-98).

**Boswellia** has been used as a traditional remedy in Ayurvedic medicine in India for the treatment of inflammatory diseases, and a strong inhibitor of the cox-2 enzyme. When boswellia was used in clinical trials, “promising results were observed in patients with rheumatoid arthritis, chronic colitis, ulcerative colitis, Crohn's disease, bronchial asthma and peritumoral brain edemas” (Ammon HP. Boswellic acids as the active principle in treatment of chronic inflammatory diseases Wien Med Wochenschr. 2002; 152(15-16): 373-8.) The same researchers point out that boswellia can inhibit elastase (an enzyme that breaks down connective tissue). **Quercetin** is a powerful bioflavonoid and antioxidant that has been found to “effectively suppress the COX-2 promoter activity” (Bagga D et al. Differential effects of prostaglandin derived from omega-6 and omega-3 polyunsaturated fatty acids on COX-2 expression and IL-6 secretion. Proc Natl Acad Sci 2003 Feb 18; 100(4): 1751-6.) **Curcumin, boswellia and quercetin** are all among the natural agents described by researchers that “may advance the efficacy of cancer therapy… One key new approach appears to be modulation of the inflammatory cascade, as research is expanding that links cancer initiation, promotion, progression, angiogenesis, and metastasis to inflammatory events” (Wallace JM. Nutritional and botanical modulation of the inflammatory cascade as an adjunct in cancer therapy. Integr Cancer Ther. 2002 Mar; 1(1): 7-37).

**Chamomile** contains bioactive flavonoids such as apigenin that are powerful cox 2 inhibitors, and “may be important in the prevention of carcinogenesis and inflammation” – in fact, apigenin was more powerful than genistein and kaempferol in inhibiting cox 2 (Liang YC, et al. Suppression of inducible cyclooxygenase and inducible nitric oxide synthase by apigenin and related flavonoids in mouse macrophages. Carcinogenesis. 1999 Oct; 20(10): 1945-52.) **The apigenin in chamomile has effectively suppressed inflammatory substances in scientific studies** (Smolinski AT, Pestka JJ. Modulation of lipopolysaccharide-induced proinflammatory cytokine production by herbal constituents. Food Chem Toxicol. 2003 Oct; 41(10): 1381-90.)

**Glutathione (GSH)** also inhibits the inflammatory cox-2 enzyme (Chen JX et al. Glutathione mediates LPS-stimulated COX-2 expression via early transient p42/44 MAPK activation. J Cell Physiol. 2003 Oct; 197(1): 86-93.) As a supplement, GSH breaks down in digestion and is not the most effective way to raise glutathione in the cells, HOWEVER, oral glutathione supplementation has been shown to have some effect on GSH concentration in the liver because of the efficient extraction by the liver of the cysteine that originated from the breakdown of GSH in the gut (Grattagliano I, et al. Effect of oral glutathione monoethyl ester and glutathione on circulating and hepatic sulfhydryls in the rat. Pharmacol Toxicol. 1994 Dec; 75(6): 343-7.) This makes it an excellent synergistic addition to a formula for glutathione support. Glutathione protects not only individual cells but also the tissues of the arteries, brain, heart, immune cells, kidneys, lenses of the eyes, liver, lungs, and skin against oxidant damage.

**Testimonials:** The Complete Whey-G is VERY good; the whole family is on it – (David Goodfield, DC)

**Suggested Dosage:** 1 heaping scoop in juice or water. Do not over mix.

**Size:** 12 oz.

**Price:** € 51,70

**Vegetarian:** No

**Contraindications:** The components of whey include lactoferrin, beta-lactoglobulin, alpha-lactalbumin, glycomacropeptide, bovine serum albumin and immunoglobulins. Those sensitive to dairy may be sensitive to the whey portion, however, that does not mean that all of those sensitive to dairy will necessarily be sensitive to the whey portion. Should not be used by whey-sensitive people.
CORE LEVEL BONE MATRIX

**Ingredients:** Each Two Tablets Supplies: Freeze Dried Veal Bone 600mg, Vitamin A (Palmitate) 1,500i.u, Vitamin C (Sago Palm) 1200mg, Vitamin D 400i.u, Rutin 25mg, Pantothenic Acid 25mg, Niacin 15mg, Vitamin B-6 10mg, Vitamin B-2 6mg, Phosphorus Chelate 100mg, Calcium Aspartate 85mg, Calcium Gluconate 70mg, Calcium Chelate 60mg, Silicea 15mcg, Zinc Sulphate 9mg, Manganese Chelate 5mg, Calcium Fluoride 3mcg, Molybdenum Chelate 2mcg, Adrenal* 40mg, Kidney* 40mg, Liver* 15mg, Stomach* 10mg, Ovary* 5mg, Orchic* 5mg, Parathyroid* 2mg, Betaine HCL 20mg, L-Cystine 20mg, DL-Methionine 10mg, Devil’s Claw Root 15mg, Lobelia 8mg.

*Nutri-trophic Process Gland.

**Supportive Function:** Core Level Bone Matrix is made up of veal bone and the essential vitamins and minerals involved in maintaining bone health. This product contains calcium, phosphorus, manganese and vitamin D, which all play various key roles in bone metabolism. Veal bone makes bioavailable the natural ratios of nutrients necessary for bone health.

**When is bone matrix helpful?** Broken bones, osteoporosis, and overall bone health.

**Testimonials/Nutrient Tidbits:**

A doctor reports . . . At a Nutri-West seminar, one of the doctors fell and broke his shoulder. A protocol utilizing Core-level Bone Matrix and Lyso-lyph forte was used, and the radiologist reported that a two-day-old break looked like it was two weeks old, and the patient was already laying down new bone. You must dose high initially on Core-level Bone Matrix (one an hour up to 12 per day initially) and on Lyso-lyph forte (16 a day were used). Also, Pro Infla-Zyme has been formulated since then and also provides vegetarian proteolytic enzyme support.

Another doctor reports . . . “Thank you for the advice on a protocol including Core Level Bone Matrix, Lyso-Lyph Forte, and Liga-PN for my shin splints. I was able to run the Boston Marathon and place 1,087 out of 6,000” (Marc Berkson, D.C.).

Another doctor reports . . . An osteopath came to see me and couldn’t move her neck (it was fused). After 2 weeks using Total Enzymes and Core Level Bone Matrix, her neck was moving freely. (Sylvia Flesner, N.D. Englewood, CO.)

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 25,60

**Vegetarian:** No

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicating in iron overload disease. Vitamin D is fat-soluble but not toxic in amounts less than 2400 IU/day. Female/male glandulars are contraindicated in cancers of the reproductive organs. Hyperparathyroidism or sarcoidosis patients should avoid vitamin D supplementation.
CORE LEEL D-TOX

**Ingredients:** Each Four Tablets Supplies: Pancreatin 225mg, Pancreas* 75mg, Adrenal* 120mg, Liver* 100mg, Orchic* 60mg, Pancreas 60mg, Spleen* 35mg, Duodenum* 30mg, Parathyroid* 10mg, Ox Bile 5mg, Pepsin 5mg, Vitamin C 300mg, Pantothenic Acid 150mg, Niacin 20mg, Natural Vitamin E (Succinate) 20i.u, Vitamin U (Cabbage) 10mg, Vitamin B-1 7mg, Vitamin B-12 75mcg, Calcium Gluconate 6mg, Calcium Chelate 100mg, Magnesium Chelate 50mg, Sodium Proteinate 30mg, Montmorillonite 400mg, Apple Pectin 250mg, Sodium Alginate 250mg, Garlic 150mg, Rice Bran 450mg, Oat Bran 450mg, Chlorophyll 20mg, Red Beet Root 150mg, Collinsonia Root 10mg, L-Lysine 30mg, L-Ornithine 10mg, L-Glycine 14mg.

*Nutri-trophic Process Gland

**Supportive Function:** Core Level D-Tox is a special formulation of vitamins, minerals, herbs and glandulars—a combination that aids the body in the detoxification process. Contains several powerful binders of metals and toxins.

**When is detoxification helpful?** Numerous conditions including hay fever, allergies, digestive problems, skin problems, asthma, autoimmune diseases, chronic diseases, overall ill health, fatigue, constipation, liver problems...

**Clinical Applications/Research:**

- **Montmorillonite:** indigestible adsorbent which adheres to toxins in the GI tract and carries them out of the body; montmorillonite is a clay and the principal constituent of bentonite. Bentonite is a colloidal hydrated silicate clay native to the Midwest and Canada, which contains some magnesium, iron and calcium and is able to carry vitamin B-12-active substances and catalysts (Merck Index, 11th ed. Merck & Co. Inc., Rahway, N.J. 1989). It has the property of forming highly viscous suspensions or gels with not less than 10 times its weight of water. The property of forming gels is very much increased by the addition of small amounts of alkaline substances such as magnesium derivatives.

- **Apple Pectin:** Apple pectin helps bind unwanted metals and toxins, and lowers cholesterol levels by binding the cholesterol and bile acids in the gut, which aids in excretion. Apples are high in malic acid content, which is used therapeutically for treating the symptoms of chronic fatigue syndrome.

- **Sodium Alginate:** Sodium alginate is a highly viscous polysaccharide with a high fiber content (J Nutr 1990; 120(4): 353-60). It is derived from a seaweed compound. Sodium alginate “offers incredible protection from many kinds of modern day pollutants, carcinogens and toxins. Algin, though non-digestible, can prevent living tissue from absorbing radioactive materials, including strontium-90, barium, mercury, tin, and cadmium” (Mowrey, D. Ph.D. The Scientific Validation of Herbal Medicine. Keats Publishing. New Canaan, CT, 1986, p. 88).

- **Garlic:** Garlic has been used for cholesterol/triglyceride reduction, candida, sinusitis, diabetes, antihypertensive, anticarcinogenic, antibacterial, antimicrobial, antifungal, anthelmintic (expels worms), antiviral, anti-inflammatory, immune-enhancing (esp. colds/flu), asthma, fever, flatulence, nausea, vomiting, colic, indigestion. Allicin is the molecule responsible for the odor of garlic, and also for many of the purported benefits it offers as an herb. There are many documented effects of garlic in the literature.

- **Rice Bran and Oat Bran:** Fiber produces butyric acid, a short chain fatty acid that is manufactured by the intestines through bacterial fermentation of fiber. Butyric acid is the main energy source for the large intestine epithelial cells and helps repair and regenerate damaged cells. Many fibers can absorb 7-8 times their weight in water, which softens stools and decreases transit time. Fiber may decrease the size of hemorrhoids and prevent hemorrhoidal bleeding. It also is said to “lower cholesterol levels and slow the absorption of sugar in diabetics, which may decrease the need for insulin in some people with diabetes” (Larson, D. Mayo Clinic Family Health Book, 1990. William Morrow & Co. Inc. NY, NY, p. 635).

- **Chlorophyll:** Chlorophyll provides intestinal nourishment and has a soothing effect on the lining of the mucosa. Chlorophyll acts as an effective natural healer and cleanser for chronic conditions internally and externally. It retards growth and development of toxic bacteria (Keith, V., and Gordon, M., The How To Herb Book, Mayfield Publications, Pleasant Grove, Utah, 1988, pg. 22). It is an intestinal detoxifier due to its neutralizing effects on guanidine, an intense
alkaline substance found in the intestines caused by constipation or cell trauma. It can also bind heavy metals and prevent the adverse effects from them.

**Red BeetRoot:** Beets aid in gallbladder function, lymphatic function, and digestion (Balch JF, Prescription for Nutritional Healing, p. 39).

**Collinsonia Root:** Collinsonia stimulates, tones and cleanses the mucous membranes of the gastrointestinal tract. It is referred to in herbal literature as a “vascular astringent.” In most patients with hemorrhoids or varicose vein problems, the patient has a congested liver. Bile salts can be combined with collinsonia because bile salts alone may be irritating.

**Testimonials/Nutrient Tidbits:** Hay fever and Asthma: Dr. Robert Thiel reports… I have successfully used this product when treating patients with hay fever and asthma.

A doctor reports… I use this product after using 4-5 per day Total Liver D-Tox. Sometimes this product will cause the parotids to swell and the armpits to smell because the body is trying to detox the toxins. I add in Core Level D-Tox within a few days to make sure the colon is moving to eliminate all the added toxins (A. Hare, D.C.)

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 or 120 tablets

**Price:** € 25,80 en € 44,40

**Vegetarian:** No

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease. Female/male Glandulars are contraindicated in cancers of the reproductive organs. In large amounts, garlic is contraindicated with anticoagulant drugs. The combination of herbs in this formula work together in creating synergistic effects, and smaller amounts of the herbs are utilized for optimal results.
CORE LEVEL HEALTH RESERVE

**Ingredients:** Each 3 Tablets Supplies: Vitamin A (palmitate) 2,000i.u, Vitamin D-3 400i.u. Vitamin E (Succinate) 200i.u., Vitamin C (Sago Palm) 1,000mg, Lemon Bioflavonoids 100mg, Rutin 25mg, Hesperidin Complex 50mg, Vitamin B-6 25mg, Vitamin B-1 13mg, Vitamin B-2 10mg, Niacin 45mg, Vitamin B-12 30mcg, Pantothenic Acid (D-Calcium Pantothenate) 50mg, Folic Acid 200mcg, Choline Bitartrate 100mg, Inositol 100mg, Biotin 400mcg, PABA 50mg, L-Glycine 9.66mg, Calcium (as gluconate/aspartate) 101mg, Vitamin F 5mg, Chlorophyll 10mg, Magnesium (as aspartate) 100mg, Phosphorus (as chelate) 20mg, Potassium (as proteinate) 540mcg, Copper (as chelate) 100mcg, Zinc (as aspartate) 500mcg, Manganese (as aspartate) 1.5mg, Molybdenum (as chelate) 50mcg, Chromium (as chelate) 25mcg, Selenium (as chelate) 30mcg, Iodine (as kelp) 50mcg, Sodium (as proteinate) 510mcg, Rubidium (as chelate) 15mcg, L-Phenylalanine 13mg, L-Histidine 5mg, L-Tyrosine 9mg, L-Lysine 13mg, L-Valine 15mg, dl-Methionine 9mg, L-Isoleucine 13mg, L-Leucine 18mg, L-Threonine 9mg, L-Glutamic Acid 2mg, Goldenseal (root) 45mg, Eleuthero (root) 45mg, Garlic (bulb) 40mg, Tillandsia (plant) 30mg, Rice Bran 175mg, Almond Meal 150mg, Lithium (as chelate) 0.8mcg.

**Supportive Function:** Packed with a powerhouse of essential vitamins and minerals, this formula provides a true, "core level" answer to full and balanced nutritional support. This formula provides high amounts of the antioxidant nutrients, i.e. vitamin C, vitamin E, selenium, zinc, and the bioflavonoids. In addition to the long list of concentrated essential nutrients, Core Level Health Reserve also contains well-known herbs such as Eleuthero, Goldenseal, garlic and Tillandsia. Plant constituents such as the balancing chlorophyll and phytochemicals (lemon bioflavonoids, rutin, Hesperidin, etc.) complement the formula. Add some high-fiber rice bran and almond meal, essential fatty acids (vitamin F), some iodine from a sea source (kelp), throw in the amino acids (Glycine, tyrosine, etc.), and you have a superior recipe for ideal nutritional support.

**When is a multiple vitamin helpful?** Preventative measures, fatigue, overall good health, good starting point to address possible deficiencies.

**Testimonials/Nutrient Tidbits:** *Most doctors report...* I love this multiple. I recommend it to my patients all the time. Patients love this product. Patients come back frequently over the years to refill their prescription.

**Suggested Dosage:** 1 tablet 2 times daily or as directed

**Size:** 60 or 120 tablets

**Price:** € 34,10 en € 55,80

**Vegetarian:** Yes

**Contraindications:** Use caution in pregnancy (prenatal vitamins are available). High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease. Vitamin D is fat-soluble but not toxic in doses less than 2400 IU/day. Hyperparathyroidism or sarcoidosis patients should avoid vitamin D supplementation. Do not use in PKU (contains phenylalanine).
**CORE LEVEL LUNG**

**Ingredients:** Each Tablet Supplies: (Nutritrophic Core Level Process glands) Lung 300mg, Thymus 100mg, Pancreas 100mg, Duodenum 100mg, Spleen 75mg, Kidney 70mg, Stomach 40mg, Uterus 10mg, Prostate 10mg, Whole Pituitary 10mg, Vitamin F 10mg, Beta Carotene 25,000i.u, Rutin 30mg, Vitamin B-6 20mg, L-Glycine 7.7mg, Calcium Gluconate 12.3mg, Calcium Chelate 75mg, Magnesium Chelate 40mg, Manganese Chelate 35mg, Iodine (Kelp) 40mcg, L-Tyrosine 25mg, L-Cysteine 20mg, Lotus Root 45mg, Korean Ginseng 20mg, Pleurisy Root 20mg, Kelp 27mg, Yellow Dock Root 5mg, Uva Ursi Root 5mg, Blue Cohosh 5mg.

**Supportive Function:** Core Level Lung is a nutritional supplement that has been developed for support of the respiratory, bronchial and lung systems. The lungs are the main organs of the respiratory system. Air entering the nose is warmed and humidified by the sinuses after which it passes to the trachea, to the bronchi, to the bronchioles and finally the alveoli. The alveoli are one cell thick and lay in direct contact with the capillary blood. This allows oxygen to pass freely into the blood and the carbon dioxide to pass into the lungs for elimination. The blood then delivers oxygen to the body.

When is lung support helpful? Asthma, respiratory, bronchial and lung support.

**Testimonials/Nutrient Tidbits:** A doctor reports . . . I love this product for my emphysema and asthma patients. They respond very well. (B. Markham, D.C.)

Another doctor reports . . . I love this product for my asthmatics. I even use it on the kids (up to 4 per day) for great results. (A. Hare, D.C.)

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 35,40

**Vegetarian:** No

**Contraindications:** Do not take in pregnancy. Pituitary glandular is contraindicated in cancer. Female/male glandulars are contraindicated in cancers of the reproductive organs. Korean ginseng should not be taken in high quantities, however; only small amounts are included in this synergistic formula.
**Ingredients**: Each 3 Tablets Supplies: Vitamin C 300mg, Apple Pectin 150mg, Garlic 150mg, Rice Bran 600mg, Sodium Alginate 300mg, L-Cystine 200mg, L-Lysine 100mg, Chlorophyll 10mg, Oat Bran 600mg, Red Beet Root 100mg.

**Supportive Function**: Natural plant fibers such as apple pectin, rice bran, oat bran and red beet root are combined with supporting nutrients such as cleansing garlic and balancing chlorophyll, along with vitamin C and amino acids, to support the bowel detoxification pathway.

**When is detoxification helpful?**: Numerous conditions including hay fever, allergies, digestive problems, skin problems, asthma, autoimmune diseases, chronic diseases, overall ill health, fatigue, constipation, and liver problems.


**Apple Pectin**: It helps bind unwanted metals and toxins, and lowers cholesterol levels by binding the cholesterol and bile acids in the gut, which aids in excretion. Apples are high in malic acid content, which is used therapeutically for treating the symptoms of chronic fatigue syndrome.

**Sodium Alginate**: Sodium alginate is a highly viscous polysaccharide with a high fiber content (J Nutr 1990; 120(4): 353-60). It is derived from a seaweed compound. Sodium alginate “offers incredible protection from many kinds of modern day pollutants, carcinogens and toxins. Algin, though non-digestible, can prevent living tissue from absorbing radioactive materials, including strontium-90, barium, mercury, tin, and cadmium” (Mowrey, D. Ph.D. The Scientific Validation of Herbal Medicine. Keats Publishing. New Canaan, CT, 1986, p. 88).

**Garlic**: Garlic has been used for cholesterol/triglyceride reduction, candida, sinusitis, diabetes, anti hypertensive, anticarcinogenic, antibacterial, antimicrobial, antifungal, anthelmintic (expels worms), antiviral, anti-inflammatory, immune-enhancing (esp. colds/flu), asthma, fever, flatulence, nausea, vomiting, colic, indigestion. Allicin is the molecule responsible for the odor of garlic, and also for many of the purported benefits it offers as an herb. There are many documented effects of garlic in the literature.

**Rice Bran and Oat Bran**: Fiber produces butyric acid, a short chain fatty acid that is manufactured by the intestines through bacterial fermentation of fiber. Butyric acid is the main energy source for the large intestine epithelial cells and helps repair and regenerate damaged cells. Many fibers can absorb 7-8 times their weight in water, which softens stools and decreases transit time. Fiber may decrease the size of hemorrhoids and prevent hemorrhoidal bleeding. It also is said to “lower cholesterol levels and slow the absorption of sugar in diabetics, which may decrease the need for insulin in some people with diabetes” (Larson, D. Mayo Clinic Family Health Book, 1990. William Morrow & Co. Inc. NY, NY. p. 635).

**Chlorophyll**: Chlorophyll provides intestinal nourishment and has a soothing effect on the lining of the mucosa. Chlorophyll acts as an effective natural healer and cleanser for chronic conditions internally and externally. It retards growth and development of toxic bacteria. (Keith, V., and Gordon, M., The How To Herb Book, Mayfield Publications, Pleasant Grove, Utah, 1988, pg. 22). It is an intestinal detoxifier due to its neutralizing effects on guanidine, an intense alkaline substance found in the intestines caused by constipation or cell trauma. It can also bind heavy metals and prevent the adverse effects from them.

**Red Beet Root**: Beets aid in gallbladder function, lymphatic function, and digestion (Balch JF, Prescription for Nutritional Healing, p. 39).

**Suggested Dosage**: 2 tablets 3 times daily

**Size**: 90 tablets

**Price**: € 25.80

**Vegetarian**: Yes

**Contraindications**: High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease. People with wheat allergies may have sensitivities to the gluten in oat bran. High doses of garlic should not be taken with anticoagulant drugs.
**DISC-ZYM**

**Ingredients:** Two-Phase Proteolytic Enzyme & Mineral Formula Each Two Tablets Supplies: Phase One in Stomach: Manganese (sulfate) 75mg, Calcium (as ascorbate) 10.7mg, Magnesium (as aspartate) 10mg. Phase Two in Duodenum: Trypsin (Chymotrypsin 2mg) 5mg, Papain 100mg, Bromelain 100mg.

**Supportive Function:** Disc-Zym is an exciting two-phase proteolytic enzyme and mineral formula that technologically addresses two separate phases of digestion (stomach and small intestine) in order to optimize absorption and assimilation of nutrients necessary for support of healthy spinal discs and optimization of flexibility and movement.

**When is disc support helpful?** Back, neck and shoulder pain, laxity of ligaments, disc injury, ligament support; difficulty holding adjustments, TMJ problems.

**Clinical Applications/Research: Manganese:** Principle uses include: trauma and injury (sprains and strains), inflammation, ligament support, osteoporosis, epilepsy and diabetes. Manganese is an important component of Manganese Superoxide Dismutase (MnSOD), which is an enzyme that battles the damaging free radicals that cause swelling. Immediately after trauma, the body starts coding for more MnSOD to be produced (J Biol Chem. 1992; 267:10625-30). Repletion of manganese after inflammatory trauma is necessary to keep up the free radical defense system. Recent research has shown MnSOD to be an efficient anti-inflammatory agent in models of acute and chronic inflammation; administration has decreased swelling up to 50-70% (Free Rad Res Comm. 1991: 15:297-301). In another study, “MnSOD at 5 micrograms produced a significant suppression (44% p<0.05) in knee joint swelling at 24 hours... “These findings support a therapeutic potential of MnSOD in inflammatory disorders...” (Free Rad Res Comm. 1993; 18:291-8). Low levels have been found in epileptics/diabetics.

**Calcium and Magnesium:** Calcium and magnesium act synergistically in hundreds of reactions in the body, and they must both be respected and taken in balance. As important as calcium is in muscle function, the contraction-relaxation phase cannot operate without magnesium. Bones also need healthy balances of both calcium and magnesium.

**Enzymes:** Enzymes have been shown to be helpful for inflammation and injury when taken away from meals, and for digestive problems when taken with meals.

**Testimonials/Nutrient Tidbits:** A doctor reports . . . This product is great for my patients with back/ disc problems. I also use it for maintenance support. It is helpful for acute and chronic disc problems. Another doctor reports . . . This product is great for any spinal irritation I see in my office. It has worked excellently for many years. (A. Hare, D.C.)

**Suggested Dosage:** 1-2 tablets 3 times daily

**Size:** 90 tablets

**Price:** € 21,50

**Vegetarian:** No

**Contraindications:** Avoid at least one-week prior to and one week after, surgery.
DSF FORMULA

**Ingredients:** Adrenal 25mg, Thymus 70mg, Spleen 20mg, Stomach 10mg, Parotid 80mg, Vitamin C 175mg, Vitamin B2 15mg, Vitamin B6 10mg, Niacinamide 15mg, Pantothenic Acid 105mg, Grape Seed Extract 1mg, Lemon Bioflavonoids 225mg, L-Tyrosine 175mg, Magnesium Oxide 45mg, Zinc Chelate 5mg, Chromium Chelate 50mcg, Potassium Chelate 2mg, Chlorella 50mg.

**Supportive Function:** DSF Formula is the perfect supplement to be chosen in stressful times! Glandulars, vitamins, minerals, antioxidants, and phytochemicals synergistically work together to support the various energy-producing systems of the body.

**When is adrenal support helpful?** Stress and conditions caused by stress, fatigue, lethargy, weakness, mental fuzziness, irritability, and inability to handle everyday tasks. May also be beneficial in hypotension or hypoglycemic problems.

**Clinical Applications/Research:**

**Glandulars:** Hans Selye reports that during stress the stomach ulcerates and the spleen and thymus atrophy. Parotid glandular aids in heavy metal detoxification.

**Vitamin C:** Vitamin C is found in the largest concentration in the adrenal gland. Vitamin C maintains promotes thymic hormone secretion, acts as an antioxidant, aids in the metabolism of tyrosine, folic acid and tryptophan, stimulates adrenal function, aids in thyroid hormone production and cholesterol metabolism, acts as a detoxifier of certain metals and drugs, recycles other hydrogen donors such as vitamin E, and aids in phagocytosis (digestion of damaged, dead or foreign cells).

**B vitamins:** The B vitamins are also essential for the proper functioning of the endocrine glands, most notably the adrenals and the thyroid. The adrenals are nicknamed our “antistress glands,” and the thyroid is nicknamed the energy gland, as it regulates the basal metabolic rate of almost every cell in the body. The B vitamins are needed for healthy liver functioning, and the liver is one of the highest concentrated areas of B vitamins. The organ we know as the skin depends on B vitamins for its healthy appearance. The Bs are also essential for hair, eyes and mouth; a deficiency of the Bs can manifest in patchy scaly skin around the mouth area. They are also necessary for normal functioning of the nervous system, and essential for maintenance of muscle tone in the gastrointestinal tract. Vitamin B-5, or pantothenic acid, functions as part of the molecule called Co-enzyme A or CoA. It is vital for optimal adrenal activity (including increasing production of cortisone and other adrenal hormones), important for healthy skin and nerves, and supports the synthesis of acetylcholine (a neurotransmitter), fatty acids, cholesterol, steroids, and phospholipids. It is known as one of the main anti-stress vitamins and can be made by the bacterial flora in the intestines.

**Tyrosine:** A precursor to epinephrine, norepinephrine and thyroxine.

**Zinc and chromium:** Necessary for proper pancreas functioning.

**Chlorella:** Potent binder of heavy metals.

**Potassium:** Essential in proper adrenal functioning.

**Testimonials/Nutrient Tidbits:**

**Adrenal crisis:** A doctor reports... a patient of mine was on 27 drugs; she had a cervical trauma, history of myasthenia gravis, amenorrhea, lupus, and fainting spells. She went into the hospital with fainting spells, no appetite, and dementia problems. After the doctors did blood test, they wanted to do a biopsy to remove the adrenal glands. She took 4 DSF and was released from the hospital the next morning. The doctors said she was fine. – (Catherine Valen, D.C. Nederland, CO.)

**AK muscle weakness:** Check any indicator muscle. If it goes weak have the patient chew a DSF tablet and test the weakness again. Invariably the muscle will become strong. This indicates that the weakness is due to adrenal fatigue. Structural manipulation is still necessary, but the adrenal support will go a long way in holding the weak indicator muscle.

**Thyroid support:** I like this formula and find that the ingredients also enhance thyroid function.

**Sexual drive:** A Colorado doctor reports that a patient uses DSF for increased libido.
A doctor reports: DSF is “incomparable”; had chronic fatigue for 5 years before addressing support of the adrenal gland with DSF. – (Bonnie Peltonen, D.C. Grand Junction, CO).

A doctor reports: I haven’t seen a case where DSF didn’t work. (Richard Ramos, D.C. Stratton, CO.)

Another doctor reports: “Here is just one of the success stories we have experienced since starting with Nutri-West products…Laura had a skin condition, was very tired and depressed. Laura had a rash that appears like a burn all over her face, hands and chest for over 10 years… On her initial visit she tested positive for parasites and lead. Giving Laura a magnet and DSF quickly began to restore her energy, along with the following: Total Lead, Homocysteine Redux, Total Enzymes, Total Leaky Gut, Total Para, Total Probiotics, and Black Currant Seed Oil. By June, Laura had significant improvement and wears makeup for the first time in her life…her rash has cleared up completely.” - (Colin R. Dingle, D.C. Santa Cruz Chiropractic).

Fibromyalgia: Your DSF Formula supplement has changed my life. You see my wife suffers from Fibromyalgia. We have tried so many different things to help her with the discomforts associate with the syndrome. A combination with an aggressive exercise routine and your DSF Formula seems to work the best for us. (Eric Johnson)

**Suggested Dosage:** ½ tablet in a.m. and ½ tablet at lunch or as much as 3 tablets daily

**Size:** 60 or 120 tablets

**Price:** € 31,50 en € 54,40

**Vegetarian:** No

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease.
**ENZYME PFOREESIS ICE**  
*(FORMERLY ENZYME ICE)*

**Ingredients:** Water Osmotic, Carbopol, Aloe Vera Concentrate, Lavender Oil, Peppermint Oil, Triethanolamine, Methylparaben, Superoxide Dismutase Type G (glutathione), Arnica Montana (flower), Propylparaben, Vitamin C (ascorbic acid), Vitamin E (acetate), Pancreatin, Papaya (fruit), Rutin, Bromelain, Thymus, Trypsin (Chymotrypsin), Pancrelipase, Amylase, Zinc Gluconate, Chelates of Copper, Manganese, Selenium, Zinc.

**Supportive Function:** The **NEW** Enzyme Pforesis Ice replaces the older version Enzyme Ice, (which was for temporary relief of arthritis, backache, strains, sprains, muscle cramps, joint pain, muscle fatigue, and pain of inflammation). The new product has twice as many enzymes including: Superoxide Dismutase type G (glutathione), Pancreatin, Papaya, Bromelain, Trypsin (Chymotrypsin, Pancrelipase, and Amylase. Also improved by including Copper, Manganese, Selenium, Zinc, Lavender Oil, Peppermint and Arnica Montana. We know you will find this exceptional product vastly improved!

**Supplies:** Soothing and relaxing massage gel combines essential oils of Lavender and Peppermint. Calming, penetrating formula nourishes and moisturizes the skin, leaving it soft and supple.

**Suggested Use:** Apply smoothly over tissue or muscle area.

**Size:** 8 oz Bottle  
**Price:** € 23,50  
**Caution:** For External Use Only
EXSPORE

**Ingredients:** Each Tablet Supplies: Caprylic Acid (Medium Chain Triglyceride) 250mg, Citrus Seed Extract 7.5 mg, N-Acetyl Glucosamine 7.5 mg, Pau D’Arco (leaf) 12.5 mg, Tillandsia (plant) 12.5 mg, Thyme (herb) 10 mg, Basil (herb) 10mg, Goldenseal (root) 5 mg, Cloves (flower buds) 7.5 mg, Aloe Vera (leaf) 12.5 mg, Beet (root) 12.5 mg, Cinnamon (bark) 12.5 mg, Garlic (bulb) 25 mg, Oregano (oil) 1 mg, Co-Enzyme Q-10 500 mg, Niacin 2.5 mg, enteric coated Lacto Bacillus Bulgaricus and Lacto Bacillus Bifidus 5 million units, Molybdenum (as chelate) 25 mcg, Manganese (as chelate) 1 mg, Zinc (as chelate) 5 mg, Black Walnut 10 mg.

**Supportive Function:** When fungal growth is allowed to take over in the gut, it predisposes the gut to a state of imbalance. Exspore is a highly potent formula containing Caprylic acid (Its antifungal properties are noted in the Merck Index.), along with supporting nutrients such as citrus seed extract, garlic, Goldenseal, Co-enzyme Q-10 and others. Additionally, the formula is boosted with supplementation of friendly bacteria, making this an ideal choice for people who wish to maintain a healthy environment in the gut.

**When is yeast support helpful?** Candidiasis and related symptoms, including food allergies, PMS, lowered immune reactions, lethargy, headaches, and overall sick feeling; candidiasis causes a toxin overload that can be manifested in a lot of different diseases.

**Clinical Applications/Research:**

**Caprylic Acid:** The Merck Index lists Caprylic acid as an “anti-fungal agent.” Caprylic acid is a long chain fatty acid found naturally in coconut. Most natural care physicians use it as a yeast elimination nutrient.

**Citrus Seed Extract:** Citrus seed extract is derived from the extracts of tropical plants. Citrus seed extract is a broad spectrum antimicrobial historically used for parasites and candidiasis. Dr. Leo Galland, M.D. notes that citrus seed extracts, “appear to be as effective as nystatin in the treatment of candidiasis without toxic side effects” (Crook, W., M.D., The Yeast Connection Handbook. Professional Books, Jackson, TN, 1996).

**N-acetyl Glucosamine:** N-acetyl-glucosamine (NAG) decreases bacterial growth and reduces the adherence of organisms to the gut wall by strengthening the intestinal mucosa. NAG is a building block for healthy cartilage and is also a key precursor in the biosynthesis of mucosal glycoproteins that form the intestinal glycocalyx. The glycocalyx is the most superficial, highly viscous layer of the intestinal mucosa that comes in contact with the intestinal contents and protects the underlying tissues from exposure to toxins and bacterial assault (Ackerson, Amber, N.D., Abstract on “Nutritional Management of Intestinal Permeability Defects”). NAG eliminates parasites (Int J Parasitology 1991; 21(8): 941-4) and acts as a helmintic (expunges worms) (J Helminthol 1993; 67(3): 179-88).

**Pau D’Arco:** Pau D’Arco was widely used by the Indian tribes of the Amazon region for centuries as a healing herb. It has become popular as an antibacterial, antiviral, anti-inflammatory and antifungal agent (Mayell; Natural Health First Aid Guide. 1994. Pocket Books. NY, NY p. 44). Research into the medicinal substances of pau d’arco show it to also have antiparasitic properties.

**Herbs:** Thyme, Basil, Cloves, Cinnamon, Oil of Oregano and Goldenseal have all been used in the elimination of candida.

**Aloe Vera:** Used for tissue healing and candida prevention/elimination.

**Probiotics:** Rebuild the healthy intestinal flora.

**Molybdenum:** May help people deal with sensitivity to the aldehydes produced by candida.

**Testimonials/Nutrient Tidbits:** Many doctors report...I love this product. I get great results for yeast problems at a dose of 1-2 tablets three times daily.

**Suggested Dosage:** 1-2 tablets 3 times daily

**Price:** € 22.60

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy. Large doses of Co-enzyme Q-10 can reduce the effectiveness of anticoagulant drugs such as Coumadin, however 1 mg is not significant enough to produce an interaction. High doses of garlic and pau d’arco are contraindicated with Coumadin because they potentiate it, however, smaller doses should not be a problem.
**F-COMPLEX**

**Ingredients:** Cod Liver 500mg, Flaxseed Oil 135mg, Extra Virgin Olive Oil 135mg, Vitamin A (31% RDA) 1,190i.u, Vitamin D (23.8% RDA) 124i.u, as well as naturally-occurring fatty acids Oleic, Linoleic, Palmitic, Arachidic and Linolenic, Eicosapentaenoic, and Docosahexaenoic.

**Supportive Function:** F-complex provides a comprehensive formula of essential fatty acids in a favorable ratio. It includes sources of linoleic acid, omega 3 fish oils, and alpha-linolenic acids. Getting the right balance of essential fatty acids, although challenging in this day and age, is vital to the health of organs and tissues, especially skin. Fatty acids are building blocks for hormones and cell membranes and precursors for the highly active prostaglandins.

**When are essential fatty acids helpful?** Inflammation, skin conditions (psoriasis, eczema and dermatitis), allergies, heart disease, hypertension, premature aging, autoimmune disorders, ulcerative colitis, neonatal development, arthritis, immune impairment, PMS, reduced sex drive, menopause and fibrocystic breast disease.

**Clinical Applications/Research: Cardiovascular:** Fish oil (omega-3/n-3) seems to have many beneficial effects on the cardiovascular system. In fact, "The mechanisms by which dietary n-3 fatty acids might modulate the morbidity and mortality from coronary heart disease have been related to their effects on plasma lipids and lipoproteins, eicosanoid metabolism, and platelet-endothelial cell interactions. In addition, more recent studies have shown positive effects on myocardial function and blood pressure" (AJCN 1993; 57:634). Since fish oil does thin the blood, it may increase risk of stroke from hemorrhaging.

**Gastro-intestinal complaints:** The effect of fish oil on ulcerative colitis was investigated in 87 patients. Treatment with fish oil resulted in, "measurable clinical benefit" - They suggested fish oil could also be working by a beneficial effect on cytokines, by scavenging free radicals, and by increasing intestinal mucosal surface area. Additionally, they noted that fish oil is used as a treatment for a variety of chronic inflammatory disorders (NEJM 1996; 334:1557-1560).

**Brain/Visual Development:** Artificial formulas, unlike human milk, do not contain any long-chain polyunsaturated fatty acids (PUFA’s). The PUFA’s found in fish oil, such as docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), are an example of very long chain PUFA’s. Their high degree of unsaturation is needed for membrane fluidity. Arachidonic acid, along with DHA, is an essential requirement for proper brain function, especially in the fetus and neonatal subject.

**Immune System:** Fish oil may very well have an important role to play in reducing the incidence of autoimmune diseases, because it can inhibit the inappropriate expression of certain molecules on the cell surface (MHC class II) that are involved with initiating autoimmune disease.

**Testimonials/Nutrient Tidbits:** Beautiful skin: I believe that Cod Liver Oil will be the next big “discovery”. It has always been one of my favorites! Everyone in my family was lined up every morning and given a spoonful of Cod Liver Oil. I grew up on this stuff! We are all in our 60’s and up and it is so interesting, all of us have excellent skin and hardly any wrinking. My Dad is 85 and doesn’t have a wrinkle on his face. He has been in the sun and the wind all of his life. My grandmother passed away at 97 and had beautiful skin. I truly believe it is the Cod Liver Oil. F-Complex has so many therapeutic benefits as an unsaturated fatty acid that we all know about, but almost no one thinks of it as a true “beauty vitamin”. I think it does wonders for hair, skin and nails. It is a mixture of Cod Liver Oil, Olive Oil and Flaxseed Oil. I believe that dry skin starts from the inside – NOT the outside! If you have dry skin problems start with 2 caps 3 X per day for a couple of weeks and then 1 cap 3 X per day indefinitely. When you see people with cracked heels and hands, this is a deficiency of GOOD fat! All of these low fat diets are causing more problems than they are helping. There are definitely fats you should not consume, but please don’t cut out the GOOD fats – they are essential for your well-being and your beauty! (Marcia White)

**Heel and Bone Spurs:** As you know, calcium must be in an acid base to stay in solution. When the patient starts putting out bone spurs that is an indication of alkalinity. I used this nutritional support for years in my
practice and it almost always worked! Calc-Acid: 2 tabs 4 X per day, Phos drops: 30 drops per day, F-Complex: 1 pearle 3 X per day. If the patient starts to yawn excessively, or starts having heartburn/acid stomach, it is time to reduce the regimen. It usually takes about 1-3 months to adequately acidify and get the calcium back into solution (Paul White, D.C.)

**Reduced sex drive:** My clinical experience suggests that this product often seems to help women who have reduced sex drives and occasionally helps men too (R Thiel, D.C.).

**Cholesterol problems:** When I have a vegetarian patient with really high cholesterol problems, I always put them on F-Complex and it works wonders. If I have a meat eater, I combine F-Complex with Lipotrophic Factors and that seems to do the trick. (A. Hare, D.C.)

**Osteoporosis:** I always use F-complex (3/day) in combination with Re-cal B (4-6 per day) when treating for osteoporosis. The omega-3’s are very necessary and this combination works very well. I also use F-complex in injury and for dry skin and get excellent results. (B. Markham, D.C.)

**Suggested Dosage:** 1-2 capsules 3 times daily or as directed

**Size:** 90 capsules

**Price:** € 25,80

**Vegetarian:** No

**Contraindications:** Since fish oil does thin the blood, large doses may increase risk of stroke from hemorrhaging. Fish oil has been used in combination with anticoagulant therapy; however, caution should be employed when larger doses are used. Hyperparathyroidism or sarcoidosis patients should avoid vitamin D supplementation. Hypercalciuria and hypercalcemia are usually not seen unless the daily dose exceeds 2400 IU. Medicinal amounts of any vitamin, mineral or specialty nutrient should only be taken with the advice of a trained licensed healthcare professional. If digestive upset is present, check gallbladder function and check for potential blockage of the bile duct.
**Ingredients:** Goldenseal (root) 62.5mg, Dong Quai (root) 62.5mg, Blessed Thistle (herb) 62.5mg, Red Raspberry (leaf) 62.5mg, Squawvine 62mg, Scullcap (herb) 28mg, Cayenne (fruit) 28mg, Blue Cohosh (root) 28mg, Licorice (root) 28mg, Wild Yam (root) 28mg, Passion (flower) 28mg, in a base of 6X tissue salts: Calc Fluor, Calc Phos, Ferr Phos, Calc Sulph, Kali Mur, Kali Phos, Kali Sulph, Mag Phos, Nat Mur, Nat Phos, Nat Sulph, Silica.

**Supportive Function:** An herbal formula of natural plant substances high in nutrients and phytoestrogens makes this an ideal choice for support of the female system.

**When is female herbal support helpful?** Female problems including PMS, menopause, irregular menstruation, ovarian or uterine problems; infertility.

**Clinical Applications/Research:** **Herbs:** Phytoestrogens is the word for a group of plant-based hormones with weak estrogenic activity. These particulars “phytochemicals,” or chemicals from plants, are found in some 300 foods (especially soy products, cabbage and fennel), and in some herbs, such as dong quai, red raspberry, and licorice root. Since the hormones have weak estrogenic activity, they are able to eliminate some of the symptoms of menopause and decrease the risk for osteoporosis that is associated with a lack of estrogen. Since phytoestrogens also have the power to bind to regular estrogen receptors, they can also eliminate the ill effects attributed to too much circulating estrogen, such as premenstrual tension and increased risk for breast cancer. The Japanese are commonly cited for their unique statistics of women who escape menopausal symptoms and related post-menopausal disease - this is attributed by many to their increased consumption of soy-based products, which are high in the phytoestrogens. In fact, the breast cancer rates increase in Japanese women if they adopt a soy-free diet (Wash. Post, April 3, 1994).

**Testimonials/Nutrient Tidbits:** **Tidbit:** Probiotics boost the absorption and utilization of phytoestrogens and therefore the effectiveness.

**A doctor reports . . .** I love this formula. I have found it works much better than remifemin for menopausal problems.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 100 tablets

**Price:**

**Vegetarian:** Yes

**Contraindications:** Contraindicated during pregnancy. In larger quantities (>400 mg), licorice root is contraindicated in hypertension. However, this formula contains only a small amount of licorice root.
**Ingredients:** Contains 76% alcohol; Pure Tincture of Chaste Tree Berries, Wild Yam Root, Dong Quai, Black Cohosh, Blue Cohosh, Damiana, Eleuthero, Dulse, Passion Flower, Raspberry Leaf, Cayenne, Dandelion Leaf, False Unicorn Root, Blue Flag, Blessed Thistle.

**Supportive Function:** A formula to support the female reproductive system.

**When is female herbal support helpful?** Female problems including PMS, menopause, irregular menstruation, ovarian or uterine problems, infertility problems, sexual desire

**Clinical Applications/Research:**

**Chaste-Tree Berries (10%):** Stimulates the pituitary and increases progesterone production; helpful in PMS and menopausal symptoms.

**Wild Yam Root (10%):** Contains hormonal precursors, especially progesterone and other cortical steroids; balances entire endocrine system.

**Dong Quai root (10%):** Helpful in PMS and menstrual irregularities; Herbalists refer to dong quai as the female ginseng for its ability to bring a proper balance to the female hormones. Its hormone balancing properties make it a valuable therapy for women coming off oral contraceptives and for many other female conditions.

**Black Cohosh (10%):** Black cohosh is most widely used in combinations for female conditions because of its natural estrogen properties. When combined with other relaxing herbs (i.e. scullcap, valerian, passionflower, and wood betony), black cohosh has a mild tranquilizing effect. Traditionally, black cohosh has been used for inducing the menstrual cycle, relieving cramping during menstruation and facilitating labor and delivery.

**Blue Cohosh:** Blue cohosh was used by the Indians to help dilate the cervix and promote rapid delivery during childbirth. Blue cohosh is effective in stopping false labor pains and although used to induce real labor, it isn’t effective unless the body is ready to go into labor. It is also effective in regulating the menstrual cycle and bringing on delayed or suppressed menstruation.

**Damiana:** Enhances sexual activity; provides kidney support.

**Eleuthero:** Supports the adrenals; natural aphrodisiac.

**Dulse:** Member of the kelp family, high in iodine and other trace minerals and vitamins.

**Passion Flower:** Antispasmodic; helpful in anxiety.

**Raspberry Leaf:** Uterine relaxant and helps with menstrual irregularities; helps prevent miscarriage.

**Cayenne:** Enhances circulation and calms down inflammation.

**Dandelion Leaf:** Liver and kidney support; eliminates toxins from the blood.

**False Unicorn Root:** Uterine tonic, diuretic and helpful in painful menstruation.

**Blue Flag:** Circulatary and lymphatic stimulant.

**Blessed Thistle:** Helps liver congestion commonly found with abnormal periods; Blessed thistle is a beneficial herb for amenorrhea (the absence of menstruation after the onset of menstruation), female hormone balance and improving the quality and quantity of milk in nursing mothers. Blessed thistle is often combined with other herbs (ginger, cramp bark, blue cohosh root, and false unicorn root) for menstrual problems. Other conditions relieved by the medicinal properties of blessed thistle include liver congestion, weak heart and lungs, circulation (takes oxygen to the brain and strengthens memory) and fevers.

**Testimonials/Nutrient Tidbits:** A doctor reports… I use this product more for female balancing and PMS and use #10 FEM more for menopausal problems. Both are excellent formulas.

**Another doctor reports**… I will almost always use this formula in female problems and will sometimes combine it with a female glandular support (Glan-Plus F) for added support.

**Many doctors report**… My female patients love this formula . . . they want to buy it by the case!

**Suggested Dosage:** 5-20 drops in water 3 times per day or as directed

**Size:** 1 oz

**Price:**

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy. Eleuthero should not be taken in high quantities, however; only small amounts are included in this synergistic formula.
**#3 GB-LIV**

**Ingredients:** Contains: 500 mg of Bayberry, Red Beet Root, Yellow Dock, Dandelion Root, Fennel Seeds, Peppermint, Ginger Root, Wild Yam, Blessed Thistle, Garlic, in a base of 6X tissue salts: Calc Fluor.

**Supportive Function:** A whole host of nutrient-packed herbs are formulated together to support healthy liver and gallbladder function.

**When is gallbladder support helpful?** Liver cleansing/support, gallbladder support/conditions, i.e. stones etc., bile flow enhancement, flatulence, and digestion, and chronic skin conditions.

**Clinical Applications/Research: Bayberry:** Bayberry bark alleviates liver and kidney problems, and can reduce fevers and intestinal parasites. It has medicinal properties similar to barberry; it relieves and prevents varicose veins, which are often caused by a sluggish liver (Heinerman, Heinerman's Encyclopedia of Fruits, Vegetables and Herbs, Parker Publishing Company, W. Nyack, NY, 1988, p. 22)

**Red BeetRoot:** Beets have been used since ancient times for medicinal purposes. Beets aid in gallbladder function, lymphatic function, and digestion (Balch JF and Balch PA, Prescription for Nutritional Healing, 1990 Avery Publishing, Garden City Park, NY, p. 39). Red beetroot has a powerful ability to present wastes to the liver (Dr. Ferenczi, Australian International Clinical Nutrition Review July 1986). Additionally, the betaine in beets helps to convert cholesterol into bile acids and is important in fat metabolism (Heinerman, John. Heinerman's Encyclopedia of Fruits, Vegetables and Herbs, Parker Publishing Company, West Nyack, NY, 1988, p. 29-31) Betaine is listed in the Merck index as a hepatoprotectant (p. 1202).

**Yellow Dock:** Yellow dock works on three of the major detox pathways: liver, blood and colon. It is an astringent (causing contraction of tissue). It is also a blood purifier, cooling and detoxifying the blood. It detoxifies the liver, and so is used frequently for jaundice. It stimulates bile and has a laxative action, relieving constipation without pain (Tierra L. The Herbs of Life. The Crossing Press, Freedon, Ca. 1992 pp. 82-83). Yellow dock contains high amounts of natural iron and has been used to treat chronic skin complaints.

**Dandelion Root:** Dandelion is an excellent liver remedy and has a high carotenoid content. "The plant was noted to have an almost specific affinity for the liver, modifying and increasing its secretion" (Weiner, M. Herbs that Heal p. 139). Dandelion and fennel seeds are good, natural herbal cleansers, and a good source of calcium, phosphorus, and potassium. According to A. Leung, who reviewed several studies on dandelion, it, "...enhances the flow of bile, alleviating liver congestion, bile duct inflammation, hepatitis, gallstones, and jaundice. Dandelion ... has been clinically used to treat gallstones" (as cited in, Marti, J. & Hine, A. Alternative Health Medicine Encyclopedia 1995. Visible Ink Press, Washington, D.C. p. 84). Dandelion is also a powerful diuretic. It is one of the best natural sources of potassium and replenishes this mineral, whereas other diuretics can deplete potassium.


**Peppermint:** Peppermint leaf has reported value as being an anti-inflammatory, antimicrobial, and antiulcer agent. Its therapeutic properties include aiding with circulation, digestion, constipation, diarrhea, mental fatigue, and viral infections. Peppermint has a reputation for absorbing intestinal gas, calming an upset stomach, and preventing colic. Peppermint stimulates the contractions of the gallbladder to encourage bile secretion, and normalizes gastrointestinal activity (David B. Mowry, Ph.D. The Scientific Validation of Herbal Medicine. 1986. Keats Publishing, New Canaan, Conn, pp. 75, 192).

**Ginger Root:** In herbal literature, ginger has been touted as a digestive stimulant and has been used to improve weak digestion (Wild, R., ed). The Complete Book of Natural and Medicinal Cures. 1994. Rodale Press, Emmaus, Pa. p. 298). Ginger tea taken 30 minutes before meals has been known to be helpful as a digestive aid. Ginger has been used for colitis, diverticulosis, gas, indigestion, vomiting, colon cleansing, and morning sickness, (David B. Mowry, Ph.D. The Scientific Validation of Herbal Medicine. 1986. Keats Publishing, New Canaan, Conn.). Ginger is an excellent carminative (a substance that promotes elimination of intestinal gas) and an intestinal spasmylic (relaxes and soothes the intestinal tract). Ginger contains some of the most powerful anti-candida substances available (Duke, JA. Handbook of Medicinal Herbs. 1985. CRC Press, Boca Raton, FL).
**Wild Yam:** Wild yam root preparations have been long used to treat bilious colic (abdominal/colon discomfort associated with bile). It has been noted in some cases that the wild yam root rapidly and effectively reduced the pain of biliary colic caused by gallstones, and eased the passage of small stones (Ellingwood F. American Materia Medica, Therapeutics and Pharmacognosy. Eclectic Med Publ. Portland, OR. 1983).

**Blessed Thistle:** Among the thistle's reported characteristics are that of appetite stimulant, indigestion and flatulence reliever, and antibacterial/anti-yeast/anti-tumor agent (Weiner, M.A. Herbs that Heal. 1994. Quantum Books, Mill Valley, Ca. p. 87).

**Garlic:** Garlic has had a reputation for centuries for being antibacterial, antiviral, and anti-inflammatory. There are many clinical trials that demonstrate its ability to lower cholesterol, triglycerides, and blood pressure, and its ability to favorably influence liver enzymes (Indian J Exp Biol 1992; 30(6): p. 523). Garlic contains high amounts of sulfur and also contains bioflavonoids.

**Testimonials/Nutrient Tidbits:** Many doctors report…excellent liver detox herbal – works great!

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 100 tablets

**Price:** € 19,10

**Vegetarian:** Yes

**Contraindications:** Do not take in pregnancy. Garlic in large amounts can have an interaction with anticoagulants (coumadin, salicylates, antiplatelet drugs, etc.) (The smaller amounts used in this formula should not pose a problem for contraindications). Similarly, ginger in large amounts is contraindicated with anticoagulants, however the smaller amounts in this formula should not be a problem.
**GB-PLUS**

**Ingredients:** Ox Bile-Black Radish-Collinsonia Complex Each Tablet Supplies: Ox Bile Concentrate 135mg, Collinsonia Root 310mg, L-Glycine 50mg, Pepsin 30mg, Concentrated Russian Black Radish Root 20mg, Niacinamide 5mg, Tissue Concentrate (not extract) of Bovine Source from Liver 30mg, Duodenum 5mg, Pancreas 20mg, Red Beet Root 25mg, Vitamin B-1 2mg, Vitamin B-2 2mg.

**Supportive Function:** GB-Plus is formulated to optimize the digestive process in the small intestine. Ox bile is combined with cleansing herbs that support liver/gallbladder detoxification and maintenance of the GI tract.

**When is gallbladder support helpful?** Liver cleansing/support, gallbladder support/conditions, i.e. stones etc., bile flow enhancement, flatulence, and digestion, varicose veins, hemorrhoids and chronic skin conditions.

**Clinical Applications/Research:** **Ox bile:** Bile is needed for the proper emulsification of fat. It breaks the fat into droplets so that pancreatic enzymes can digest it. Bile salts are usually needed to prime the biliary system for proper bile production in any gallbladder problem, and ox bile salts are an excellent source. Purified bile salts act as an excellent liver detoxifier in certain toxic states. “The bile acids in bile keep cholesterol from becoming too concentrated and forming gallstones. A bile acid given in tablet form increases the bile acid concentration within the gallbladder, which brings the solid cholesterol stone back into solution” (Larson, D, M.D., Mayo Clinic Family Health book. William Morrow and Company, Inc., N.Y., 1990, p. 662.).

**Collinsonia:** Collinsonia stimulates tones and cleanses the mucous membranes of the gastrointestinal tract. It is referred to in herbal literature as a “vascular astringent.” In most patients with hemorrhoids or varicose vein problems, the patient has a congested liver. Bile salts can be combined with collinsonia because bile salts alone may be irritating.

**Black Radish:** Black radish is a detoxifying herb for the lymphatics and the bowel. It is especially helpful for the ileocecal valve, allowing efficient closing and opening of the valves. It is beneficial for constipation problems. Black radish root is reported to support the gallbladder and the gastrointestinal (GI) tract valves.

**Red BeetRoot:** Beets aid in gallbladder function, lymphatic function, and digestion (Balch JF, Prescription for Nutritional Healing, p. 39). Red beet root has been utilized for treating tumors; the anti-cancer property may be due to betaine, the natural red coloring of the beet (Australian International Clinical Nutrition review July 1986, Dr. Ferenezi, as cited in: Heinerman, John. Heinerman’s Encyclopedia of Fruits, Vegetables and Herbs. Parker Publishing, West Nyack, NY pp. 29-31). The powerful ability of red beetroot to present wastes to the liver when breaking up tumors stresses the need to detoxify the liver and colon at the same time (ibid, p. 31).

**Testimonials/Nutrient Tidbits:** A doctor reports…I love this product for constipation. I have the patient take 4 tablets before bedtime and it usually makes the bowels move by morning. (A. Hare, D.C.)

Another doctor reports…I use this product when I am dealing with weight problems in patients. Usually they are having a difficult time digesting fats and this really enhances their digestion!

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 28,60

**Vegetarian:** No

**Contraindications:** Biliary colic.
**Homocysteine Redux**

**Ingredients:** Trimethylglycine 300mg, Pyridoxal 5 Phosphate (enteric coated) 5mg, Vitamin B-12 200mcg, Dimethyl Glycine 25mg, Niacinamide 20mg, Cysteine 15mg, Molybdenum Chelate 30mcg, Selenium Chelate 15mcg, Vitamin B-6 (enteric coated) 15mg, Folic Acid 275mcg, Vitamin E Succinate 10i.u, Red Beet Root 25mg, Choline Bitartrate 10mg, Magnesium Chelate 100mg, Zinc Chelate 10mg.

**Supportive Function:** Homocysteine is a toxic substance, and is slowly reaching the ranks with cholesterol as a household word associated with risk for heart disease. Faulty pathways are suspect, and Homocysteine Redux was formulated to totally support every aspect of the biochemical reactions in the pathway. When the homocysteine pathway is facilitated and functioning correctly, SAM (S-adenosyl methionine) is produced to methylate brain neurotransmitters. Natural sulfur is also produced at the end of the pathway, providing a building block for joint/connective tissue.

**When are homocysteine nutrients helpful?** Clinical applications include decreasing risk for heart disease; atherosclerosis (hardening of the arteries), thrombosis (clots), etc., vascular, ocular, and skeletal complications, osteoporosis, depression, Fibromyalgia, alcoholism, depression, diabetic complications, Parkinson’s, Alzheimer’s, multiple sclerosis, rheumatoid arthritis, schizophrenia, spontaneous abortion, and all complications of impaired sulfation pathways, i.e. sluggish liver detoxification, adrenal problems, joint cartilage degeneration.

**Clinical Applications/Research:**

**B vitamins:** Many studies have now shown that supplementation of particular B vitamins, most notably folate, B-6, B-12, and niacinamide, can protect the heart by lowering homocysteine levels. These B vitamins have major roles in the pathway of homocysteine metabolism, and supplementation seems to facilitate the clearance of this potentially harmful substance. Many studies have shown decreased homocysteine levels and decreased risk for heart disease with the consumption of these B vitamins (Science News 1998; 153:105; Rosenberg IH. Colloquium on Homocysteine, Vitamins, and Arterial Occlusive Diseases. Experimental Biology Conference, Atlanta, Ga. 1995).

**Vitamin E:** Vitamin E is associated with lower risk for heart disease. It is a powerful free radical scavenger that prevents oxidative damage, such as that caused by homocysteine damage.

**Trimethylglycine and Dimethylglycine:** Trimethylglycine (betaine) can help facilitate the pathway so that homocysteine is metabolized correctly. It serves as a methyl donor, which means that it gives up some of its functioning groups to help another substance needing the methyl group for biological function, such as phosphatidylserine. Dimethylglycine also works to facilitate the pathway in the same manner.

**Cysteine:** Cysteine is one of the by-products that should naturally be produced by homocysteine. It is an important amino acid, which needs to be in balance, and faulty pathways can compromise levels of this important amino acid.

**Red Beetroot:** Red beetroot contains high amounts of betaine, which has proven to be successful in lowering homocysteine levels. Betaine stimulates one of the key enzymes in the pathway that makes homocysteine nontoxic. Red beets are liver cleansing and are high in proanthocyanidins.

**Molybdenum:** Molybdenum is an essential trace element that plays a role in three human enzymes. A decrease in the first two enzymes has no known clinical consequences, however the third enzyme is involved in sulfur reactions such as those in the homocysteine pathway, and consequences of a decrease in enzyme concentration can be very harmful. When MSM is supplemented long-term, it depletes the body of necessary molybdenum.

**Magnesium:** Magnesium is needed for many various enzyme reactions (it’s a cofactor in > 80% of the enzyme reactions in the body), including those of the homocysteine pathway. On its own, magnesium has been shown to lower blood pressure, relax smooth muscle, and improve heart/muscle function.

**Testimonials/Nutrient Tidbits:** Arthritis and joint pain…I have seen this formula do amazing things for my arthritis and joint patients. I have given as many as 10 per day for several weeks and then bring them down to a standard dose (3 per day) and they really respond well. Their pain really decreases. Also, this product is wonderful support for diabetes type 2 patients (A. Hare, D.C.).
Miscarriages…The sulfur produced in the homocysteine pathway is a necessary building block for fibro-connective tissue, such as that comprising arteries, veins, and capillaries. “Dr. John Brimhall worked on my uterus prolapse when I was at one of his seminars (I was trying to get pregnant). I was prone to miscarriages. He gave me Homocysteine Redux as a supplement, and within months, I became pregnant and carried to term (Cheryl Lipton, D.C., Dallas, Texas).

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 or 180 tablets

**Price:** € 25,80 en € 62,40

**Vegetarian:** Yes

**Contraindication:** None known.
Homocysteine Redux vs. MSM

SAM is an important methyl donor for vital substances, including neurotransmitters and phosphatidylcholine.

Cysteine can continue on to either provide taurine (an important conjugator for bile acids), or to the essential sulfur molecule needed for many reactions, such as detox and joint repair.

Homocysteine is recycled to methionine in the presence of B-12, folic acid, and methyl donors such as choline or betaine (trimethylglycine).

B-6 & magnesium help take homocysteine to cysteine.

Methionine

- SAM (S-adenosylmethionine)
- SAH (S-adenosylhomocysteine)
- HOMOCYSTEINE

(ATP/Mg) (P-5-P or vitamin B-6; Mg)

SAM is an important methyl donor for vital substances, including neurotransmitters and phosphatidylcholine.

Cysteine

- Taurine
- CYSTEINE-SULFINIC ACID

- Pyruvic acid

B-SULFINYLPYRUVIC ACID

Toxic sulfite molecule

Essential sulfate molecule

Provides NATURAL sulfur for building blocks/regeneration of joint and cartilage tissue, including glucosamine sulfate and chondroitin sulfate.

Provides NATURAL sulfur for detox pathways in the liver, especially the pathways that bind heavy metals such as lead, mercury and cadmium.

Molybdenum (Mo) is an essential trace mineral necessary to take the toxic sulfite molecule to the important sulfate molecule, needed for many biochemical reactions.

SULFATE and chondroitin SULFATE

P-5-P or vitamin B-6; Mg

(Adenosine-5'-triphosphate and magnesium)

Homocysteine
HYPO-D

**Ingredients:** Each Two Phase Tablet Supplies: Phase one in Stomach: Betaine HCL 155mg, L-Glutamic Acid 100mg, Pepsin 105mg, Papain 50mg. Phase two in Duodenum: Pancreatin 100mg, Pancrelipase 50mg, Amylase 30mg, Bromelain 30mg, Ox Bile 65mg, and Parotid 2mg.

**Supportive Function:** The individual with insufficient acid secretion who is looking for additional HCL and digestive enzyme support might choose Hypo-D.

**When is HCL and enzyme support helpful?** Digestive upset, burping and belching directly after meals, food allergies, osteoporosis, eczema, skin conditions caused by allergies.

**Clinical Applications/Research:** Betaine HCL: Hydrochloric acid (HCL) aids in phase one digestion in the stomach. HCL is necessary for protein digestion. It plays a key role in activating inactive precursor proenzymes (chymotrypsinogen and trypsinogen) to their active form (chymotrypsin and trypsin), which then start to uncurl protein in the stomach. It also maintains the acid environment of the stomach, which is necessary to prevent bacterial growth.

**Pepsin:** Pepsin is a protein-digesting enzyme that is most active in a 1-2 pH environment. Pepsin is most helpful in the stomach as a digestive aid.

**Papain:** Extracted from papayas, papain soothes the stomach and aids in protein digestion. Papain has been shown "to be effective in celiac disease patients by digesting the wheat gluten and rendering it harmless" (Murray and Pizzorno, Encyclopedia of Natural Medicine, Prima Publishing, Rocklin, CA, 1991, p. 54).

**Pancreatin:** Pancreatin is utilized in Phase II digestion in the duodenum. Pancreatin refers to preparations of enzymes secreted by the pancreas. Pancreatic enzyme deficiency is said to be at the root of many degenerative diseases. Pancreatin is often used in treatment of indigestion, malabsorption and inflammatory conditions. "It converts not less than 25 times its weight of starch into soluble carbohydrates and not less than 25 times its weight of casein into proteoses (hydrolyzed protein) within 5 minutes" (Merck Index, Merck and Co., Rahway, NJ, 1989, p. 1581).

**Pancrelipase:** Pancrelipase is a pancreatic enzyme preparation with a high lipase concentration to improve fat digestion.

**Amylase:** Amylase is a highly effective, carbohydrate-digesting enzyme.

**Bromelaine:** Bromelaine is a highly effective, proteolytic (protein-digesting) anti-inflammatory enzyme extracted from pineapple. It is most active in the 5-8 pH range, which starts digestive activity in the duodenum.

**Ox Bile:** Ox bile contains bile salts that act as excellent liver detoxifiers in certain toxic states. The bile acids in bile keep cholesterol from becoming too concentrated and thus forming gallstones. Studies show that bile extract supplementation stimulates bicarbonate secretion by the pancreas and duodenum (Gastroenterol. Clin Biol 1991; 15 (8-9): 574-9).

**Testimonials/Nutrient Tidbits:** Nutrient tidbit: Michael McCann, M.D., describes his success with pancreatic enzyme supplementation on a 37 yr. old woman with life long eczema, intermittent diarrhea and weight loss. In an abstract presented to the 1992 Food Allergy Symposium sponsored by the American College of Allergy and Immunology, he reports that supplementation resulted in a, “complete clinical remission and resolution of eczema for the first time in her adult life. She was also able to discontinue all other drugs” (from Crook, William G., The Yeast Connection Handbook. Professional Books, Inc. Jackson, Tenn. 1996 p. 172).

A doctor reports… “It’s an ace in the hole” (Antoinette Nowakowski, D.C. Durango, CO.)

Most doctors report…Amazing formula! Works great for my patients with chronic digestive problems, food allergies, etc. I would highly recommend it!

**Suggested Dosage:** 1-2 tablets 3 times daily with meals or as directed

**Size:** 90 tablets

**Price:** € 32,70

**Vegetarian:** No

**Contraindications:** Do not take in the presence of an ulcer. **DO NOT CHEW.**
**IMMUNO PLUS**

**Ingredients:** Contains 70% alcohol; Pure Tincture of Echinacea Purpurea, Pau D Arco, Cats Claw, Garlic, Cayenne, Goldenseal, Astragalus Membranaceus, False Unicorn Root, Black Walnut, Dandelion (root & leaf), Suma, Red Clover, Elderberry.

**Supportive Function:** Immuno Plus provides complete immune system herbal support.

**When are immune herbs helpful?** Immune conditions, colds, flu, fever, infection, and malaise due to lowered immune defenses.

**Clinical Applications/Research:**
- **Echinacea purpurea (12%):** Acts as an immune system stimulant; anti-bacterial and anti-viral properties.
- **Pau D’Arco (12%):** Contains quinones, known to have anti-bacterial and anti-viral properties.
- **Cat’s Claw (Uncaria tomentosa) (12%):** Powerful immune stimulant.
- **Garlic:** Acts as broad spectrum antibiotic, antifungal and antiviral.
- **Cayenne:** Calms inflammation and improves circulation; increases effectiveness of other herbs.
- **Goldenseal root:** Immune system support.
- **Astragalus membranaceus:** The Chinese herbal (huang qi), or astragalus, has been used traditionally in Chinese medicine for viral infections. It is valued as a tonic for building resistance to disease. Parts commonly used include the root (which may be made into a tincture, fluidextract or powder). Astragalus is very high in trace minerals and micronutrients.
- **False Unicorn Root:** Immune support against parasites and acts as a general tonic for the entire genito-urinary system.
- **Black Walnut:** Potent vermifuge.
- **Suma:** Energy tonic and adaptogen.
- **Red Clover:** Assists in liver detoxification; potent blood purifier.
- **Elderberry:** Rich in vitamin C; immune support and blood purifier.
- **Dandelion Rood and Leaf:** Supports the liver and kidneys; helps eliminate toxins from the blood.

**Testimonials/Nutrient Tidbits:** **Most doctors report** . . . Amazing formula for immune support. We can’t keep enough on our shelves!

**Suggested Dosage:** 5-20 drops in water 3 times per day or as directed

**Size:** 1 oz

**Price:**

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy. Echinacea contains sugars in its cell membrane, which the body can build resistance to. Some believe that the immune system should not be constantly stimulated, and recommend not taking continuously (i.e. 8 weeks on, 1 week off). Garlic and pau d'arco should not be taken in large doses with anticoagulant drugs (only small amounts are included in this formula).
Iodine Rescue

Ingredients: Potassium Iodide 16.35 mg which yields Iodine 12.5 mg. Also contains 40mg of Colloidal Silica

Supportive Function: Iodine is one of the 14 essential minerals that are crucial to the growth and production of bones, teeth, hair, blood, nerves, skin, enzymes, hormones, etc. Iodine is also important for the healthy functioning of a multitude of biochemical processes, including hormonal balance but especially thyroid pathways; Iodine is incorporated into the thyroid hormones.

Sufficient Iodine is essential to good health. Although the primary function of Iodine is in the production to thyroid hormones by the thyroid gland, many other organs require Iodine for optimal function. Iodine deficiency is associated with reduced mental performance, fibrocystic breast disease and breast cancer. Iodine is known as a potent antioxidant (References can be provided on request).

It is estimated that 15% of American women are below the World Health Organization’s classification for Iodine sufficiency and this is a conservative estimate and almost one third of the world’s population lives in areas of iodine deficiency. The most recent trend in the US is a 50% reduction in urinary iodine excretion between 1970 and 1990.

The RDA for iodine is 150 mcg/day, which pales in comparison with the daily average intake of 13.8 mg/day for the mainland Japanese population. The mainland Japanese consume on the average 92 times the US RDA and have reduced rates of many chronic diseases. In fact, the optimal iodine consumption level has never been determined; yet, the incidence of breast cancer is much lower in the Japan.

In 1829 Jean Lugol, a French physician, discovered a method to dissolve iodine in an aqueous solution. This is known as Lugol’s solution and has been used for a myriad of maladies for more than 150 years. The collective experience of clinicians over this period led to a recommended daily amount of Lugol’s equivalent to be 12.5-37.5 mgs, which so happens to be the recommended dosage to maintain whole body sufficiency using the recently developed iodine/iodide loading test.

FAQ About Iodine:

Should I Take Iodide Or Iodine and In What Form, Liquid Or Tablets?
Iodine and iodide are the same element and they are used interchangeably here, the only difference in the two is one electron. Dietary iodine is changed to iodide in the GI tract, and back to iodine in the cell. Potassium iodide (KI) is extremely bio available and has proven to be an efficacious supplement for iodine repletion.
Liquid forms of Iodine/Iodide (Lugol’s) and of potassium iodide (SSKI) have similar efficacy, however, they may have a metallic taste, can stain clothing, may cause gastric irritation and can vary in accurate delivery. However, a tablet form consisting of potassium iodide (KI) (providing 76.45% iodine) is more precise and pleasant to ingest. Nutri-West’s Iodine Rescue has the advantage of being coated to pass by the taste buds without ill effect and will not stain clothing or cause gastric upset. Tablets travel more easily and do not cause problems with airport security.

The RDA for Iodine Is 150 mcg: Don’t I Get Enough in My Diet?
No, the iodine in salt is just enough to prevent goiter and severe mental retardation. Therapeutic doses are much higher. The mainland Japanese diet provides a daily average of 13,800 mcg: which is 92 times the...
RDA. In fact, in Europe, the RDA for iodine in cats is 150 mcg. Since bromine knocks iodine off receptors and it is prevalent in our environment (bakery items, hot tubs, i phones, etc.), it increases iodine deficiency.

**How Can I Determine a Clinical Deficiency in Iodine?**
A conservative estimate is that 30% of the general population is iodine insufficient. Some physicians report up to 90% of their patients showing insufficiency. Signs and symptoms of iodine deficiency include thyroid problems (both hypo- and hyper-), goiter, impaired immune system, etc. Iodine deficiency is associated with many conditions, including fibroids, fibrocystic breast disease, cardiac arrhythmias, adult onset diabetes, arthritis, weight imbalances, and many more.

**Can’t I Just Use the Iodine Skin Test Instead of the Iodine Load/Urine Test for Determining a Deficiency in Iodine?**
No, the skin test does not accurately assess body tissue stores; it reflects local absorption at that site. 88% of iodine applied to the skin will evaporate; only 12% is absorbed. “The iodine patch test is not a reliable method to assess whole body insufficiency for iodine. Many factors play a role in the disappearance of the yellow color of iodine from the surface of the skin… the iodine/iodide loading test is much more accurate” (Guy Abrahams MD) (10). Utilizing an Iodine Load/Urine Test from Dr. Jay Mead, MD (www.Labrix.com) provides documentation for patient records, for insurance, for protocol rationale, and for liability support (you must have a health practice to order the Iodine test).

**I’ve Heard That the Thyroid Prefers Iodide and the Breast Prefers Iodine.**
Multiple studies and clinical observations show that the efficacy of Iodide vs. Iodine is statistically the same regardless of the tissue involved.

**Can Iodine Deficiency Cause Estrogen Dominance?**
Yes. It is believed that estrogen receptors are more sensitive to estrogen when a person is iodine deficient. In fact, Stadel found that a diet low in iodine can lead to a hyperestrogen state with high estrone and estradiol and a low estriol to estrone ratio that can increase the risk for cancer. Other researchers report: “This paper reviews evidence showing iodine as an antioxidant and antiproliferative agent contributing to the integrity of a normal mammary gland. Seaweed is an important dietary component in Asian communities and a rich source of iodine. The high consumption of this element has been associated with the low incidence of benign and cancer breast disease in Japanese women. In animal and human studies, iodine supplementation exerts a suppressive effect on the development and size of both benign and cancer neoplasias. This effect is accompanied by a significant reduction in cellular lipoperoxidation. Iodine, in addition to its incorporation into thyroid hormones, is bound into antiproliferative iodolipids in the thyroid called iodolactones, which may also play a role in the proliferative control of mammary gland. We propose that an iodine supplement should be considered as an adjuvant in breast cancer therapy” (Aceves C, Anguiano B, Delgado G. Is iodine a gatekeeper of the integrity of the mammary gland? J Mammary Gland Biol Neoplasia. 2005 Apr;10(2):189-96.)

**Some People Still Believe We Get Enough Iodine From Salt and Our Diet; How Do I Justify Using Larger Doses?**
The proof is in the pudding. A lab test conducted by an MD (www.Labrix.com) verifying iodine deficiency and clinical results/improved lab reports after supplementation speaks volumes.

**What About Allergies to Iodine?**
The American Academy of Allergy, Asthma and Immunology has issued a position statement on the rarity of a true iodine allergic reaction. They state that people who react to iodine-containing intravenous contrast material, skin preparations and shell fish are reacting allergically to a component other than the iodine (position statement, Feb. 24, 2004).

**What Are the Possible Side Effects?**
Dr. Guy Abraham clearly describes the known risk to iodine supplementation and reports that adverse effects are extremely uncommon if not non-existent in the doses in the ranges suggested here (14). Potential adverse effects related to iodide include: Thyrotoxicosis; iodine-induced goiter; brassy taste; increased salivation; coryza (symptoms of a head cold); sneezing; headache; mild acneiform lesions in the seborrheic areas.

Since bromine toxicity is common (bromine replaced iodine in breads and other bakery items in the 70’s and most people are exposed to high levels), there may be symptoms of bromine detox. Detoxification consists of mobilization, binding and removal. Detoxes should always be monitored; if toxins are being bound and removed it should alleviate detox symptoms. If symptoms occur, reducing the dosage (reduces mobilization) and increasing nutritional support helps (Nutri-West’s Total Systemic Detox, Complete Glutathione, Complete Omega 3 Essentials or Complete Hi-Potency Omega 3 Liquid are all good detox products). As with any protocol, if any ill effects are suspected, stop taking the product and check with your practitioner.

Some Claim That the Relatively High Doses of Iodine Used In Orthoiodosupplementation May Lead to Hypothyroidism, Goiter or Other Thyroid Problems.

“This just is not the case. A review of the literature revealed that the organic forms of iodine were involved in most of these complications (editor’s note: even though “organic” is usually a good thing, it is not when it comes to the form of iodine supplementation you want). Iodine intake has fallen over 50% in the U.S. over the last 30 years. During this same time, major increases in diabetes, hypertension, obesity, breast and thyroid cancer, and other thyroid disorders, have been reported. It appears to us that iodine deficiency, not iodine excess may be responsible for the increase of these conditions” (Dr. Guy Abraham, MD). Again, utilizing the Iodine Load/Urine Test from Labrix can be helpful, and monitoring lab tests can help to document clinical improvement.

Dr. Alan Gaby points out that absence of iodine side effects is most likely correlated to utilizing a comprehensive nutritional program. Suggestions have included nutrients such as vitamin C and magnesium (Nutri-West has C-1000 TR and Aspartic-Mag). See above question for diminishing effects due to bromine detox.

What Are the Drug Interactions?
Because of the high iodine content of the drug amiodarone, the thyroid gland is effectively saturated, thus preventing further uptake of isotopes of iodine. Supplementing with additional iodine is generally not warranted. Diuretics (like amiloride, spironolactone or triamterene) can raise potassium levels, and additional potassium may not be warranted.

Are Some People Especially Sensitive to the Adverse Effects of Iodine?
Technically it is correct to say that some will be especially sensitive, just as some people are more sensitive to vitamin C therapy. If someone is immune-compromised or toxic from excess bromine exposure for instance, they may be more susceptible to adverse effects. If there is any question, careful monitoring, individualized doses, proper follow-up visits and lab testing can help minimize adverse effects.

What about Pregnancy/Breast-Feeding?
There is a good review suggesting iodine supplementation in pregnancy (18), however, since there are limited studies, we suggest erring on the side of caution and avoiding in pregnancy and breast-feeding.

What About Supplementing in Children?
Most studies have not been conducted in children. As with those who are especially sensitive to the adverse effects of iodine, careful monitoring, individualized doses, proper follow-up visits and lab testing can help minimize adverse effects.
What If I’m On Thyroid Meds?

Once the body iodine stores are replete, a lower dose or complete cessation of the medication is possible (consult your physician). Lab tests are suggested for monitoring.

What If TSH Levels Go Up?
Please keep in mind that the need for more iodine symporters (to bring iodine into the cell) during iodine repletion can temporarily raise TSH levels (because TSH functions to increase the symporters). This can occur for up to six months after iodine supplementation, especially when the deficiency was more pronounced and should not be a concern when other lab parameters are normal.

Suggested Dosage:
Dosage varies with the individual. The daily optimal dosage of one tablet (12.5mg) closely mimics the daily average consumption in Japan. However, higher daily doses may be needed to correct total body insufficiency, e.g. 4 tablets (50mg) for up to 3 months.

Size: 90 Tablets

Price: € 30,50

Vegetarian: Yes

Contraindications: See the relevant references in FAQs.
**ISB Formula**

**Ingredients:** Thymus Tissue Concentrate (not an extract) 60mg, Vitamin A (Palmitate) 300i.u, Vitamin B-6 15mg, Niacin 10mg, Pantothenic Acid 60mg, Vitamin B-12 200mcg, Folic Acid 150mcg, Vitamin C (Sago Palm) 150mg, Natural Vitamin E (Succinate) 70i.u, Suma 7mg, I.S.B. Complex 107mg: includes Magnesium, Selenium, SOD Type G, Zinc, Echinacea Purpurea, Golden Seal, L-Ornithine, Ferric Phosphate, Garlic and L-Aspartic.

**Supportive Function:** ISB has a collection of nutrients, which are all known for their reputed roles in supporting the immune system. Echinacea, Goldenseal, garlic, and suma all have phytochemically active constituents. The list of ingredients is expanded to include antioxidants, synergistic vitamins, and thymus glandular support.

**When is immune support helpful?** Immune conditions, colds, flu, fever, infection, and malaise due to lowered immune defenses.

**Clinical Applications/Research:**

- **Vitamin A:** Supports the mucous lining. It also appears to improve antibody response and white blood cell functions. Supplementary treatment of vitamin A is reported by some investigators to enhance antibody and cell-mediated immune response (Levis WR & Emden RG. Proc. Am Assoc. Cancer Res. (1976); 17:112; Cohen BE & Cohen IK. J. Immunol. (1976); 111:1376).


- **Vitamin E:** Vitamin E protects cells, including the cells of the immune system. Additionally, it seems to boost immune activity. "Vitamins E, A, C and carotenoids are able to protect cells and enhance humoral and cellular immune responses in disease" (Nockels, C.F. The role of vitamins in modulating disease resistance. 1988. Vet Clin North Am Food Anim Pract 4(3): 531-42).

- **B Complex:** The B vitamins help give us the energy to function. They are known as the "catalytic spark plugs" of the body; they catalyze many biochemical reactions because of their role as Co-enzymes.

- **Zinc:** Zinc is necessary for the proper function of white blood cells (WBC’s) and the thymic hormones. Zinc helps prevent the age-related shrinking of the thymus (involution), and is especially effective in restoring depressed cell-mediated immunity in the elderly.

- **Echinacea:** Echinacea is a natural herb that has been used for centuries as a medicinal agent, and in many scientific studies for its ability to enhance the immune system. It is known to stimulate macrophages and antibodies.

- **Goldenseal:** Goldenseal is a powerful herb, acting as a detoxifier and antibiotic.

**Testimonials/Nutrient Tidbits:** Numerous doctors report . . . ISB Formula (3/day) has been very beneficial for my chronic fatigue/EBV patients.

Another doctor reports... Start taking ISB and Sago-C at the onset of a cold or flu virus, every hour until symptoms abate. If you don’t catch it in time to completely avoid it, decrease dosage to 1-2 tablets each, three times a day.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 42 tablets

**Price:** € 25,80

**Vegetarian:** Yes

**Contraindications:** Do not take in pregnancy. Echinacea contains sugars in its cell membrane, which the body can build resistance to. Some believe that the immune system should not be constantly stimulated, and recommend not taking continuously (i.e. 8 weeks on, 1 week off). Goldenseal is contraindicated in pregnancy.

**Vegetarian:** Yes

81
**L-GLUTAMINE PLUS**

**Ingredients:** Each tablet contains: L-Glutamine 500mg, Chlorophyll 20mg, N-Acetyl Glucosamine 50mg, Lipoic Acid 2mg, Lactobacillus Acidophilus 4 million units, Lactobacillus Bulgaricus 1.3 million units, Lactobacillus Bifidus 2.2 million units, Vitamin E Succinate 5i.u.

**Supportive Function:** Glutamine is the major fuel of the intestines and contributes to the metabolic processes that are necessary for restorative tissue repair. A healthy intestinal lining maximizes nutrient absorption, while acting as a barrier to foreign invaders. Glutamine is boosted with Lactobacillus and bifidus flora to support immune function, along with the antioxidant vitamin E and chlorophyll, which has a gentle, non-irritating action that is important in digestive well being.

**When is glutamine helpful?** Intestinal permeability (leaky gut), food allergies, acid reflux, Crohn’s Disease, ulcers, nausea, anorexia, muscle growth (weight lifters), athletic activities (buffers lactic acid), achlorhydria, surgery, trauma, cancer and other immune-challenged conditions, chemotherapy: General indications for repairing intestinal NSAIDS/drug damage, and/or any condition of the bowel, especially small bowel, requiring synthesis and healing of intestinal cells.

**Clinical Applications/Research:** Glutamine: L-glutamine is the main fuel of the intestinal cells. It aids in tissue healing, maintains a healthy digestive tract, and effectively treats small intestine absorption problems. It is an integral amino acid needed for the synthesis of the mucoproteins present in the intestinal mucous secretions (Texas J Med 1957; 53:840-3).

**Probiotics:** Supports the gastrointestinal tract by replenishing the good bacteria.

**Testimonials/Nutrient Tidbits:** A doctor reports . . . I have used this product in combination with Total Leaky Gut (2 of each per day) and have gotten great results for leaky gut problems.

A NW distributor reports… My mother took 8 grams of glutamine a day (equivalent to 16 pills) during her chemo – the doctors were amazed that she didn’t suffer the average side effects from the chemo.

**Suggested Dosage:** 1-2 tablets 3 times daily on an empty stomach or as directed

**Size:** 90 tablets

**Price:** € 49,05

**Vegetarian:** No

**Contraindications:** High doses of glutamine are contraindicated in kidney disease.
**LIGA-PN**

**Ingredients:** Shark Cartilage 50mg, N-Acetyl Glucosamine 10mg, Valerian 50mg, Fever Few 150mg, Passion Flower 50mg, Scullcap 25mg, White Willow 100mg, Magnesium Citrate 150mg, Calcium Lactate 100mg, Turmeric 10mg, Vitamin B-6 10mg, Oregano 10mg, Marjoram 10mg, Thyme 10mg, Basil Powder 10mg, Ginger 10mg, Suma 10mg, Magnesium Chelate 15mg, Molybdenum Chelate 50mcg.

**Supportive Function:** Amazing nutritional support for tissues damaged by injury and overuse, Liga-PN is a complex of soothing, calming herbs and nutrients. Liga-PN is a popular supplement often chosen by those affected by overworked muscles/ligaments. Great support for cramping and menstrual symptoms.

**When is ligament support and calming herbs helpful?** Conditions involving pain and/or inflammation, i.e. trauma, injury, PMS, headache, muscle/ligament pain, laxity of ligaments (helps hold an adjustment).

**Clinical Applications/Research:**

- **Valerian Root:** Valerian is called, “nature’s tranquilizer.” It contains valepotriates, which seem to be active ingredients in calming the nervous system.

- **White Willow Bark:** White willow bark, or salicin, is the forerunner of aspirin, which is technically known as acetylsalicylic acid. In ancient times, chewing on pieces of this bark were known to alleviate pain and symptoms of inflammation; however, white willow bark does not involve the side effects of aspirin and other anti-inflammatory drugs, (i.e. ibuprofen, indomethacin, etc.), such as stomach upset, cartilage destruction, headaches and dizziness.


- **PassionFlower:** Passionflower is known for its calming effects.

- **Bromelain:** Extracted from pineapple, bromelain is an enzyme which "has therapeutic effects in the treatment of inflammation" (Med. Sci. Sports Ex. 1992; 24:20-5). Bromelain has been shown in many studies to aid the body’s response to inflammation and swelling.

- **Magnesium:** Magnesium has many roles in the body; one of the major roles is involved in muscle relaxation.

- **Feverfew:** Feverfew is an herb which some have suggested be called, “headache-few.” It works in the prevention and treatment of migraine headaches, and is most effective in prevention. It contains compounds called parthenolides, which help control the expansion and contraction of blood vessels in the brain (Wild R, ed. The Complete Book of Natural and Medicinal Cures. 1994. Rodale Press, Emmaus. PA p. 295). Feverfew is contraindicated in pregnancy.

- **Calcium:** Calcium functions in many biochemical reactions, and is especially important for the contraction-relaxation phase of muscles. Magnesium acts synergistically with calcium in this phase.

**Testimonials/Nutrient Tidbits:**

- **A doctor reports**...amazing formula for joint pain and muscle spasm. I will sometimes give a dose as high as 3 tablets every 3 hours for 2 days and then dramatically drop the dosage.

- **Most doctors report**...excellent product for pain and even for PMS!

- **Another doctor reports**...Liga-PN relieved the muscle spasm in a locked-up neck. Range of motion dramatically improved within a few hours from no range to being able to turn the neck freely to the right and left.

- **A doctor reports**...I had a patient with Ankylosing Spondilitis who responded wonderfully to a protocol of Total Multimune, Total GHR, and Liga-PN – Dr. Sigh, Loveland, CO.

**Suggested Dosage:** 1-2 tablets 3 times daily; in case of injury, take 2 every hour (up to 12 per day) for first 3 days of injury.

**Size:** 60 tablets

**Price:** € 25,60

**Vegetarian:** No

**Contraindications:** Feverfew and ginger should not be taken in large doses with anticoagulant drugs (small amounts are included in this formula). Do not take during pregnancy.
**LYSO-LYPH-FORTE**

**Ingredients:** Pancreatin 170mg, Papain 100mg, Bromelain 80mg, 170 mg of Pancreatin; 100 mg of Papain; 80 mg of Bromelain; Trypsin (Chymotrypsin 8 mg) 40mg, Pancrelipase 15mg, Rutin 85mg, Zinc Gluconate 4mg, Tissue concentrates (Bovine Source): Thymus 45mg, Parotid 1mg.

**Supportive Function:** A highly potent formula of specially prepared enzymes to support processes that clear inflammatory debris from the body; supports arterial circulation.

**When are proteolytic enzymes helpful?** Any site of inflammation, swelling, redness, acute arthritis pain, ovarian cysts, sinus infections, ruptured/bulging discs, food allergies, etc.

**Clinical Applications/Research:** Proteolytic enzymes (An overview of enzymes and support of inflammatory processes): In the normal inflammatory response, proteolytic enzymes are released from the neutrophils to clear toxic debris. During inflammation, toxic protein-containing material is released which can foster disease unless it is removed. Neutrophils release proteolytic enzymes when they arrive at the scene, to break apart this material and prevent infection. This, “clean up process” helps rid the tissue of substances that prolong inflammation. **Pancreatin Protease** and **Chymotrypsin (Trypsin)** are animal-based proteolytic enzymes that help the body digest proteins from food and other sources. Proteolytic enzymes aid digestion in the intestines and lessen the demands of the body to supply enzymes to convert food into energy when they are taken with food. Proteolytic enzymes can also be absorbed into the body when they are taken between meals. After absorption, proteolytic enzymes can directly assist the immune system’s defense mechanisms (Morley JE et al, *Nutritional Modulation of Neural Function, UCLA Forum in Medical Sciences* 28. San Diego, CA: Academica Press, 1988). Partially digested protein molecules enter the immune system where they can be treated as foreign antigens by the immune system. Antibodies combine with these antigens that pass through the gut barrier and form Circulating Immune Complexes (CICs) where they can trigger allergic reactions. CICs begin to accumulate in soft tissues where they cause inflammation and stress to tissues and organs. Pancreatic enzymes help break down CICs for elimination by the kidneys. Enzymes ingested for this purpose are taken between meals so they will not be used for digesting food. Proteolytic enzymes help digest other foreign proteins such as scar tissue, products of inflammation, and viruses which have protein coatings. Pancreatic enzyme mixtures have been used for asthma, bronchitis, atherosclerosis, blood clotting, lung and tooth infections, bone fractures, and prior to and after surgery. After sports injuries, pancreatic enzymes are taken to accelerate healing. Enzymes are also taken before sporting events as prophylaxis to promote faster healing in case of injury (Deitrick RE, “Oral proteolytic enzymes in the treatment of athletic injuries: A double-blind study,” *Pennsylvania Med J* Oct 1965:35-7). In viral infections, pancreatic enzymes are used to digest the protein coat of virus to destroy the virus directly and to help remove CICs produced as a byproduct of viral infection (Jaeger CB et al, “Polymer encapsulated dopaminergic cell lines as ‘alternative neural grafts,’” *Progress in Brain Research* 1990; 82: 41-6; Wolf & Ransberger, 1972). In people undergoing cancer treatment, pancreatic enzymes have been shown to expose antigens on the surface of cancer cells so that cancer cells can be more easily recognized by the immune system as antigens for immune system destruction. Pancreatic enzymes help remove CICs byproducts produced by cancer cells that are shed into the circulation. Pancreatic enzymes also have been shown to stimulate the immune system’s T-cells, killer cells, and tumor necrosis factor, which are all toxic to cancer cells. Pancreatic enzymes may enter cancer cells in their reproductive phase and help digest them. In German studies, pancreatic enzymes have been directly injected into tumors causing them to dissolve (Wolf & Ransberger, 1972; Cichoke AJ, “The effect of systemic enzyme therapy on cancer cells and the immune system,” *Townsend LfDP* Nov 1995: 30-2). Proteolytic enzymes have been shown to be natural blood thinners and reduce platelet stickiness as well as dissolve fibrin-lipid deposits in arteries (Heinicke R et al, “Effect of bromelain (Ananase) on human platelet aggregation,” *Experiencia* 1972; 28: 844-5). Note: We recommend avoiding enzymes in high doses right before surgery because of a blood thinning effect, and we also recommend waiting a week after surgery because some scar tissue formation after surgery is desirable. **Bromelain,** known as a natural blood thinner, is a proteolytic enzyme from pineapples that is very effective in reducing blood platelet stickiness and clot formation. It has also been shown to alleviate symptoms in 100% of those with urinary tract infections of the kidney, bladder, and urethra. In arthritis, it is used to reduce joint
inflammation. It has been shown to help in quick recovery from injury, in relaxing smooth muscle and reducing cramps during PMS, and is particularly effective in reducing bruising following tooth extraction.

The journal Medicine and Science in Sports and Exercise (1992; 24(1): 20-25) reports a study on bromelain, one of the proteolytic enzymes that has therapeutic effects in the treatment of inflammation and soft tissue injuries. Following injury, bromelain significantly increased the maximum muscle force in the treated group, indicating that bromelain can be helpful for a quick recovery from injury. The Merck index lists it as an excellent anti-inflammatory enzyme (Merck Index, 11th ed. 1989. Merck & Co. Inc., Rahway, NJ, p. 1382). Bromelain therapy has become quite popular for use in rheumatoid arthritis and joint inflammation. The smooth muscle relaxant properties of bromelain contribute to the documentation for relieving menstrual cramps.

**Papain:** Papain is a proteolytic enzyme derived from pineapple. Obstructions in the gastrointestinal tract can cause ulceration, bleeding and perforation, with symptoms of discomfort, nausea and vomiting; however, they can be dissolved by the proteolytic enzyme papain (Kinderarztl Prax 1990 58(10): 531-4).

Papain is soothing to the stomach; helps digest protein-based substances, and can be effective in celiac disease by digesting wheat gluten.

**Lipase** helps split fats into essential fatty acids and glycerol. Supplemental enzymes spare stress on the body, help improve digestion, increase uptake of nutrients from food, and prevent partially digested fats from entering the bloodstream, which can cause obstruction, inflammation, or allergies.

**Amylase** is a carbohydrate-digesting enzyme found in the saliva, pancreatic, and intestinal juices. People with allergies are frequently deficient in this enzyme.

**Rutin** is a powerful noncitrus bioflavonoid that works with vitamin C to protect capillaries, promote circulation, prevent cataracts and macular degeneration, fight bacteria and viruses, has anti-inflammatory, anticarcinogenic, and anti-allergic factors. Bioflavonoids are used frequently as prophylaxis and treatment for injuries because they relieve pain and bruising. Allergies, asthma, eczema, arthritis, eye problems, diabetes, nosebleeds, and varicose veins all benefit from bioflavonoid supplementation. Rutin deficiency, as well as deficiencies in other bioflavonoids and vitamin C, can weaken the collagen structure of veins, which can lead to varicose veins. Rutin was shown to be the most powerful of superoxide scavengers out of seven bioflavonoids tested. It has strengthening and chemoprotective effects on blood vessels and many other tissues (Chen et al, "Flavonoids as superoxide scavengers and antioxidants," *Free-Radic Biol Med* 1990; 9(1): 19-21).

**Thymus:** The thymus produces T- cells. The thymus continues to grow into puberty, when it begins to shrink. In early life, it is the main manager of the immune response. In later life, it is the learning center where lymphocytes acquire roles for identifying antibodies, as messengers for the immune system, as killer cells, and as helper cells. Killer cells recognize and target foreign toxins and recognize and target tumor cells (Merck Manual, 1992:279-87). Glandular nutrients such as thymus are believed to help repair damaged, deteriorated, or autoimmune system attacks on aging and malfunctioning glands and help restore them to normal activity (Balch JF and PA Balch, *Prescription for Nutritional Healing*, 2nd Edition, New York: Avery, 1997; 555-556).

**Zinc** supplementation has been demonstrated to increase immune function and enhance lymphocyte activity (Duchateau J et al, “Influence of oral zinc supplementation on the lymphocyte response to mitogens of normal subjects,” *Am J Clin Nutr* 1981; 34: 88-93; Fraker PJ et al, “Interrelationships between zinc and immune function,” *Fed Pro* 1986; 45:1474-9). Zinc is an antioxidant and plays a role in the synthesis of the antioxidant enzyme SOD. Zinc is necessary to maintain vitamin E levels and assists in the absorption of vitamin A. Zinc also participates in the promotion of glandular, reproductive, and immune system health (Balch & Balch, ibid: 45-46). Zinc lozenges are reported to reduce the severity of symptoms in the common cold and to reduce the duration of the infection (Lininger S, Wright J, Austin S, Brown D, Gaby A, *The Natural Pharmacy*, Rocklin, CA: Prima Health, 1998: “Enzymes, Proteolytic”: 73). Zinc is one of four minerals known to stimulate the release of human growth hormone. Zinc is essential for the body’s protein synthesis, regulates the contraction of muscle, and is important in the formation of insulin. Zinc has been reported to accelerate healing time, eliminate taste loss, promote growth and increase mental alertness (Mindell E, *Earl Mindell’s Vitamin Bible*, New York: Warner Books, 1991:112, 94).

**Parotid:** The parotid is one of 3 sets of salivary glands. Saliva is part of the body’s first line of defense for antigenic materials entering the mouth and alimentary tract. The parotid produces a number of defensive polypeptides, defensins, and lactoferrin, an iron binding glycoprotein, which blocks unfriendly bacteria from obtaining a source of iron. Lactoferrin is also found in the products of all exocrine glands located in the
gateways of the digestive, respiratory, and reproductive systems, in saliva, tears, nasal secretions, and seminal plasma. In blood, lactoferrin is derived from a special group of white blood cells, the neutrophils. Lactoferrin also stimulates the immune system, has both antibacterial and antiviral properties, promotes protective flora in the gut, helps regulate iron metabolism, and helps prevent harmful oxidation. Saliva also contains digestive enzymes, which begin the digestion of starches, and bathe the teeth in protective alkaline mineral nutrients (Levay & Viljoen, 1995:252-67; Reiter, 1985: 281-336).

Testimonials/Nutrient Tidbits: Tidbit… When taken for IgE (immediate) food reactions, proteolytic enzymes can be very helpful.

Amazing recovery . . . Lyso Lyph Forte in very high doses between meals turned around a ruptured cervical disk (C-7). Surgery was not necessary after an intense nutritional regime that included high doses of proteolytic enzymes, away from meals. A neurosurgeon, three chiropractors, and my family practitioner were astounded with the results (Lynn Toohey, Ph.D.).

Hiking pain-free…”Marie says that the Lyso-Lyph Forte has been a magic pill for her! After 20 years, she’s now hiking pain-free”. (Karen Desjardin, Ft. Collins, CO)

A doctor reports . . . My patient was ecstatic. She has endometriosis and was told she needed a hysterectomy. After high dosing on Lyso Lyph Forte between meals, the doctors reported that the hysterectomy was not necessary.

Another doctor reports . . . “Thank you for the advice on a protocol including Core Level Bone Matrix, Lyso-Lyph Forte, and Liga-PN for my shin splints. I was able to run the Boston Marathon and place 1,087 out of 6,000” (Marc Berkson, D.C.)

Another doctor reports… A patient suffered from multiple kidney stones for months. He had been treated for prostatitis, but after they diagnosed stones, the doctor recommended hospitalization and stent replacement. I sent him Lyso Lyph Forte, Magnesium Chelate, Calc-acid, Phos Drops and KB Plus. Within a few days he passed his stones, which had been giving him nagging back pain and difficulty in urination. He was ecstatic to say the least! (Ben Markham, D.C. Phoenix, AZ).

Suggested Dosage: 2 tablets 3 times daily; take between meals; during initial inflammation, use as many as 16 per day between meals.

Size: 60 or 120 tablets

Price: € 39,50 en € 49,50

Vegetarian: No

Contraindications: Do not use 7 days before or after major surgery, or in pregnancy.
**PARA DYSBIO CLEANZ**

**Ingredients:** Each Capsule Supplies: Gentian Lutea 60mg, Garlic (odorless) 175mg, Goldenseal 125mg, Quassia 40mg, Ginger 50mg.

**Supportive Function:** This potent formula includes nutrients listed by the Merck Index as antiparasitic, such as quassia, and antibacterial, such as berberine (in Goldenseal) and allicin (in garlic). This blend optimizes other synergistic botanicals to comprise excellent support for maintaining a healthy intestinal environment.

**When is parasite support helpful?** Parasitic infestations and related conditions, including colicky pains, dysentery, weight loss, intestinal toxemia, nausea, and diarrhea.

**Clinical Applications/Research:**

**Gentian:** Gentian has an incredible reputation for supporting the entire digestive process, by stimulating appetite and bile flow. The rhizomes and roots of gentian are used to stimulate gastric secretions (by stimulating natural secretion of HCL), increase appetite, increase circulation, and promote proper digestion and liver, gallbladder and spleen function. Gentian has antimicrobial activity (Int J Dermatol 1992; 31(3): 210-3). Many believe gentian to be a tonic which strengthens the whole system, useful in the treatment of exhaustion from chronic disease and in general debility, and also as a febrifuge (fever reducer), emmenagogue (stimulates menstrual flow), anthelmintic (expels worms) and antiseptic (Grieve M. A Modern Herbal. Vol. 1, Dover Publ. NY, NY 1971).

**Garlic:** Garlic extracts have been found to be safe and effective in treating parasites. It has been utilized to act against common parasites such as roundworm and hookworm (Planta Medica 1973; 23:381-393; Am J Trop Med Hyg 1969; 18:920-923). Thirty six children were administered two capsules, 2x day for three days, and their parasites were eliminated; garlic, "was found to be efficient, safe and shortens the duration of treatment" (J Egypt Soc Parasitol 1991; 21(2): 497-502). Garlic is also known for its immune, cardiovascular, candida and gastrointestinal effects.

**Goldenseal:** Goldenseal reduces candida infections, a common side effect of antibiotic therapy (Sabouraudia 1982; 20:79-81; Heinerman, John. Heinerman's Encyclopedia of Fruits, Vegetables and Herbs. Parker Publishing, West Nyack, NY p. 158, 162). Berberine destroys microorganisms, and has been "shown to be effective in the treatment of E. Coli, Shigella dysenteriae, Salmonella paratyphi B, Klebsiella, Giardia lamblia and Vibrio Cholera." (Murray M, Pizzorno J. Enc Nat Med. Prima Publ, Rocklin, Ca. 1991, p. 289). These organisms are responsible for causing many forms of gastrointestinal distress, including diarrhea. Berberine inhibits both infectious organisms and toxic formation by the organisms. One of the most interesting characteristics of berberine is the mechanism by which it impedes microorganisms: it not only has antibiotic activity, but it can block the adhesion of the microorganisms, which thwarts their colonization without having to use high doses to kill the organisms.

**Quassia:** Considered an amoebocide, quassia has been useful in treating giardia, dysentery, and pinworms. It is effective therapy for poor gastrointestinal function. Quassia has been reported to increase appetite by stimulating the production of saliva and the gastric juices. Thus, it may be helpful in anorexia nervosa. Quassia is a bitter tonic and anthelmintic (anti-worm), which is, “excellent for dyspeptic conditions, stimulates the production of saliva and digestive juices, and is also used in the expulsion of worms” (Hoffman D. The Holistic Herbal. Element, Mass. 1992 p. 226).

**Ginger:** Ginger has been used as a remedy for colitis, diverticulosis, gas, indigestion, vomiting, colon cleansing, morning sickness, nausea, and cramping (Mowry, D. Scientific Validation of Herbal Medicine. 1986. Keats Publ. New Canaan, Conn.). It has a cleansing effect on the kidneys and bowels and aids in the removal of toxins from the body. In herbal literature, ginger has been touted as a digestive stimulant and has been used to improve weak digestion (Wild, R., ed. The Complete Book of Natural and Medicinal Cures. 1994. Rodale Press, Emmaus, Pa. p. 298). Ginger tea taken 30 minutes before meals has been known to be helpful as a digestive aid. Ginger contains some of the most powerful candida substances available (Duke, JA. Handbook of Medicinal Herbs. 1985. CRC Press, Boca Raton, Fl.).

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 28,10

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy. Garlic and ginger should not be taken in large doses with anticoagulant drugs (only small amounts are included in this formula). People with high blood pressure should not take gentian in large doses.
**PARATHYROID-LYPH**

**Ingredients:** Each Tablet Supplies: Tissue concentrates (not extracts) of bovine source from Parathyroid 10 mg, Stomach 35 mg, Parotid 2 mg, Dulse 300 mg (iodine 60 mcg), Calcium (as bone meal) 78 mg, Phosphorus (as bone meal) 37 mg, Vitamin D-3 100 i.u, Folic acid 400 mcg, Vitamin B-12 20 mcg, in a base of 50 mg each of Concentrated Carrot (root) and Beet (leaf) powder (Benaris) as an additional source of Calcium and other minerals

**Supportive Function:** The parathyroid glands produce PTH, or parathyroid hormone, which is responsible for the balance between bone calcium and blood calcium. They are the primary organ controlling mineralization of bone (Burton Goldberg Group, Alternative Medicine: The Definitive Guide, Future Medicine Publishing, Inc. WA, 533).

**When is support helpful?** In small doses, parathyroid hormone stimulates osteoblasts to build bone, also helpful for blood calcium regulation.

**Testimonials/Nutrient Tidbits:** A doctor reports…Michael Treinen, D.C. from Cortez, CO has studied the effects of parathyroid hormone for years in relation to bone growth. Parathyroid hormone, in small amounts, has the ability to stimulate the osteoblasts to build new bone, while in larger amounts will facilitate the removal of calcium from the bones into the blood. Dr. Treinen has found that the amount of parathyroid-lyph, which is ideal to recommend to his osteoporosis patients, is one tablet twice a week. Dr. Treinen has conducted clinical testing in his practice, and has recorded improved bone growth after several weeks of supplementation. It is also highly important to give Glucosamine Plus with the Parathyroid-lyph, as the Glucosamine formula will provide necessary precursors for growth. Interestingly enough, Dr. Treinen notes that there is a new drug on the market for osteoporosis, called Forteo, and the drug contains at least a third of the amino acid sequences of the Parathyroid hormone.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 25,70

**Vegetarian:** No

**Contraindications:** Hyperparathyroidism or sarcoidosis patients should avoid vitamin D supplementation. Hypercalciuria and hypocalcaemia are generally not seen unless the daily dosage exceeds 2400 IU (only a small amount of vitamin D is included in this formula; approximately ¼ of the RDA).
**PAROTID-LYPH**

**Ingredients:** Each Tablet Supplies: Parotid 200mg, Calcium Lactate 50mg.

**Supportive Function:** The parotid is one of the salivary glands, responsible for supporting a crucial first step in digestion.

**When is parotid support helpful?** Chemical and heavy metal toxicity; biological tagging.

**Clinical Applications/Research:** No known research exists regarding parotid glandular. However, clinically, many practitioners agree that parotid glandular will cause the body to begin detoxifying heavy metals and chemicals from the body.

**Testimonials/Nutrient Tidbits:** Many doctors report . . . Parotid-Lyph will invariably cause patients to begin dumping heavy metals and chemicals from the body. Usually a combination of Parotid-Lyph and Core-Level D-Tox works well, to bind to the toxins and prevent an unpredicted detoxification reaction.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** €

**Vegetarian:** No

**Contraindications:** None known.
**PHOS DROPS**

**Ingredients:** Ortho Phosphoric Acid-Inositol-Choline Each Drop Supplies: Ortho Phosphoric Acid 13mg, Inositol 0.57mg, Choline Bitartrate 0.27mg.

**Supportive Function:** Phosphorus is critical to healthy cell growth in many tissues of the body. Ortho phosphoric acid provides acidic support for an alkaline environment.

**When is acidic phosphorus helpful?** Kidney stone formers, tendonitis, bursitis, gallstones, gout, arthritis, high blood pressure, excess calcium deposits, excess tarter on the teeth, complaints of nausea, bone spurs.

**Clinical Applications/Research:** Acidifying phosphorus: Acidifying phosphorus will provide acidic support when the environment is too alkaline. For example, a kidney stone former is too alkaline and as a result calcium is making deposits in the body. To break up calcium and cause it to go back into solution, an acidifying agent is necessary. Phosphorus is a calcium mobilizer. Our diet contains plenty of inorganic phosphorus in the form of soda pop or red meat, but we ingest very little organic phosphorus.

**Choline and Inositol:** To be an effective calcium mobilizer, orthophosphoric acid needs to be in partnership with its co-factors, choline and inositol.

**Testimonials/Nutrient Tidbits:** Heel and Bone Spurs: As you know, calcium must be in an acid base to stay in solution. When the patient starts putting out bone spurs that is an indication of alkalinity. I used this nutritional support for years in my practice and it almost always worked! Calc-Acid: 2 tabs 4 X per day, Phos drops: 30 drops per day, F-Complex: 1 pearl 3 X per day. If the patient starts to yawn excessively, or starts having heartburn/acid stomach, it is time to reduce the regimen. It usually takes about 1-3 months to adequately acidify and get the calcium back into solution. (Paul White, D.C.)

A doctor reports… the patient who has joint stiffness in the morning that clears up after his shower is a good candidate for Phos Drops. Often you will see phosphorus elevated on a blood chem panel and the patient will still be exhibiting signs of joint stiffness, etc. Blood chemistries do not delineate between organic and inorganic, and, generally speaking, when you question the patient relative to his dietary habits, you will find that he has plenty of inorganic phosphorus being ingested regularly (Robert Cass, Ph.D.)

A gallbladder surgeon reports…a surgeon in Southern California who uses Phos Drops and GB Plus together to dissolve gallstones has been 60% successful at decreasing the need for gallbladder surgery. Note that GB Plus is known to thin biliary viscosity and decongest the gallbladder and liver.

Complaints of nausea…a doctor reports that he mainly uses this product when a patient complains of nausea (Robert Thiel, Ph.D. N.D.).

**Rule of thumb**…if a patient shows symptoms of phosphorus deficiency (excess calcium deposits, kidney stones, tarter on the teeth, osteoarthritis), Phos Drops will help him. If he has osteoporosis, he would benefit from Re-Cal-B. Once balance is achieved he then can begin using a calcium/phosphorus product such as Core Level Calcium for continued stasis (Robert Cass, Ph.D.).

Another doctor reports…Phos Drops is great for spurs and calcium imbalances!

Before a liver flush…Another doctor reports that he uses Phos-drops in any type of arthritic stiffness and also before he does a liver flush on a patient. It will help to soften the stones.

Another doctor reports…A patient suffered from multiple kidney stones for months. He had been treated for prostatitis, but after they diagnosed stones, the doctor recommended hospitalization and stent replacement. I sent him Lyso Lyph Forte, Magnesium Chelate, Calc-acid, Phos Drops and KB Plus. Within a few days he passed his stones, which had been giving him nagging back pain and difficulty in urination. He is ecstatic to say the least! (Ben Markham, D.C. Phoenix, AZ).

**Suggested Dosage:** 10 drops 3 times daily in water

**Size:** 60cc liquid

**Price:** € 16,50

**Vegetarian:** Yes

**Contraindications:** Do not apply undiluted. Caution in pregnancy and with children. Phos Drops is contraindicated in cases of hyperthyroidism as the ortho-phosphoric acid may increase the metabolic rate. Do not give if pulse rate is greater than 90.
PINEAL-LYPH

**Ingredients:** Pineal and Whole Pituitary Each Tablet Supplies: Tissue Concentrates (not extracts) of Bovine source from Pineal 9mg, Whole Pituitary 19mg, Calf Bone 200mg, Parotid 1mg, Vitamin F 10mg.

**Supportive Function:** The pineal gland secretes melatonin (based on circadian rhythms) and a hormone, which acts on the adrenals to produce aldosterone. The pineal gland has been called “the window to the soul”. Frequent computer users often choose this supplement to support maintenance of rhythms that are exposed to electric magnetic fields.

**When is pineal glandular helpful?** Seasonal effective disorder, computer workers, cyclical female problems, night workers, coordination difficulties, sleep problems, difficulty waking in the morning

**Clinical Applications/Research: Pineal gland:** The pineal gland has been referred to as the “seat of the soul”. In all ancient texts it is referred to as the crossover point between the invisible and the visible, often being called the seat of being and the point of connection for the “silver cord”. It has also been described as focusing the spirit of love.

**Testimonials/Nutrient Tidbits: Tidbit…**Instead of using melatonin (a hormone), try stimulating the gland that produces it naturally – the pineal gland.

**A doctor reports…**My patient travels internationally frequently. She takes one pineal lyph at dinner and one at bedtime the day before she leaves on her trip. She repeats the protocol the day she arrives, and then again when she departs, and again the day after she arrives home. She doesn’t suffer from jet lag when she follows this protocol – (Dr. Dahlhauser, D.C. Aurora, CO).

**Computer people…**I check this product on all my computer people because invariably they need pineal support. The EMF’s from the computer will mess up the pineal gland!

**SAD and Insomnia:** Many doctors report that Pineal-lyph is an effective supplement when treating patients with SAD, and also for insomnia.

**Suggested Dosage:** 1-2 tablets daily or as directed

**Size:** 40 tablets

**Price:** € 30,70

**Vegetarian:** No

**Contraindications:** Pituitary concentrates are contraindicated in cancer.
**PRE/POST NATAL MINERALS**

**Ingredients:** Two Tablets Supplies: Calcium (as carbonate/citrate/microcrystalline hydroxyapatite/chelate) 200.3mg, Magnesium (as citrate/chelate) 100mg Zinc (as chelate) 8.34mg, Selenium (as chelate) 13.2mcg, Potassium (as chelate) 16.6mg, Manganese (as chelate) 1.66mg, Molybdenum (as chelate) 5mcg, Iron (as peptonate) 20mg, Chromium (as chelate) 16.8mcg, Betaine HCL 3.34mg.

**Supportive Function:** Pre/Post Natal Minerals provide comprehensive mineral support for the pregnant mother before, during and after pregnancy.

**When are the prenatal formulas helpful?** Before pregnancy to prepare the body for implantation, during pregnancy and after for rebuilding. Pre/Post Natal Minerals should be taken in combination with Pre/Post Natal Vitamins.

**Suggested Dosage:** 2 tablets daily of the pre-natal vitamins and 6 tablets daily of the pre-natal minerals or as directed

**Size:** 180 tablets

**Price:** € 24,70

**Vegetarian:** No

**Contraindications:** Iron is contraindicated in iron overload disease.
PRE/POST NATAL VITAMINS

**Ingredients:** Each Tablet Supplies: Vitamin B-1 (thiamine Hcl) 7.5mg, Vitamin B-2 (riboflavin) 5mg, Vitamin B-6 (pyroxidine) 5mg, Vitamin B-12 10mcg, Biotin 100mcg, Folic Acid 400 mcg, Pantothenic Acid 7.5mg, Vitamin A (natural fish liver oil) 500iu, Vitamin E (as natural succinate) 50iu, Vitamin C 150mg, Vitamin D 200iu, Iodine (as kelp) 75mcg, Also Contains: Beta Carotene 1500 units, Pyrodoxal-5-Phosphate 2.5mg, Riboflavin-5-Phosphate 2.5mg, Choline 37.5mg, Inositol 37.5mg, Lemon Bioflavonoids 37.5mg, Niacinamide 7.5mg, Lactobacillus Acidophilus 2 million units, Lactobacillus Bulgaricus 2 million units, Lactobacillus Bifidus 2 million units, Black Currant Seed Oil 5mg, Cod Liver Oil 7.5mg, Flaxseed Meal 26.5mg, Lactase 7.5mg, Hydrolyzed Protein 250mg, Lipoic Acid 500mcg, Betaine HCL 5mg, Pepsin 5mg, Oxbile 5mg, Lutein 500mcg, Lycopene 500mcg, Red Raspberry (leaf) 7.5mg, Dandelion (leaf) 7.5mg.

**Supportive Function:** Pre-natal vitamins provide comprehensive vitamin support for the pregnant mother before, during and after pregnancy; includes folic acid, red raspberry, antioxidant and probiotic support.

**When are the prenatal formulas helpful?** Before pregnancy to prepare the body for implantation, during pregnancy and after for rebuilding. Pre/Post Natal Vitamins should be taken in combination with Pre/Post Natal Minerals.

**Suggested Dosage:** 2 tablets daily of the pre-natal vitamins and 6 tablets daily of the pre-natal minerals or as directed

**Size:** 60 tablets

**Price:** € 24.70

**Vegetarian:** No

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease. Vitamin E does not involve contraindications at amounts up to 400 IU/day. Since vitamin E is an anticoagulant, amounts of vitamin E (400 IU or greater) can potentate blood-thinning drugs such as coumadin and should not be used concurrently. Large doses of vitamin E are contraindicated in hypertension (however, large doses of vitamin E are not used in this formula). Hyperparathyroidism or sarcoidosis patients should avoid vitamin D supplementation; however, many people are deficient in vitamin D. Hypercalciuria and hypocalcaemia are usually not seen unless the daily dose exceeds 2400 IU.
**PRO-INFLA-ZYME**

**Ingredients:** Each Capsule Contains: Vitamin C 65mg, Protease 50,000HUT, Bromelaine 384,000 FCCPU, Protease 6.42 SAPU, Cellulase 100 CU, Bladderwrack Algae 75mg, Turmeric (rhizome) Extract 60mg, Astragalus (root) 50mg, Horsetail (herb) 50mg, Citrus Bioflavonoids 40mg, Rosemary (standardized) (herb) Extract 10mg.

**Supportive Function:** Highly potent formula of specially prepared enzymes for support of processes that clear inflammatory debris from the body.

**When are proteolytic enzymes helpful?** Any site of inflammation, trauma, surgery, swelling, redness, acute arthritis pain, ovarian cysts, sinus infections, ruptured/bulging discs, etc.

**Clinical Applications/Research:**

**Proteolytic enzymes:** As mentioned above, proteolytic enzymes are released from the neutrophils to clear toxic debris. During inflammation, toxic protein-containing material is released which can foster disease unless it is removed. Neutrophils release proteolytic enzymes when they arrive at the scene, to break apart this material and prevent infection. This, “clean up process” helps rid the tissue of substances that prolong inflammation.

**Proteases:** Proteases play a powerful role in the inflammatory cascade. Proteases will inhibit inflammation without immune suppression and reduce pain and edema. Proteases will also improve blood circulation and supply, therefore preventing the mutation of the tissue. They will also aid in rapid wound healing and reduce scar formation.

**Bromelaine:** The journal Medicine and Science in Sports and Exercise (1992; 24(l): 20-25) reports a study on bromelain, one of the proteolytic enzymes that has therapeutic effects in the treatment of inflammation and soft tissue injuries. Following injury, bromelain significantly increased the maximum muscle force in the treated group, indicating that bromelaine can be helpful for a quick recovery from injury. The Merck index lists it as an excellent anti-inflammatory enzyme (Merck Index, 11th ed. 1989. Merck & Co. Inc., Rahway, NJ, p. 1382). Bromelaine therapy has become quite popular for use in rheumatoid arthritis to decrease joint inflammation. The smooth muscle relaxant properties of bromelaine contribute to the documentation for relieving menstrual cramps.

**Vitamin C and Bioflavonoids:** Beneficial nutrients to aid in the inflammatory response.

**Turmeric:** A powerful anti-inflammatory herb.

**Testimonials/Nutrient Tidbits:**

**Injury:** A Practitioner reports… one of the Broncos (Denver football team) had an egg on his meniscus that had been there 2 months. I lasered it and used Pro-Infla-Zyme and it went away. (Steve Hamilton, Littleton, CO).

A distributor reports … My son Grant had an accident and ended up with an ungodly black eye and the blood vessels in his eyes were so badly broken that it looked like his eye was actually bleeding. We gave him Pro-Infla-Zyme and it actually cleared up completely in two days. This stuff is amazing! (Nutri-West South)

**Injury again:** Our daughter dropped a large drum of raw material on her foot. The toes and nails were black and we thought she would lose the nails. We put her on high dose Pro-Infla-Zyme between meals and within two days her toes looked normal. (Marcia White)

**Blood clots…** I use Pro-Infla-Zyme in all cases of blood clots with excellent results (Jason Campbell, D.C.)

Another doctor reports: “Currently, after taking the supplements (Pro-Cortisol Balance and Liga-PN), I’ve been running 3-4 times per week and I’m up to 1 and ½ miles with minimal discomfort of the foot. The Pro-Infla-Zyme is also very helpful in preventing post workout pain” - (Terry Wiley, D.C. Alamosa, CO.)

A customer reports: I’ve been taking Pro Infla-Zyme for inflammation and noticed that my allergies are much better! (Maria Long NT CO Springs)
**Suggested Dosage:** Initial Injury: 2-8 capsules 3-5 times per day (or one per hour during time you are awake).

Continue supplementation a minimum of 14 days post injury at 1-2 capsules 3 X per day. Take supplements between meals.

**Size:** 60 capsules

**Price:** € 42.80

**Vegetarian:** Yes

**Contraindications:** Do not take in pregnancy.
**PROSTATE SUPPORT**

**Ingredients:** Vitamin C 10mg, Vitamin B-6 10mg, Vitamin E (Succinate) 5i.u, Zinc Chelate 10mg, L-Glycine 120mg, L-Alanine 120mg, L-Glutamic Acid 120mg, Saw Palmetto 106mg, Pygeum Africanus Extract 10mg, Pygeum Africanus Herb 20mg, Pumpkin Seed 200mg, Stinging Nettle Leaves 75mg, Echinacea 25mg, Ginkgo Biloba 20mg, Wild Yam 20mg, Uva Ursi 10mg.

**Supportive Function:** The well-referenced herbals, saw palmetto and pygeum Africanus, associated with male prostate support, are mixed with other synergistic nutrients to comprise a great support product for this gland.

**When is prostate support helpful?** Benign prostatic hyperplasia (BPH), (improvements with nutritional support have been noted in prostate volume, urinary frequency and peak urinary flow rates), prostate disorders, cystitis, epididymitis, stimulates bladder, prostate, testicles, ovaries and uterus, stimulates mucous membranes (respiratory and genitourinary), male infertility, impotence, prostatitis, aphrodisiac, diuretic, sedative, dysentery, androgen excess in women, and polycystic ovarian disease.

**Clinical Applications/Research:**

**Saw Palmetto:** Saw palmetto is a small palm tree native to the West Indies and the North American Atlantic coast. The most common therapeutic use for saw palmetto is for benign prostatic hyperplasia (BPH), or enlargement of the prostate. Saw palmetto inhibits an enzyme that prevents testosterone from being converted to a more potent hormone, dihydrotestosterone, implicated in the cause of BPH.

**Pygeum Africanum:** Pygeum africanum targets mostly the prostate, having beneficial effects on benign prostatic hyperplasia (BPH) specifically, and has been shown to enhance prostate and bulbourethral gland secretions, in quantity and quality. Components of pygeum africanum also have anti-inflammatory activity. The fatty acid components are similar to that of saw palmetto, and may explain why it also has a beneficial effect on BPH. Pygeum extract shows clinical significance of improvement in the symptoms of BPH (such as nocturnal frequency, difficulty in micturition, and incomplete bladder emptying) (Ann Urol 1984; 18:193-195). Large doses of pygeum can result in gastrointestinal irritation in sensitive individuals.

**Pumpkin Seeds:** They are high in unsaturated fatty acids, vitamins and minerals (especially zinc), and have been used traditionally for urinary problems, nephritis, as a diuretic, an anti-inflammatory, and have proven useful in the early stages of prostate problems (Chevallier A. The Encyclopedia of Medicinal Plants. Dorling Kindersley Ltd, London 1996).

**Wild Yam:** Wild yam contains phytosterols (plant steroids including precursors to progesterone and estrogen). These phytosterols are important in keeping the right hormonal balance for optimal health.

**Stinging Nettle:** Stinging nettle is used as a cleansing, nourishing spring tonic and has a high vitamin C content. It is a diuretic, astringent, and circulatory stimulant. The aerial parts of the plant clear uric acid to relieve gout and arthritis. It contains histamine and formic acid, which can cause an allergic response in sensitive people.

**Uva Ursi:** Uva ursi's purported properties include that of anesthetic, anticarcinogenic, antibiotic, antiseptic, diuretic, and urinary disinfectant, and it is used in cases involving weakened liver, kidneys, and other glands (Mowry D. Scientific Validation of Herbal Medicine Keats Publ. New Canaan, Conn. 1986).

**Echinacea:** Echinacea has demonstrated superb ability to fight foreign invaders and boost the immune system. It provides excellent protection from bacterial, viral, and microbial attack, to which the genitourinary system is particularly susceptible.

**Ginkgo Biloba:** Ginkgo Biloba is well known for its ability to increase microcirculation, or the circulation of blood near the small vessels and one-celled capillaries of tissue nutrient exchange. This makes it especially helpful for the blood circulation of the sexual organs.

**Other Nutrients:** Vitamin C, Vitamin E, Vitamin B-6, and Zinc are accessory nutrients, which help support and build healthy prostate tissue and protect cells from oxidative damage. Zinc has long been associated with support of the male sexual organs.
Testimonials/Nutrient Tidbits: A doctor reports . . . Works excellent; many times I will combine it with Prosta Plus for added support.

Suggested Dosage: 1-2 tablets 3 times daily or as directed

Size: 60 tablets

Price: € 25,40

Vegetarian: Yes

Contraindications: Do not take during pregnancy. Echinacea contains sugars in its cell membrane, which the body can build resistance to. Some believe that the immune system should not be constantly stimulated, and recommend not taking continuously (i.e. 8 weeks on, 1 week off). Ginkgo in large quantities is contraindicated with anticoagulant drugs (only a small amount is used in this synergistic formula). Monitor PSA levels regularly.
QUERCETIN-S

**Ingredients:** Quercetin 200mg

**Supportive Function:** Quercetin is a powerful antioxidant; its popularity is reflected by the fact that it has even been named, "the most important flavonoid" (Nutr. Cancer 1993, 20:21-9).

**When is Quercetin helpful?** Allergies (both environmental and food), asthma, bursitis, arthritis, colds and flu’s, infection, immune deficiency, varicose veins, colitis, hemorrhoids, heel and bone spurs, bleeding gums, miscarriages, bleeding ulcers, easy bruising, nosebleeds and eye problems.

**Clinical Applications/Research: Quercetin:** Quercetin, called, "the most important flavonoid" by Nutrition in Cancer, is a powerful antioxidant which has demonstrated anticarcinogenic properties (Nutr. Cancer 1993, 20:21-9). Being a potent bioflavonoid, quercetin is used in inflammatory and allergic problems. It is effective because it stabilizes cell membranes, decreases the release of inflammation mediators, and decreases the contraction of smooth muscle (Murray M. Enc of Nat Med. Prima Publ., Rocklin, CA. 1991. p.298). Bioflavonoids also improve capillary integrity (Merck Index, 11th ed. 1989. Merck and Co. Inc. Rahway, N.J. p. 1243), and stabilize the collagen matrix by preventing free radical damage. Quercetin regulates the permeability of the capillaries and prevents the rupture of the capillaries that causes bruising. Quercetin is also known as an antiviral. Bioflavonoids have demonstrated a positive, protective effect on human viruses (J. Med. Virol. 15:71-79).

**Testimonials/Nutrient Tidbits:** A practitioner reports…“Quercetin helped calm down an allergic reaction to something I ate” (Debra Novotny, Ac. Lakewood, CO.).

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 27,00

**Vegetarian:** Yes

**Contraindications:** None known.
**RE-CAL-B**

**Ingredients:** Boron (Special Organic Complex) 1mg, Magnesium (from 400mg of magnesium chelate) 80mg, Calcium (from 813mg calcium chelate/aspartate/Gluconate/hydroxyapatite/veal bone/citrate) 255.6mg, Vitamin C 25mg, Vitamin D-3 50i.u, L-Glutamic Acid HCL 25mg, Betaine HCL 10mg, Ammonium Chloride 10mg, Parathyroid 2mg, Horse Tail Rush (shave grass) (plant) 25mg, Calcium Fluoride (cell salt), Safflower (flower) Herb 25mg.

**Supportive Function:** A special hydroxyapatite formula provides super bone support with calcium, magnesium, and other important nutrients (including the herb horsetail, traditionally used to maintain bone health); organically complexed with boron.

*When is bone support helpful?* Osteoporosis (or prevention) bone trauma, and daily calcium requirements.

**Clinical Applications/Research: Calcium:** Calcium is critical to normal bone function, and supplementation has been beneficial in preventing bone loss. “The current RDA of calcium for older adults (800 mg) is controversial, and it has been suggested that 1500 mg/day is required for adequate calcium balance” (Gastroenterology Clinics of North America 1990; 19(2): p.484). A National Institutes of Health panel reported that ½ of all Americans consume too little calcium (NIH Committee, Nutrition Week 22:7, June 10, 1994). Hydroxyapatite, veal bone, and red bone marrow are all excellent natural sources of both calcium and magnesium with other trace minerals.

**Magnesium:** Magnesium increases the solubility and retention of calcium. Many people feel that magnesium has not gotten enough attention in light of the focus on calcium for prevention of bone loss, however magnesium is just as important, if not more important, than calcium. Magnesium slows bone loss and strengthens muscles (Wright, Jonathan V. M.D. Healing with Nutrition. 1990. Keats Publishing, Inc. New Canaan, Conn. p. 205). Clinical trials showing supplementation of at least as much magnesium with calcium has proven dramatic results in reduction for risk of osteoporosis.

**Boron:** Boron is a, “dynamic ultra trace element that affects major mineral metabolism in higher animals. Boron naturally elevates estradiol levels, and decreases urinary excretion of calcium and magnesium, both of which decrease risk for osteoporosis. Osteoarthritis patients have shown improvement when supplemented with boron (Giller, R., M.D., and Matthews, K., Natural Prescriptions, Ballantine Books, NY, p. 245). A possible mechanism is via the parathyroid gland, which contains more boron than any other tissue. Boron enhances parathyroid hormone activity, and the parathyroid gland is the primary organ controlling mineralization of bone (Burton Goldberg Group, Alternative Medicine: The Definitive Guide, Future Medicine Publishing, Inc. WA, 533).

**Vitamin D:** Vitamin D increases the absorption of calcium from the intestines, and regulates the blood level of calcium. Parathyroid hormone works to regulate blood levels of calcium, mostly by its effect on vitamin D. Vitamin D occurs naturally in cod liver oil, but not in many dietary sources. Trace amounts are found in eggs. Some conversion to vitamin D takes place with exposure to sunlight.

**Vitamin C and HCL:** Vitamin C and hydrochloric acid (HCL) increase absorption of calcium from the intestines. An acid environment solubilizes and ionizes the insoluble calcium salts in the body (calcium has to be ionized in the intestines in order to be absorbed).

**Horsetail Rush:** Horsetail rush (shave grass) is highly absorbable and is utilized to promote bone growth and collagen formation. Horsetail’s silica content makes it useful in sitz baths, which aid in treating peripheral vascular disorders and post-thrombotic swelling, as well as treating ligaments and tendons after ankle sprains and fractures (Weiner, M.A. Herbs that heal. 1994. Quantum Books, Mill Valley, Ca. p. 197).

**Testimonials/Nutrient Tidbits:** A doctor reports . . . I have had great results with Re-Cal-B. I have had 3-4 patients who have had a bone density test and showed osteoporotic on the test. After taking Re-Cal-B for 6 months (4-6 per day), their bone density tests was back to normal or much better. (A. Hare, D.C.)

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 120 tablets

**Price:** € 28,60

**Vegetarian:** Yes

**Contraindications:** Not recommended for children. Boron may raise estrogen levels which can be irritating in pre-menopausal females, which is not normally a problem. If that is the case, switch to Cal/Mag 1:1.
**RUTIN PLUS**

**Ingredients:** Rutin, Bioflavonoids, Vitamin C  Each Tablet Supplies: Vitamin C 100mg, Lemon Bioflavonoids 75mg, Rutin 60mg, Hesperidin Complex 5mg, Rose Hips 10mg, Alfalfa 30mg, Witch Hazel 10mg, Acerola 10mg, Freeze Dried Carrot 10mg, Calcium 100mg, Phosphorous 50mg, Hydrolyzed Protein 10mg.

**Supportive Function:** Rutin Plus is an amazing combination of bioflavonoids, providing the best that nature offers in phytochemically active plant constituents. Bioflavonoids were first discovered in the white rind of citrus fruits. Also known as “vitamin P” (for permeability factors), bioflavonoids have a beneficial effect on building capillary strength. Bioflavonoids are water-soluble plant pigments that give the bright color to fruits and vegetables. Bioflavonoids include such things as flavones, flavonones, flavonols, anthocyanidins and proanthocyanidins.

**When is Rutin helpful?** Increases capillary integrity, especially for easy bruising, bleeding gums, bleeding ulcers, hemorrhoids, varicose veins and nosebleeds, high blood pressure, spontaneous abortions, repeated miscarriages, heavy menstrual flow, colds and flu’s

**Clinical Applications/Research:**

**Vitamin C:** Works synergistically with bioflavonoids.

**Bioflavonoids, Rutin and Hesperidin:** Bioflavonoids have been shown to have anti-inflammatory, anti-allergic, antiviral and anticarcinogenic properties. They are also powerful antioxidants. Bioflavonoids include rutin from buckwheat, Hesperidin from citrus fruits and quercetin from garlic and onions. Rutin and Hesperidin also have beneficial effects on capillary permeability and blood flow. Quercetin has been shown to have anti-tumor activity.

**Rose Hips:** Natural source of vitamin C.

**Alfalfa:** Alfalfa is an infection fighter; the high chlorophyll content in alfalfa was used by doctors in the 1940's for treating infections from surgical incisions, bedsores and inner ear problems (Heinerman, J. Heinerman’s Encyclopedia of Fruits, Vegetables and Herbs. 1988; Parker Publishing, West Nyack, NY. p. 2).

**Witch Hazel:** Witch hazel has been known for centuries to be helpful in hemorrhoids.

**Carrot:** Carrots have also been used to “benefit the lungs, strengthen the spleen and pancreas, improve liver function, stimulate the elimination of wastes, act as diuretic, dissolve accumulations such as stones and tumors, treat indigestion including excess stomach acid and heartburn, eliminate putrefactive bacteria in the intestines that cause poor assimilation and provide relief in diarrhea and chronic dysentery.” (Pitchford, P., Healing with Whole Foods, North Atlantic books, Berkeley, CA, 1993, pg. 498.) Carrots are powerful antioxidants that are important in many illnesses, including cancer. The carotenoids found in carrots have been linked to lung cancer prevention.

**Testimonials/Nutrient Tidbits:**

**Nosebleeds:**  A doctor reports . . . Rutin Plus will almost always take care of this one. It is great support for varicose veins and bruises also.

**Bruising and hemorrhoids** . . . Many doctors report that this formula really helped in patients who bruised easily. Remember to always check liver function in your hemorrhoid patients!

**Miscarriages** . . . Sometimes what’s needed to support the collagen of weak capillaries is bioflavonoids.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 120 tablets

**Price:** € 19,75

**Vegetarian:** Yes

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease. Alfalfa contains L-canavanine, which is suspected of causing some allergic reactions in susceptible people.
**Ingredients:** Vitamin C (Sago Palm) 500mg, Rutin 15mg, Lemon Bioflavonoids 15mg, Hesperidin Complex 15mg, Lypholized Tissue Concentrates (not extracts) of Bovine Source from Lymph, Thymus, Spleen and 5X Propolis 2mg.

**Supportive Function:** Sago-C-500 is a powerful mixture featuring corn-free, Sago Palm Vitamin C teaming up with rich bioflavonoids and glandular support to help maintain a solid immune barrier.

**When is vitamin C helpful?** Common cold, respiratory infections, flu, antioxidant function, immune enhancement, adrenal and thyroid support, viral infections, inflammation, asthma, post-surgical support, substance addiction, heavy metal toxicities, diabetes, eye problems (antioxidant effect), heart disease, and fatigue.

**Clinical Applications/Research:** Immune system: Given the many varied functions of vitamin C in the body, it is no surprise that it is essential to the immune system. It has been suggested that larger doses than the RDA may be useful in preventing the formation of carcinogenic substances and in boosting immunity (Gastroenterology Clinics of North America 1990; 19(2): p.483). Consumption of vitamin C has been inversely related to incidences of cancer in epidemiological studies (Kromhout D. Essential micronutrients in relation to carcinogenesis. Am J Clin Nutr 1987; 45:1361-7). According to a report in Allergy and Imm. (Feb. 1993), vitamin C has a "special influence" on enhancing the immune response and warding off infection. Several studies of groups taking vitamin C show that it reduces the longevity and severity of colds (Brit. J. Nutr. 67:3-16). One group, taking 600 mg supplements, had upper respiratory tract infections reduced by 50% (Amer. J. Clin. Nutr. 57:170-74). Extra addition of vitamin C seems to boost the immune system by increasing cellular immune functions and stimulating neutrophils (immune-fighting cells). Patients receiving 1 gram of vitamin C daily had improved neutrophil activity, resulting in a dramatic reduction of infectious attacks (Anderson, R. Int J Vitam Nutr Res. Suppl. 23:23-34, 1982; Patrone, R, Dallegra, F, Bonvivi, E, et al. Acta Vitaminol Enzymol. 4:163-68, 1982). Most importantly, vitamin C treated groups don't feel as bad while they are sick. When this means less sick days and less interference with our daily lives, vitamin C can help keep production levels up.

Asthma and Aging: Vitamin C is a potent antioxidant which guards against the oxidant stress involved in the cause and progression of asthma (Hatch GE Am J of Clin Nutr 1995; 61(suppl): p. 628S). A UCLA researcher, James Enstrom, says that 300-mg of vitamin C a day (half from supplements) will extend the life of men 5 or 6 years longer than those getting only 25 mg. Enstrom claims that the same amount will add two years to a woman's life (Fort Collins Coloradoan USA Weekend, Sept 30, 1994 p. 10).

Heart disease: The presence of hypercholesterolemia, hypertension, and atherosclerosis is more frequent in humans with a low intake of vitamin C. Optimum intake of ascorbic acid to prevent these disorders ... “probably exceeds tenfold the doses officially recommended and is in the range of some hundred milligrams of ascorbic acid (vitamin C) per day” (Miquel & Quintaniilha The CRC Handbook of Free Radicals and Antioxidants in Biomedicine 1989; CRC Press, Boca Raton, Fla. p. 194). Studies show that administration of gram doses of vitamin C lead to a large decrease in circulating triglycerides (Sokoloff, B, Hor, M, Saelh, CC et al. J Am Geriatr Soc. 14:1239-60, 1966; Ginter, E, N Engl J Med. 294:559-60, 1976. Gooley, KL, Diamond, LH. Ann Intern Med. 93:511, 1980). Vitamin C's antioxidant function prevents the oxidation of LDL (the bad cholesterol), which has been shown to be instrumental in heart disease. One puff on a cigarette can deplete the plasma vitamin C content by as much as 50%. This is why the RDA for vitamin C intake for smokers is six times that for non-smokers (Efstratopoulos AD & Voyaki SM J of Hypertension 1993 11(suppl 5): S112-113).

Clinical trials are now showing that vitamin C can lower blood pressure. When Trout et al. supplemented 12 borderline hypertensives with 1 gram of vitamin C for six weeks, they demonstrated a significant reduction in blood pressure. (Trout, D.L. 1991. American Journal of Clinical Nutrition, 53:322S-25S).

**Testimonials/Nutrient Tidbits:** Tidbit...this is an excellent combination of immune nutrients. Antibacterial propolis and thymus glandular add to the power of the formula. One every hour (in addition to ISB) is a standard protocol for fighting the onset of a cold.
Unusual reports…Doctors have reported that chronic elbow pain or knee pain that had undergone repeated chiropractic adjustments with no improvement, may respond to Sago-C 500. The pain may be coming from an undetected infection residing in the joint.

A bacterial problem…works great for acute or chronic bacterial problems. This is the vitamin C product that is used much more for therapeutic results, rather than a prophylactic.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 20,80

**Vegetarian:** No

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease.
SINO-LUNG FORMULA

**Ingredients:** Lung 35mg, Thymus 35mg, Spleen 35mg, Vitamin C 75mg, Beta Carotene 12,600 units, Lemon Bioflavonoids 125mg, Rutin 20mg, Hesperidin Complex 75mg, N-Acetyl Cysteine 35mg, Propolis 20mg, Cranberry 36mg, Echinacea 30mg, Goldenseal 35mg, Elderberry 10mg, Scullcap 35mg

**Supportive Function:** Sino-Lung-Formula is a revolutionary mixture of ingredients that optimizes natural defenses by including glandular immune support, strong-acting propolis, healthful herbs, N-acetyl cysteine to maintain cell protection, along with synergistic nutrients and antioxidants to facilitate the maintenance of a healthy respiratory tract.

**When is sinus support helpful?** Sinus infection, nasal congestion, asthma, and respiratory conditions.

**Clinical Applications/Research:**

**Vitamin C:** Vitamin C is the most abundant antioxidant in the extra cellular fluid lining of the lungs. Low vitamin C intake has been correlated with pulmonary dysfunction (National Health and Nutrition Examination Survey), asthmatics have lower than normal serum levels of vitamin C (Aderele WR et al., Afr J Med Sci 1985; 14:115-20), and supplementation with vitamin C seems to help. It has been noted that symptoms of ongoing asthma in adults appear to be increased by exposure to environmental oxidants and decreased by vitamin C supplementation. Seven clinical trials showed an improvement in respiratory measurements as a result of supplementation with 1-2 grams of vitamin C.

**Bioflavonoids:** Bioflavonoids are found in nature with vitamin C, and they boost the therapeutic effect of vitamin C, helping to build strong connective tissue, and create a protective barrier to infection.

**Beta-carotene:** Beta-carotene is a potent antioxidant, which works in areas of low oxygen tension, making it especially important at the cellular level of the lungs, where deoxygenated blood reaches the lungs and accepts fresh oxygen.

**N-acetyl-cysteine:** N-acetyl-cysteine (NAC) has a unique cell-protecting ability, potent antioxidant activity, is a precursor for extra cellular connective tissue, and is a precursor for glutathione, another important antioxidant found in the extra cellular fluid lining of the lungs.

**Propolis:** Propolis is a substance made by bees, which is sometimes called, “bee glue,” which is highly antibacterial and anti-inflammatory. It is very effective in counteracting lung inflammations.

**Cranberry and Elderberry:** Cranberry and elderberry have phytochemicals called proanthocyanidins, which are potent phytochemicals that prevent the release and synthesis of compounds that promote inflammation, such as histamine, serine proteases, prostaglandins and leukotrienes (Trends Pharm Sci.1984; 5:335-8). Additionally, cranberry has the ability to reduce adhesion of bacteria and microbes to mucous linings, such as those in the respiratory system. Elderberry reduces phlegm, acts as an anti-inflammatory and expectorant, and is useful for upper respiratory tract mucous, especially associated with colds and hay fever (Ody, P. The Complete Medicinal Herbal. 1993. Dorling Kindersley Ltd, London.).

**Goldenseal:** Goldenseal is antibacterial, antimicrobial, reduces phlegm, and heals mucous membranes.

**Scullcap:** Scullcap is a calming, relaxing antispasmodic herb. It was found to have an effect on stabilizing blood pressure, probably by relaxing the blood vessels (Farmakologija I Toxikologija 1958; 21:31-34), and is thought to work by a similar mechanism in the respiratory system.

**Glandulars:** Glandulars are thought to provide precursor substances that the body can use to support and enhance the function of a specific gland. They may provide the potential “life force” the body needs to enhance function of a specific organ or gland. Glandulars are tissue concentrates, usually of a bovine source, which stimulate the glands they respond to, such as the lungs and thymus gland. They provide integral amino acid sequencing and signaling substances to enhance their respective organs. Glandular therapy began in the late 19th century when doctors suggested to their patients that eating the glandular parts from a cow that correspond to the weaknesses in their own bodies may help them to heal. The Egyptians and Greeks used glandular therapy many years ago because they believed in the concept that “like heals like” (Haas, E. MD. Staying Healthy with Nutrition. 1992; Celestial Arts, Berkeley, Ca. p. 283). In the late 1800s, desiccated thyroid glandular was used for patients with hypothyroidism or goiter, but was replaced once the thyroid hormone thyroxin (T4) was isolated. Many doctors...
felt that the whole glandular was superior, due to better utilization, absorption, and synergistic action. Dr. A. Kemet investigated whether or not oral glandulars were organ specific. Using radioactive isotope tracings, he found that glandular tissues were absorbed in the blood and deposited in the corresponding organs. He documented his findings in German medical publications of 1958 and 1972 (Balch, J.F., M.D. and Balch, P.A., C.N.C. Prescription for Nutritional Healing. 1990. Avery Publishing, Garden City Park, NY. p. 326).

**Testimonials/Nutrient Tidbits: Sinus problems**…many doctors report that this product works great for people with sinus problems. Some doctors use it in combination with China-West #2 Sino Formula for added support. It will give support for both the sinus and the throat.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 26.70

**Vegetarian:** No

**Contraindications:** Contraindicated in pregnancy. Echinacea contains sugars in its cell membrane, which the body can build resistance to. Some believe that the immune system should not be constantly stimulated, and recommend not taking continuously (i.e. 8 weeks on, 1 week off).
SPLEENO-LYPH

**Ingredients:** Spleen Concentrate  Each Tablet Supplies: Tissue Concentrates (not extracts) of Bovine Source from Spleen 250mg, Parotid 1mg.

**Supportive Function:** Lymph is one of the main ways in which the body detoxes poisons that can pose a threat to the immune system. The spleen is the major lymph organ, and Spleeno-lyph offers glandular support for this important tissue.

**When is spleen support helpful?** Lowered immune function, infections, fatigue, hypocalcaemia, hypoparathyroidism

**Clinical Applications/Research:** The spleen has many functions in the body. It disposes of red blood cells, manufactures leukocytes, increases immune factors, and provides resistance to infection assists in iron metabolism and monitors intestinal peristalsis to some extent.

**Testimonials/Nutrient Tidbits:** This is an interesting note from Dr. Robert Cass, Ph.D., written over a decade ago... Apart from the obvious factors mentioned above, new information is coming out regarding the role that the spleen plays in hypocalcaemia, emulating parathyroid function. In one study, the removal of the spleen from several dogs was followed very quickly with hypocalcaemia. When a raw spleen concentrate was fed to the dogs the low calcium index was promptly raised to normal. The Journal of the AMA in September 1930 stated, “From the studies here discussed it appears that the spleen is likewise concerned in calcium metabolism. Furthermore, it appears that the results might even be interpreted to mean, that in the absence of the parathyroid glands the spleen can take over their function in preventing tetany. These intricate relationships between organ systems illustrate the ends to which the organism as a whole will go in order to preserve the vital equilibrium: furthermore they indicate, in some measure the inherent difficulties in outlining effective therapy.” (This is an interesting thought!)

Another doctor reports... I use this product whenever I have a secondary or tertiary breakdown of the immune system (2-3 per day).

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 15,65

**Vegetarian:** No

**Contraindications:** None known.
ST. JOHN’S DEP

**Ingredients:** St. John's Wort Herb 400mg, Pyridoxal-5-Phosphate 5mg, Riboflavin-5-Phosphate 5mg, Folic Acid 100mcg, Vitamin B-1 10mg, Vitamin B-12 250mcg, Ginkgo Biloba Extract 5mg, Damiana Herb 25mg, Ginkgo Biloba Herb 30mg, Blue Vervain 25mg, Hyssop Herb 15mg, Eleuthero 10mg, Niacinamide 50mg, Calcium Citrate 100mg, Magnesium Citrate 100mg

**Supportive Function:** Mood support

**When is St. John’s Wort helpful?** Depression, anxiety, antiviral, and provides fullness, or satiety, by influencing serotonin levels.

**Clinical Applications/Research: St. John’s Wort:** St. John’s Wort appears to be effective at relieving mild to moderate depression, without the side effects of Prozac or some of the other antidepressant drugs. Although St. John’s Wort is reported to be a natural, herbal alternative for some of the antidepressant drugs, it should be stressed that it is for mild to moderate depression, which should be diagnosed by a practitioner. Give St. John’s Wort for several weeks to see best results.

Although St. John’s Wort is thought to exhibit properties of a mild MAO inhibitor, its mechanisms of action have not been clearly defined. For this reason, the same contraindications for the MAO inhibitors do not apply to St. John’s Wort, although some people warn against them. These contraindications include avoidance of tyramine-containing foods, such as cheese and wine (Bratman, Stephen MD, Beat Depression with St. John’s Wort. Prima Publ., Rocklin, Ca. 1997, p.63). People on MAO inhibitors are inhibiting not only the breakdown of neurotransmitters, but also the breakdown of tyramine, which can leave toxic by-products of tyramine in the system. However, recent research has shown that MAO inhibition may not be the most likely mechanism by which St. John’s Wort is working, because doses taken orally are probably too low to inhibit monoamine oxidase (Bladt, S et al., 1994. Journal of Geriatric Psychiatry and Neurology 7 (suppl. 1), S34-S38), and that it is more likely that St. John’s Wort is acting as a Selective Serotonin Reuptake Inhibitor. It is known that even when the supposed active ingredient, hypericin, is removed, that there is still an antidepressant effect, indicating that (a) there is synergy among the different ingredients, and (b) we still don’t know what the exact mechanism of action really is.

**Eleuthero:** Eleuthero has been traditionally used for centuries as an adaptogen (balancer), which is a substance that regulates the homeostasis (balance) of tissue organ systems. Eleuthero stimulates and nourishes the adrenal glands, an important source of energy. When the adrenal glands are not functioning optimally, it can result in tiredness and lethargy. Eleuthero increases monoamine content in the brain and adrenals, and has, “consistently demonstrated an ability to increase the sense of well-being in a variety of psychological disturbances including depression, insomnia, hypochondriasis, and various neuroses” (Farnsworth NR et al., Econ Med Plant Res 1985; 1:156-215).

**Ginkgo Biloba:** The influence of ginkgo biloba on improving microcirculation (Fortschr Med 1990; 108 (29): 557-60; Arzneim. 1990 40(5): 589-93) has important implications for energy levels, and for delivery of nutrients to the liver/tissues via the blood. This may explain the positive effects of ginkgo biloba on depression, especially in cases of cerebrovascular insufficiency (DeFeudis FV. Ginkgo biloba extract (RGb 761). Pharmacological Activities and Clinical Applications. Paris, Elsevier, 1991; Werbach MR & Murray MT. Botanical Influences on Illness. Third Line Press, Tarzana, CA. 1994). It is also believed to influence nerve cell-to-nerve cell communication.

**Calcium and Magnesium:** Calcium and magnesium are both essential nutrients for muscles and nerves, not to mention numerous biochemical reactions for which they are co-factors. Intravenous magnesium therapy has been utilized in the past for an anti-anxiety effect (Hamilton K & Roberson K. Asthma. IT Services, Sacramento, CA. 1997, p. 23).

**B Vitamins:** A double-blind, placebo controlled trial was designed to evaluate the role of 10 mgs each of vitamins B1, B2, and B6 in 14 geriatric patients with depression, and the vitamins' ability to enhance tricyclic antidepressants (Journal of the American College of Nutrition, 1992; 11(2): 159-163). Those taking the vitamins had better B2 and B6 status, better enzyme activity, and showed trends towards greater improvement in scores on depression ratings and cognitive function. It was noted, even without supplementation of B12, that B12 levels increased in the group receiving vitamins B1, B2 and B6, and were reduced in the placebo treated subjects. “These
preliminary findings support the role of B complex vitamins acting synergistically among themselves in the
treatment of geriatric depression” (ibid). It was noted that folate and B12, in addition to vitamins B1, B2 and
B6, might also be of benefit.

Testimonials/Nutrient Tidbits: Many doctors report . . . Works well for depression! It is a great combination
of nutrients. The dose may vary or fluctuate for each patient and per day. Patients find that between 3-5 tablets
per day is necessary.

Suggested Dosage: 1 tablet 3 times daily or as directed

Size: 60 tablets

Price: € 25,40

Vegetarian: Yes

Contraindications: Do not take while taking mood-altering drugs. St. John's Wort is believed to act as an
SSRI, and cautions of it being a possible MAO inhibitor (avoid tyramine-containing foods, etc.) Have not been
substantiated. Hypericin, the concentrated extract, can cause sun sensitivity, however there is not as much
concern with the whole herb. Ginkgo in large quantities is contraindicated with anticoagulant drugs (only a
small amount is used in this synergistic formula). Eleuthero in large quantities is contraindicated in hypertension
(only a small amount is used in this synergistic formula). Use caution in pregnancy. None of the herbs in this
formula are directly contraindicated in pregnancy; however, it is a good idea to check with a licensed
professional when contemplating the use of herbs during pregnancy.
**T-LYPH**

**Ingredients:** Lyophilized Thyroid (Thyroxin Free) 130mg, Parotid 1mg

**Supportive Function:** The thyroid hormones regulate the metabolic rate, hence the energy level, of almost every cell in the body. Subclinical hypothyroidism can be responsible for a host of dysfunctional problems, especially with hair, skin, and energy. Calcitonin, another thyroid hormone, regulates blood calcium.

**When is thyroid glandular helpful?** Any indication of hypothyroidism; lethargy, constipation, headache, metabolic disorders, weight gain, dry skin and hair and osteoporosis.

**Clinical Applications/Research:** Thyroid glandulars: Glandulars are thought to provide precursor substances that the body can use to support and enhance the function of a specific gland. They may provide the potential “life force” the body needs to enhance function of a specific organ or gland. Glandulars are tissue concentrates, usually of a bovine source, which stimulate the glands they respond to, such as the thyroid gland. They provide integral amino acid sequencing and signaling substances to enhance their respective organs. Glandular therapy began in the late 19th century when doctors suggested to their patients that eating the glandular parts from a cow that correspond to the weaknesses in their own bodies may help them to heal. The Egyptians and Greeks used glandular therapy many years ago because they believed in the concept that “like heals like” (Haas, E. MD. Staying Healthy with Nutrition. 1992; Celestial Arts, Berkeley, Ca. p. 283). In the late 1800s, desiccated thyroid glandular was used for patients with hypothyroidism or goiter, but was replaced once the thyroid hormone thyroxin (T4) was isolated. Many doctors felt that the whole glandular was superior, due to better utilization, absorption, and synergistic action. Dr. A. Kemet investigated whether or not oral glandulars were organ specific. Using radioactive isotope tracings, he found that glandular tissues were absorbed in the blood and deposited in the corresponding organs. He documented his findings in German medical publications of 1958 and 1972 (Balch, J.F., M.D. and Balch, P.A., C.N.C. Prescription for Nutritional Healing. 1990. Avery Publishing, Garden City Park, NY. p. 326).

**Testimonials/Nutrient Tidbits:** A doctor reports... I had one patient who was having hair fall out in the tub. After taking T-lyph her hair grew back thick and curly.

**Suggested Dosage:** 1-2 tablets daily or as directed

**Size:** 90 tablets

**Price:** € 17,40

**Vegetarian:** No

**Contraindications:** None known.
TOTAL ALPHA LIPOIC ACID

**Ingredients:** Each tablet supplies: Alpha Lipoic Acid 100mg, B-1 5mg, Thiamine Pyrophosphate 2mg, B-2 5mg, Riboflavin 5 Phosphate 5mg, B-6 10mg, Pyridoxal 5 Phosphate 5mg, Niacin 5mg, Pantothenic Acid 5mg, Betaine HCl 20mg, Magnesium Citrate 10mg, Zinc Chelate 3mg, Molybdenum Chelate 25mcg, Selenium Chelate 5 mcg, Manganese Chelate 1mg.

**Supportive Function:** This formula provides comprehensive nutritional support for antioxidant protection, glucose balance/insulin sensitivity.

**When is Lipoic acid support helpful?** Support of diabetes, liver, pancreas, kidneys, eyes, capillaries, skin, infection, glucose tolerance, and insulin sensitivity

**Clinical Applications/Research:** Alpha Lipoic Acid enhances glucose conversion for cell protection, maintenance, and rebuilding. In diabetes, cells starve from unconverted glucose, resulting in diabetic complications to tissues and organs. Lipoic Acid protects against capillary damage and cataract formation. Lipoic Acid helps regenerate and recycle other antioxidants, especially C, E, and glutathione. It protects against arterial plaque and oxidative damage to LDL cholesterol. It helps neutralize toxins in alcohol and tobacco smoke, mobilize and detoxify heavy metals. Lipoic Acid protects liver from alcohol damage, enhances glucose disposal in adult onset, Type II diabetes, improves insulin sensitivity; and protects against diabetic complications of nerve damage. It has been shown to improve nerve blood flow, reduce oxidative stress, improve distal nerve conduction, and improve reduced levels of deficient glutathione and deficient E in the nerves of diabetics. Lipoic Acid prevents cataracts in animals by increasing levels of C, E, and glutathione in the lens. It binds with the DNA of some viruses and prevents replication. Viral causes are implicated in some cases of diabetes. Supplements have been shown to improve neuropathy and reduce nerve pain.

**B-1** works with B-2 and B-3 to release energy from glucose. Thiamine Pyrophosphate, the enzymatic form of B-1, is included because some people have difficulty-converting B-1 into its active enzymatic form.

**B-2** is needed to convert amino acids, fats, and carbohydrates into energy. Restricted diabetic diets frequently result in B-2 deficiencies. Riboflavin 5 Phosphate, the enzymatic form of B-2, is included because some people have difficulty-converting B-2 into its active enzymatic form.

**B-6** levels are low in diabetics. B-6 helps prevent diabetes caused by pregnancy and birth control pills. B-6 helps produce normal blood sugar levels. Pyridoxal forms of B-6, such as Pyridoxal 5 Phosphate, has been found to improve glucose tolerance dramatically.

Niacin, a form of vitamin B-3, has been shown to help people with diabetes in small milligram amounts; massive gram amounts of B-3 have been found to work against diabetics. B-3 is necessary to release energy from carbohydrates and is synergistic with B-1 and B-2.

**Pantothenic Acid** (vitamin B-5) works with vitamins B-1, B-2, and B-3 to produce ATP, the energy molecule the body needs to run on. B-5 deficiency can lead to hypoglycemia, blood, and skin disorders. B-5 helps maintain the central nervous system and is necessary for the conversion of sugar and fat into energy.

**Betaine HCL** helps the digestion and absorption of nutrients, especially important in diabetes where the pancreas does not function well enough to produce adequate digestive, pancreatic enzymes.

**Magnesium** deficiencies create greater glucose intolerance and contribute to damaging nerves and organs. Magnesium supplements improve arterial health by reducing plasma lipids and improving vasodilation. Magnesium improves production of insulin in the elderly and helps prevent retinopathy.

**Zinc** “may have immunomodulatory activity. It may also have antioxidant activity. Zinc has putative antiviral, fertility-enhancing and retinoprotective activities” (PDR Health). Zinc deficiency is common in diabetes (Ho E, Quan N, Tsai YH, Lai W, Bray TM Dietary zinc supplementation inhibits NFkappaB activation and protects against chemically induced diabetes in CD1 mice. Exp Biol Med (Maywood). 2001 Feb;226(2):103-11). Zinc is essential for the production of


**Selenium** deficiency has been associated with pancreatic insufficiency. Selenium is needed to maintain a healthy pancreas, a healthy liver, and heart as well as protect against harmful oxidation of fats, protect the immune system, and protect against damage to arteries and eyes (Balch, J.F., M.D. and Balch, P.A., C.N.C. Prescription for Nutritional Healing. Avery Publishing, Garden City Park, NY. 1990:11,22,33.) Diabetes is also known to predispose diabetics to infection. Selenium is a necessary co-factor for the enzyme glutathione peroxidase (GPx), which has well-documented activity against HIV activation (Diamond AM, Hu YJ, Mansur DB. Glutathione peroxidase and viral replication: implications for viral evolution and chemoprevention. Biofactors. 2001;14(1-4):205-10). Selenium is believed to have an antiviral effect on the immune system (Lukác N, Massányi P. Effects of trace elements on the immune system. Epidemiol Mikrobiol Imunol. 2007 Feb;56(1):3-9). Selenium can “alter mutagenesis rates in both viral genomes and the DNA of mammalian cells exposed to carcinogens” (Diamond, AM et al., Ibid.). Recent studies suggest that a viral cause may be implicated in some cases of diabetes (Berg AK, Olsson A, Korsgren O, Frisk G. Antiviral treatment of Coxsackie B virus infection in human pancreatic islets. Antiviral Res. 2007 Apr;74(1):65-71.)

**Manganese** deficiency is common in people with diabetes. Deficiency is associated with glucose intolerance, among other complications of diabetes. Manganese is necessary to maintain and repair the pancreas, and it is a co-factor in the enzymes that regulate glucose metabolism (Balch & Balch, 1997: 27-8; 228-32; Manganese and glucose tolerance. Nutr Rev. 1968 Jul;26(7):207-9).

**Testimonials/Nutrient Tidbits:** A doctor reports: …A patient was unsatisfied with the results they were getting from Glucophage, one of the diabetes type 2 drugs (their glucose levels averaged over 200). After starting on Total Alpha Lipoic acid (at just one a day!) the patient was excited that their blood sugar levels dropped to a range within 130-169 in just one week (Dr. Spacke, Denver, CO).

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 49,40

**Vegetarian:** Yes

**Contraindications:** In HIV infected individuals, doses up to 600mg have proven helpful in interrupting viral activation, but doses over 600mg may result in thrombocytopenia (this formula contains only 100 mg.)
TOTAL ARGinine

**Ingredients:** Each tablet supplies: Vitamin C 40 mg, Vitamin B-6 10 mg, Vitamin B-12 75 mcg, Folic Acid 50 mcg, Magnesium (as malate) 8 mg, Zinc (as chelate) 2mg, L-Arginine 500 mg, Lemon Bioflavonoids 40 mg, Alpha Lipoic Acid 10 mg, Ginkgo Biloba Extract 10 mg, N-Acetyl Cysteine 10 mg, L-Citruilline 20 mg, Rehmannia Glutinosa (Sheng Di Haung) 50 mg, Catuaba (Golden Trumpet) 50 mg, Morinda Officinalis (Baji Tian Morinda) 50 mg, Salvia Miltiarrhiza (Dan Shen Salvia) 50 mg.

**Supportive Function:** This formula provides comprehensive nutritional support for increased circulation and libido

**When is circulation support helpful?** Male & female health: male & female erectile dysfunction, libido, endocrine balance, etc.

**Clinical Applications/Research:** Arginine is a precursor for nitric oxide, which is essential to dilate blood vessels, allowing adequate blood flow to all tissues and organs, the heart, and to erectile tissues in both men and women. One of arginine’s major benefits is increasing circulation all over the body. In animal studies, arginine reduces cholesterol and atherosclerosis. It is necessary for the male’s production of sperm and comprises 85% of seminal fluid. Supplementation improves sperm count and quality and aids fertility. Arginine deficiency delays sexual maturity in both sexes and impairs the liver’s metabolism of fat. Taken on an empty stomach before sleep or 1 hour before vigorous exercise, arginine supplementation stimulates growth hormone production, which enhances the building and toning of muscle tissue and an enhanced immune response. It facilitates weight loss, reduction of body fat, and increases muscle mass. Arginine helps increase the size and activity of the thymus gland, aids in liver detoxification by neutralizing ammonia, and is involved with the production of the pituitary’s vasopressin. It is important to endocrine balance in both men and women. It stimulates the production of insulin and improves glucose tolerance. Arginine has beneficial effects on an overall sense of well-being, wound healing, and tissue repair.

**Bioflavonoids** help protect cholesterol from oxidative damage that potentially leads to blocked arteries and capillaries which can restrict blood flow to male and female erectile tissues and heart. Bioflavonoids protect and potentiate vitamin C’s roles as a major constituent of the prostate, the seminal vesicles, and prostatic fluid. **Alpha Lipoic Acid** enhances glucose conversion for cell protection, maintenance, and rebuilding. In diabetes, cells starve from unconverted glucose resulting in diabetic complications to tissues and organs. Lipoic Acid protects against capillary damage. Lipoic Acid helps regenerate and recycle other antioxidants, especially C, E, and glutathione. It protects against arterial plaque and oxidative damage to LDL cholesterol. It helps neutralize toxins in alcohol and tobacco smoke, and to mobilize and detoxify heavy metals. Lipoic Acid protects the liver from alcohol damage, enhances glucose disposal in adult onset Type II diabetes, improves insulin sensitivity, and protects against diabetic complications of nerve damage. It has been shown to improve nerve blood flow, reduce oxidative stress, improve distal nerve conduction, and improve reduced levels of deficient glutathione and deficient E in the nerves of diabetics. It binds with the DNA of some viruses and prevents replication. Supplements have been shown to improve neuropathy and reduce nerve pain. (Ley BM, The Potato Antioxidant, Alpha Lipoic Acid, New York: BL Publications, 1998.)

**Ginkgo Biloba Extract** helps enhance circulation for all body tissues including male and female erectile tissues. It helps lower blood pressure and inhibits blood clotting, which are factors that can affect potency. In one study of patients who did not respond to traditional drug therapy, Ginkgo Biloba Extract increased penile blood flow and restored potency within six months. **Caution:** should not be combined with Warfarin and other blood thinning drugs.

**N-Acetyl Cysteine** protects against damage caused by cigarettes and alcohol, including the prevention of hangovers and liver and brain damage. It is important in heavy metal detoxification. Heavy metals can be factors in erectile dysfunction. Cysteine is important in the formation of many essential compounds, including niacin, biotin, Co-enzyme A, lipoic acid, glutathione, glucose tolerance factor, insulin, and digestive enzymes. In
chronic illness, methionine conversion into cysteine is impaired. Supplementation increases the levels of glutathione, which has anti-aging effects.

**Vitamin B-6** aids in the prevention of arteriosclerosis, promotes the formation of DNA-RNA, is needed for formation of hydrochloric acid and proper absorption of proteins and fats.

**Zinc Chelate (Elemental):** Zinc is needed for prostate gland function and reproductive organ growth in both men and women. Zinc supports the concentration of vitamin E in the system that promotes circulation. Deficiencies are associated with impotence, infertility, BPH, prostatitis, prostate cancer, and high cholesterol levels.

**Vitamin B-12** is needed for the proper digestion of food and absorption of nutrients. B-12 helps maintain fertility, cell formation, and the metabolism of carbohydrates and fats.

**Folic Acid** is necessary for energy production, the production of DNA-RNA, and may alleviate depression and anxiety, which can impair achieving and maintaining erections.

**Vitamin C** can improve achieving and maintaining erections.

Zinc supports the concentration of vitamin E in the system that promotes circulation.


Magnesium Malate (elemental) helps prevent the calcification of soft tissue, protect the arteries from stress damage, and prevents cardiovascular disease, which can restrict blood flow to the heart and sexual organs. Malate helps promote aerobic glycolysis, the most efficient mode of energy production for maintenance and repair of organs.

**Suggested Dosage:** 1 tablet 3 times daily or as directed.

**Size:** 90 tablets

**Price:** € 49,80

**Vegetarian:** Yes

**Contraindications:** Some people may be sensitive to arginine; people with herpes viral infections, schizophrenia, or iron overload disease or during pregnancy/lactation should not take this product. Contraindicated with blood-thinning drugs.
TOTAL BAC-T

**Ingredients:** Liquid Herbal Tincture: 35% Cat’s Claw Extract, 30% Olive Leaf Extract, 20% Astralagus, 15% Red Clover Extract.

**Supportive Function:** Synergistic herbs combine to support normal bacterial populations and a healthy immune system.

**When is Total Bac-T helpful?** Bacterial overgrowth; weakened immune systems.

**Clinical Applications/Research:** Cat’s Claw Extract is from an herb that has been researched for its, "remarkable ability to cleanse the entire intestinal tract and help those suffering from different stomach and bowel disorders," including Crohn's disease, gastritis, ulcers, parasites, candidiasis, diverticulitis, hemorrhoids, leaky gut, and intestinal flora imbalance (Dr. Brent Davis, *DC Wellness Advocate* Feb 1995; 5(1):1-4). Cat’s Claw (uncaria tomentosa) has been used for hundreds of years in Peru for immunological and digestive disorders (Steinberg PN, *Sidahora* 1995 Apr-May;35-6). Its most powerful immunologically active alkaloids are believed to be isopteropodine and pteropodine. These alkaloids have been reported to enhance the WBCs’ ability to digest bacteria and debris (Planta Media 1985; 51:419-23). Cat’s Claw Extract may benefit people with toxic burdens, arthritic, and intestinal problems (*Explore* 1994; 5(4):27-8).

**Contraindications:** should not be taken in pregnancy or lactation. Cat’s Claw stimulates the immune system and should not be taken by people with transplants.

**Olive Leaf Extract:** The olive tree was believed to be the “Tree of Life” mentioned in Genesis. Current research suggests this belief may be based on the many beneficial effects of the special bioflavonoid oleuropein, other powerful flavonoids found in the olive and olive leaf extract, not to mention the beneficial effects of the olive’s many fatty acids and its 30 other phytochemicals. The phytochemical content of the olive may partly account for the low incidence of heart disease and some cancers in the Mediterranean diet (Visioli F, Bellomo G, Galli C, “Free radical-scavenging properties of olive oil polyphenols,” *Biochem Biophys Res Commun* 9 Jun 1998; 247(1):60-4). Olive Leaf Extract’s oleuropein, working synergistically with rutin, Hesperidin, and other flavonoids is believed to be responsible for the promotion of antibacterial, antiviral, antifungal, antioxidant, hypolipidemic, hypouricemic, hypocholesterolemic, and hypotensive effects. Oleuropein has been found to inhibit 11 out of 17 strains of both gram positive and gram-negative bacteria and to reduce their enterotoxin production (Fleming HP, Walter WM Jr., & Etchells JL, “Antimicrobial properties of oleuropein and products of its hydrolysis from green Olives,” *Appl Microbiol* Nov 1973; 26 (5): 777–782).


Red Clover Extract: Red Clover is one of the herbs recommended for support of the immune system for people with Lyme disease (Balch JF & PA Balch, Prescription for Nutritional Healing, 2nd Edition, New York: Avery, 1997). It is a rich source of protective nutrients and phytochemicals. Herbalists have traditionally used red clover for its antibiotic, immune enhancing, cell-protective, and blood purifying properties. Its phytochemicals include coumarins, isoflavones, flavonoids, glycosides, and resins (Yanagihara K et al, “Antiproliferative effects of isoflavones on human cancer cell lines established from the gastrointestinal tract,” Cancer Res 53:5915-21). Red Clover can help in kidney disorders and can help guard against bacterial attack. It is packed with vitamins and minerals that support kidney function and the body’s glands. Red Clover has been used for tissue support in women with fibrocystic breasts. It can act as a relaxant, appetite suppressant, antibiotic, blood purifier, and anti-inflammatory for skin, bowels, and lungs. It is a rich herbal, vitamin and mineral source of bioflavonoids, isoflavonoids, folic acid, biotin, choline, inositol, pantothenic acid, vitamins A, B-1, B-2, B-3, B-6, B-12, C, copper, magnesium, manganese, selenium, and zinc.

Testimonials: A distributor reports… I used 2 drops of Total Bac-T in 3 Oz. of breast milk to clear up my 5 week old twin’s rashes. It worked beautifully. (Mike Munro)

Doctors report… Case #1: A rash presented on the faces of our children and began to slowly get worse. So I checked out the allergy point and found out it was an allergic reaction. I just decided to test a couple of products that we don't usually use or have in the house and found out it was the anti-bacterial hand lotion that we recently started buying. I looked at the label and saw propylene glycol as a main ingredient. So we stopped using that and the Total Bac-T cleared up the rashes in 24 hours. I love our N-W products.

Case #2: I’ve used the T. Bac-T with our kids with Flu like symptoms and they cleared up within 48 hours.

Suggested Dosage: 3- 5 drops in liquid 3 x day or as directed

Size: 1 oz. bottle

Price:

Vegetarian: Yes

Contraindications: Some people may be sensitive to arginine; people with herpes viral infections, schizophrenia, or iron overload disease or during pregnancy/lactation should not take this product. Contraindicated with blood-thinning drugs.
TOTAL BORON

**Ingredients:** Each tablet includes: Vitamin B-6 15 mg, Pyridoxal-5-Phospate 2 mg, Boron (as aspartate) 3 mg, Apple Pectin 100 mg, Asparagus (herb) 100 mg.

**Supportive Function:** Boron is a trace mineral essential for healthy bone and joint function; it helps to build strong bone tissue. Boron also facilitates the detoxification process.

**When is Total Boron helpful?** Osteoporosis, bone injury, metal or other detoxification

**Clinical Applications/Research:** Vitamin B6 (15mg) has been reported to help remove lead from the brain (Balch & Balch, 1997:364). The B vitamins, especially B6, has been reported to be important in helping rid the intestinal tract of excess metals, removing them from the body, and protecting the cells and the brain: identified heavy metals include aluminum and mercury (Balch & Balch, 1997: 123, 386, The Burton Goldberg Group, 1995:928). B6 is essential for antibody formation, important in detoxification functions of the body (Mindell, 1991:33). B6 is essential for synthesizing and breaking down most amino acids. The amino acids L-methionine, L-Cysteine, and L-glutathione play important roles in helping detoxify the body of heavy metals and other toxins (Chaitow, 1988). Pyridoxal-5-Phosphate (2mg) is one of the essential components of vitamin B6 (Mindell, 1991:33). B6 has been reported to be a copper antagonist. B6 deficiency can enhance iron absorption, which may lead to iron toxicity. (Eck & Wilson, 1989:22; 28;).

Boron (as aspartate, 3mg) has been reported to enhance the uptake and spare the loss of calcium, magnesium, and phosphorous from the body (Linnerger, 1998:142). Both calcium and magnesium are reported to bind with aluminum, cadmium, excess copper, and help eliminate it from the body (Balch & Balch, 1997:123, 176, 214). Adequate calcium is reported to prevent lead from being deposited in body tissues (Balch & Balch, 1997:363). Calcium and magnesium have been reported to protect against radiation, especially radioactive strontium (Balch & Balch, 1997: 455). In studies with postmenopausal women, 3 mg of boron per day significantly reduced calcium lost in the urine (Hunt, CD, et al, *Am J Clin Nutr* March 1997; 65(3): 803-13). Boron supplementation in both animals and humans results in higher estradiol, (natural human estrogen level), higher testosterone levels, and higher vitamin D levels (Samman, S, et al, *Biol Trace Elem Res* Winter 1998; 66(1-3): 227-35).

Low levels of boron in tissues have also been linked to lower hormonal levels. Boron is now suspected of being a mineral regulator of many minerals, in addition to calcium, magnesium, and phosphorous, but its exact mechanisms, its possible antagonisms and protective functions are still unclarified (Naghii, MR, Samman, S, *Prog Food Nutr Sci* Oct Dec 1993; 7(4): 331-49). However, boron is combined with steel in nuclear utility plants to trap radiation (Boron, National Academy Press, 1980: 71-83). It is also used in experimental drugs for trapping neutrons in radiation therapy and it may--we believe--play a protective role against uranium, radium, and radon’s damaging effects (Chou, FL, et al, “Preparation and in vitro evaluation of B-lipiodol as a boron delivery agent for neutron capture therapy of hepatoma,” *Anticancer Res* May-June 1999; 19(3A): 1759-64).

Adequate calcium and vitamin D intake can help prevent or reverse osteomalacia caused by cadmium poisoning (Eck & Wilson, 1989:11). Boron increases calcium and vitamin D levels.

Higher levels of calcium, magnesium, and phosphorous have been found to protect against lead toxicity. Calcium and phosphorous either compete with lead for absorption, or help replace lead in storage sites (Eck & Wilson, 1989:39; 40; 41). Boron increases levels of calcium, magnesium, and phosphorous.

**Apple Pectin** (100mg) has been reported to bind with heavy metals in the colon and help excrete them from the body. Apple pectin has been reported especially to help protect against arsenic, lead, mercury, and nickel (Balch & Balch, 1997:123, 135, 363, 386, 404,).

Asparagus (herb) [100mg] is a member of the allium, lily family, which includes asparagus, garlic, and onions. The allium family contains sulfur compounds that have been reported to help eliminate arsenic, cadmium, excess copper, lead, mercury, nickel, radiation products, from the body (Balch & Balch, 1997:135, 176, 215, 364, 387, 404, 456,). In addition, asparagus has been traditionally used as a diuretic. Aluminum is excreted principally through the urine, and Eck and Wilson (1989) reported that enhancing eliminative organ activity helps in heavy metal detoxification. Asparagus has been reported to enhance female hormone levels and was used for that purpose in India to relieve menstrual pains (sometimes linked to copper overload, Schmitt, 1991), and generally strengthen
the female reproductive system. By enhancing female hormone levels, calcium, magnesium, and phosphorous levels may increase and antagonize heavy metals. In China, asparagus therapy has been traditionally prescribed for “kidney deficiency” and severe “adrenal deficiency,” syndromes associated with chronic exhaustion and fatigue. By strengthening the kidney, elimination of heavy metals through the urine may be enhanced. Asparagus contains steroidal and bitter glycosides and asparagine, an amino acid, which functions to help detoxify the brain of excess ammonia. It has been traditionally used as a diuretic, nutritive tonic, and to strengthen the lungs (Tierra, 1990:110-111).

**Testimonials/Nutrient Tidbits:** A doctor reports . . . I can’t believe how quickly my patient started dumping toxins after taking Total Boron.

**Suggested Dosage:** 1-2 tablets daily or as directed

**Size:** 90 tablets

**Price:** € 16.50

**Vegetarian:** Yes

**Contraindications:** Since one of the mechanisms of bone protection is increasing estradiol levels, boron may not work for some sensitive pre-menopausal women.
**TOTAL CHELATE**

**Ingredients:** Each tablet supplies: EDTA (Calcium Disodium) 200mg, Vitamin B-6 10mg, Niacin 5mg, Biotin 10mg, Magnesium (as chelate) 25mg, Zinc (as chelate) 5mg, Selenium (chelate) 40mcg, Niacinamide 5mg, Inositol 15mg, Choline 25mg, Betaine HCL 10mg, Beta Sitosterol 30mg, Vegetable Lipase 15mg, DL Methionine 15mg, Apple Pectin 50mg, Red Algae (carrageenan) 200mg, Garlic 200 mg.

**Supportive Function:** Nutritional support for strong, elastic arteries and healthy circulation to the heart, kidneys and brain.

**When is chelation support helpful?** Poor circulation, blocked arteries, high cholesterol, etc.

**Clinical Applications/Research:** EDTA (Calcium Disodium) has been safely used since the 1950’s for successful reduction of atherosclerotic plaque in cardiovascular disease, treatment of lead poisoning, and as a beneficial food preservative preventing oxidation. EDTA Chelation therapy helps remove calcium deposits and other harmful minerals that promote blood clotting and arteriosclerosis. In combination with other synergistic nutrients including B-6 and garlic, EDTA has an anti-clotting effect and helps reduce blood platelet stickiness. EDTA promotes improved cellular respiration, enhanced mitochondrial action, increased exercise tolerance and walking distance, lessened pain from angina and claudication, improved elasticity of arterial walls, improved function in senility, enhanced bone growth, and improved blood flow. Patients who gain little improvement in blood flow do sometimes show marked improvement of function and relief of symptoms. EDTA helps dissolve metastatic calcium that has been deposited where it is not wanted in the joints, the kidneys, arteries, and the bones of the inner ear. EDTA enhances absorption of beneficial nutrients including B-12 and minerals, although chronic long-term use may lead to nutrient deficiencies. It helps decrease absorption of iron and copper, protects against free-radical damage stemming from iron-copper overload, and prevents copper-catalyzed oxidation of vitamin C. EDTA protects against many toxic metals including nickel, cadmium, vanadium, lead, cobalt, and lowers the body’s burden of fission products. EDTA helps lower total cholesterol and improves the deposition of calcium and phosphorus in bone. Patients with lead poisoning experience reduced blood pressure and improved kidney function after EDTA treatment. In a study of 27 patients scheduled for limb amputation due to poor circulation, EDTA resulted in saving 24 limbs. EDTA enhances nitric oxide production, which kills bacteria, protects the heart, stimulates the brain, enhances oxygen delivery to tissues, helps prevent blood clots, and helps regulate blood flow and blood pressure (Cranton EM, “Current Status of EDTA Chelation Therapy in Oclusive Arterial Disease,” in *Textbook of EDTA Chelation Therapy* 2nd Ed, Charlottesville, VA: Hampton Roads, 2001; Loren K & Gordon GF, “Oral EDTA, Lead & More,” http://www.oralchelation.net/data14k.htm).  

**Contraindications:** May not be appropriate for patients with severe renal disease. Precaution: effects on fetal development have not been established and may be contraindicated in pregnancy. Caution: Doses exceeding 4,000mg daily may have toxic effects.

**Vitamin B-6:** McCulley found that heart patients had 80% less of vitamin B-6 than healthy people (*Atherosclerosis Reviews* 1983; (11): 157-246). Supplementation with vitamin B-6 can inhibit platelet aggregation that characterizes atherosclerosis (*Lancet* June 1981; (1) 8233:12-99-1300). B-6 is essential to break down potentially toxic homocysteine into harmless and beneficial forms that do not cause oxidation, clotting, or injury to blood vessel walls. Niacin or Vitamin B-3, and Niacinamide, a form of niacin, increase the activity of two crucial enzymes needed to facilitate conversion of homocysteine into non-toxic substances and provide the sulfur groups necessary for liver detoxification. In a placebo-controlled study of 8000 men who had suffered one heart attack, niacin was shown to be beneficial in lowering the death rate and increasing longevity (Canner et al, *J of the Am College of Cardiology* Dec 1986 8 (6): 1245-55).

**Biotin** is essential in the metabolism of carbohydrates, fatty acids, and protein. Biotin aids in cell growth, lowers blood glucose, and stimulates the production of insulin.

**Magnesium:** People who die suddenly from heart attacks have been found to have lower levels of magnesium and potassium than controls (Wood et al, *Lancet* Jul 1984; 2 (8395): 117-21). Magnesium helps dilate arteries and ease the heart’s pumping of blood, which may help prevent irregular heartbeats. It can help raise good HDL cholesterol, lower total cholesterol, inhibit platelet aggregation, and help prevent calcium deposits in blood vessels (Seeig &
Zinc, Selenium, and Magnesium are all essential mineral co-factors in enzymatic reactions in the methionine/homocysteine metabolic pathways. All are co-factors for anti-oxidant enzymes that fight free radicals that damage cells that can lead to atherosclerosis, arteriosclerosis, and heart disease. Zinc has been shown to shorten the duration of colds by inhibiting viral replication (Landis, *Herbal Defense*, NY: Warner Books, 1997). Zinc, magnesium, and selenium are antagonistic to heavy metals and help remove them from the body.

Selenium is a co-factor in the antioxidant enzymes, glutathione peroxidase and Sn-superoxide dismutase, and is reported to strengthen the immune system. Low serum selenium has been associated with higher incidence of cardiovascular disease (Salonen et al, *Brit Med J* Mar 1991; 302 (6779):756-760). Supplementation of selenium has been shown to reduce platelet aggregation (Stead et al, *Am J of the Med Sci* Dec 1985; 290 (6): 228-233). Cocksaxie virus has been implicated in heart disease under nutritionally deficient circumstances, where it has been described as attacking heart muscle and causing heart failure (Beck & Levander, *Nature Medicine* May 1995; (1) 433-6). In his clinical practice, Dr. Brimhall has found many of his patients with heart problems also have viral infections. Taylor and Ramanathan have built theoretically compelling cases for the viruses, Ebola, HIV, and coxsackie, mutating into aggressively virulent strains triggered by selenium deficiency (*J of Med Chemistry*, Aug. 19, 1994; (37): 26-37-54). It has been theorized that the heart is a likely target since it is one of the largest selenium depots in the body. Taylor believes that adequate selenium acts as an inhibiting factor, shutting down rapid viral replication.

Inositol is most prevalent in the heart and brain. It is necessary for cell membrane formation and aids in the transport of fatty acids. Choline, a B vitamin, is reported to intensify vitamin B12’s effect of reducing homocysteine levels (Olszewski et al, ibid.)

Betaine HCL: Betaine has been credited with lowering homocysteine levels even when patients were not responsive to other treatments (*NEJM* 1983; (309): 448-453). Betaine has been shown to stimulate an enzyme in the metabolic pathway that renders homocysteine non-toxic (*Neth J Med* 1994; 45 (1): 34-41). Betaine HCL helps breakdown and digest proteins, fats, and carbohydrates in the stomach, reduce bacterial and viral colonization of the stomach, and enhance the absorption of minerals and other nutrients. Beta Sitosterol boosts the effects of isoflavones (*J of Urology* 1995; (154): 391; *Cancer Res* 1991; (51): 3445). Isoflavones are special bioflavonoids that block the sorbitol pathway that is linked with oxidative damage in diabetes. They are also known as natural blood thinners that protect blood vessels and reduce platelet aggregation. As antioxidants, bioflavonoids protect cholesterol from oxidative damage. High cholesterol levels in themselves may not be the problem they were first thought to be, but oxidized LDL cholesterol may be the greater issue (Kostner et al, “The interaction of human plasma low density lipoproteins with glucosaminoglycans: influence of the chemical composition,” *Lipids* Jan. 1985; 20 (1): 24-28, Lininger et al, 1998:140-1; Potter, SM, "Overview of the proposed mechanisms for the hypo-cholesterolemic effect of soy," *J Nutri* 1995; 606S-611S).


DL Methionine helps remove heavy metal toxins from the body and neutralize free radicals. It also helps the digestive process. Apple Pectin contains both soluble and insoluble fiber, which lowers fat absorption and cholesterol, and reduces the risk of heart disease. By slowing the absorption of food, pectin has proven helpful to diabetics. The insoluble fiber of pectin binds to cholesterol, heavy metals, and other toxins, and helps remove them from the body (Balch & Balch, 1997: 53). Red Algae (carrageenan) acts synergistically with EDTA to help remove heavy metal concentrations. Iron is a mineral that can encourage bacterial growth. Chronic infections of many kinds have been implicated in arteriosclerosis, blood clotting, and heart disease. Sulfated polysaccharides in Red Algae’s carrageenan show broad-spectrum anti-viral activity. Carrageenan is incorporated into infected cells and inhibits viral replication (http://www.bryantlabs.com/redmarinealgae-abstracts.htm; “Protocol for Chronic Infections,” at http://www.gordonresearch.com/Protocols/protocol_cronic_infections.html)

Garlic has been shown to lower LDL oxidation by 34% (*Lipids* 1993; (28): 475-77). One of garlic's components, methyl allyl trisulfide, lowers blood pressure by dilating blood vessel walls. Garlic helps thin blood by inhibiting platelet aggregation, reducing the risk of blood clotting, and aiding in the prevention of heart attacks.
Garlic has antibiotic properties useful for reducing chronic levels of infections implicated in heart disease. Garlic also lowers total serum cholesterol levels and helps in digestion (Balch & Balch, 1997:54).

**Suggested Dosage:** One tablet 3 times daily or as directed.

**Size:** 90 tablets

**Price:** € 44.90

**Vegetarian:** Yes

**Contraindications:** Contraindicated with blood thinners and in renal disease. Safety in pregnancy has not been tested. Doses exceeding 4,000mg of EDTA daily (one pill contains only 200 mg) may have toxic effects.
TOTAL CHILDREN’S CHEWABLE

**Ingredients:** Each chewable tablet contains: Vitamin A 2500 i.u., Vitamin C (from the sago palm) 100 mg, Vitamin B-1 1.5 mg, Vitamin B-2 1.7 mg, Vitamin B-6 2 mg, Vitamin B-12 6 mcg, Vitamin D3 200 i.u., Vitamin E (as succinate) 30 i.u., Niacin 1 mg, Folic Acid 30 mcg, Biotin 50 mcg, Pantothenic Acid (as D-Calcium Pantothenate) 10 mg, Iodine (as dulse) 100 mcg, Calcium (as chelate) 20 mg, Iron (as peptonate) 850 mcg, Magnesium (as chelate) 10 mg, Zinc (as chelate), 500 mcg, Selenium (as chelate) 2 mcg, Copper (as chelate) 50 mcg, Manganese (as chelate) 50 mcg, Potassium (as chelate) 200 mcg, Niacinamide 5 mg, Bromelain 10 mg, Lactobacillus Acidophilus 2 million units, Lactobacillus Bulgaricus 2 million units, Lactobacillus Bifidus 2 million units, Papaya (fruit) 10 mg, Flax Seed Fiber 25 mg.

**Supportive Function:** Proper growth and development; enhancement of immune function; strong bones, muscles and connective tissue; maintenance of healthy organ systems in the body.

**When is vitamin and mineral support helpful?** Vitamins and minerals are vital to all biochemical functions in the body, and therefore are helpful in most things related to health; beneficial in impaired immune status and vitamin/mineral deficiencies.

**Clinical Applications/Research:**

- **Vitamin A** is necessary for cell growth and repair, and as such is an essential nutrient for growing children. It contributes to strong, efficient immune cells, and helps to build strong bones and teeth. Vitamin A is also important for good eyesight (visual acuity is determined to a large degree in early childhood). Deficiencies can be manifested in night blindness, sinus problems, dry, scaly skin, acne, and frequent infections, among other conditions. The importance of vitamin A for early development is emphasized by a study conducted by the National Institute of Child Health and Human Development Neonatal Research Network. A randomized trial showed that vitamin A supplementation reduced bronchopulmonary dysplasia (abnormal cells in the lungs) or death in extremely low birth weight babies (Ambalavanan N, et al. Vitamin A supplementation for extremely low birth weight infants: outcome at 18 to 22 months. Pediatrics. 2005 Mar;115(3):e249-54).

- **Vitamin C** is necessary for a lot of processes, but it is most widely known for its integral function in the development of collagen (strong tissues) and its effect on the immune system. It is a powerful antioxidant and protects cells from oxidative destruction. Typical overconsumption of carbonated drinks can crowd out much needed fruits and vegetables from the diet that provide a good source of vitamin C. Eating inadequate amounts of fresh fruit or vegetables can cause symptoms of asthenia (lack of energy), weak blood vessels, bleeding, and gum abnormalities. Musculoskeletal symptoms can consist of arthralgia, myalgia, hemorrhosis (blood in a joint or synovial cavity), and muscular hematomas. Vitamin C depletion is responsible for structural collagen alterations, defective bone matrix formation, and increased bone resorption. Imaging studies may show osteolysis, osteoporosis, joint space loss, bone cell death, and osteopenia. Children can experience severe lower limb pain related to subperiosteal bleeding (bleeding under the periosteum, specialized connective tissue covering all bones).

- **Vitamin D** increases calcium absorption and is necessary for proper bone and tissue growth. It is also being studied for its beneficial effects on the immune system and its role in preventing some autoimmune diseases. Studies show that a significant proportion of healthy children present with values below the threshold, indicating an insufficient vitamin D status (Garabedian M, et al. Arch Pediatr. 2005 Apr;12(4):410-419). There is also considerable evidence that vitamin D, which is important for nerve growth factor (NGF) has a substantial effect on the developing brain, and that low levels can interfere with that development. In fact, some researchers “conclude that transient early life low levels of vitamin D not only disrupt brain development but lead to persistent changes in the adult brain” (Feron F, et al. Developmental Vitamin D(3) deficiency alters the adult rat brain. Brain Res Bull. 2005 Mar 15;65(2):141-8). The American Academy of Pediatrics (AAP) has recommended a minimal intake of 200 IU/d vitamin D for all infants, beginning in the first 2 mo of life.

- **Vitamin E** increases cell membrane flexibility, is a powerful antioxidant and cell protector, strengthens capillary walls, and has many health benefits. Deficiency of vitamin E can manifest in many ways, including eczema and
a weakened immune system. It is believed that levels of antioxidant vitamins and other elements may be important in the prevention and treatment of chronic rhinosinusitis in children (Unal M, et al. Serum levels of antioxidant vitamins, copper, zinc and magnesium in children with chronic rhinosinusitis. J Trace Elem Med Biol. 2004;18(2):189-92). The other elements included vitamin C, copper and zinc.

The B vitamins are water-soluble, necessary for many biochemical reactions, and are essential for energy, mental well-being, and the health of hair, skin, eyes, mouth, liver, etc. Most of them are made by the intestinal flora of the gut. They are particularly important for nervous system function and adrenal/thyroid glands in infants/children. They are destroyed by heat and microwaving, making it even more difficult to extract them from food. Stress and sugar are both notorious for robbing the body of necessary B vitamins. Vitamin B-1 (thiamine) is associated with proper growth and energy production in children, and contributes to normal Hcl production. Vitamin B-2 (riboflavin) is important for the production of two Co-enzymes that are essential to many reactions, including metabolism of food macronutrients, energy production, and normal cell growth. Vitamin B-6 (pyridoxine) is especially correlated with normal function of the nervous system, fluid balance, and synthesis of red blood cells, antibodies, and DNA. Vitamin B-6 can lower homocysteine levels, a toxic substance that is increasingly noticed in children, and indeed, “Risk factors established at young ages may set the stage for later cardiovascular disease (CVD)” (Papoutsakis C, et al. Plasma homocysteine concentrations in Greek children. J Nutr. 2005 Mar;135(3):383-8).

Folic acid is needed for all dividing cells (especially RNA/DNA), it helps prevent neural tube birth defects, and it also lowers homocysteine levels. Vitamin B-12 is also essential to nervous system and energy function, and lowers homocysteine levels, too. Deficiencies in folic acid or vitamin B-12 can manifest in anemias. Vitamin B-3 (niacin) is necessary for the production of two Co-enzymes that are involved in over 50 reactions, ranging from digestion to energy production. Low levels can contribute to weakness, dermatitis, skin eruptions, and a whole host of other symptoms. Biotin is a Co-enzyme that helps with the utilization of vitamin B-12, folic acid, and pantothenic acid. It is critical for the synthesis of RNA/DNA and the metabolism of fat, protein and carbohydrate. Pantothenic acid (vitamin B-5) is part of a Co-enzyme called “Co-A”; it is especially vital to optimal adrenal activity, healthy skin and nerves, and is known as one of the major “anti-stress” vitamins.

Calcium is necessary for many enzymes to be activated; it is important for muscle contraction, nerve transmission, and blood clotting, and 99% of body calcium is concentrated in the bones and teeth. Approximately 50% of the calcium in adult bones is laid down during adolescence, so this is a critical time period for calcium intake. Deficiencies can cause muscle cramps, joint aches, nervous disorders, colitis, kidney stones, brittle nails, etc. Magnesium increases the solubility of calcium. It is present as a cofactor in many enzymes, especially in energy production. It plays an important role in muscle contraction-relaxation, regulates pH and body temperature, it is essential for rebuilding after injury, and it gets depleted in inflammatory states. Magnesium is so important to bone strength that magnesium alone is able to suppress bone turnover, and improve the risk profile for osteoporosis (Dimai, H.P., et al. Daily oral magnesium supplementation suppresses bone turnover in young adult males. Journal of Clinical Endocrinology and Metabolism, Vol. 83, August 1998, pp. 2742-4).


Selenium is essential for normal functioning of the immune system and thyroid gland (also essential for the synthesis of active thyroid hormone), and is part of an antioxidant enzyme that protects cells in the body from oxidative damage. Gastrointestinal disorders may decrease the absorption of selenium, resulting in selenium depletion or deficiency. Adequate selenium intake is associated with decreased risk for many cancers. Most soils are devoid of selenium.

Copper helps release energy, aids the thyroid gland, carries oxygen in the blood stream and supplies the body’s tissues with oxygen, aids in nerve and brain function, acts as a component in enzymes (including
antioxidant enzymes), and improves levels of neurotransmitters such as epinephrine, norepinephrine and dopamine. Low copper causes the cells to suffocate and lack oxygen. Low levels can cause low levels of HDL cholesterol, skin problems, swollen ankles and anemia, among other things. **Low copper levels are also linked to low enkephalins (endorphins) produced in the brain. Endorphins make us feel good and combat depression.**

Manganese is an essential trace mineral that aids in the formation of connective tissue, bones, blood-clotting factors, and plays a role in fat and carbohydrate metabolism, calcium absorption, and blood sugar regulation. Manganese is also necessary for normal brain and nerve function. Manganese is a component of an antioxidant enzyme that protects cells from oxidative damage. Low levels of manganese in the body can contribute to bone malformation, weakness, and seizures.


Papaya is a fruit rich in phytochemicals and vitamins A & C. Papaya has long been used traditionally as an antiphlegmatic, digestive, anti-flatulent, diuretic, vermifuge, pyretic (temperature regulation) and a general tonic. It is rich in papain, a helpful digestive enzyme, and lends a pleasant tasting flavor to the chewable tab.

Flax Seed Fiber provides much needed fiber for intestinal health and reduced risk for disease; flax seed is a source of omega 3 fatty acids.

Probiotics, or the good flora in the gut, can fortify the immune system. Increased toxic load will change the pH of the intestines, and the balance of beneficial flora. Stress can alter the balance of good bacteria in the gut, just as repeated antibiotic use will destroy the great immune-protecting potential of the probiotics (such as lactobacillus strains).

**Suggested Dosage:** Chew 1 tablet 3 times daily or as directed.

**Size:** 120

**Price:** € 34,30

**Vegetarian:** No

**Contraindications:** None known.
TOTAL CMO

**Ingredients:** Each Tablet Supplies: CMO® (cerosomal-cis-9-cetylmyristoleate) 250mg.

**Supportive Function:** A fatty acid and natural immuno-modulator that acts to modulate the immune response and support normal joint function. Total Inflam is a great product to use in addition to Total CMO.

**When is CMO helpful?** Arthritis and autoimmune diseases.

**Clinical Applications/Research:** CMO® is a newly recognized substance that has apparently reported remarkable results. Harry W. Diehl, an experienced medical researcher, was employed by the National Institute of Arthritis, Metabolism, and Digestive Diseases at the National Institutes of Health when he discovered CMO®. He was intrigued by the fact that mice could not get arthritis, even if an attempt was made to induce the arthritis experimentally. However, rats, which are the biological kin to mice, could and did develop arthritis. Diehl reasoned that there must be something the mice possessed that prevented them from getting arthritis. He soon isolated a compound (CMO®), which exists in mice but not rats. When the compound was given to a group of rats that had developed arthritis, the rats which were protected by the CMO® did not get arthritis, and they grew 5.7 times as much as the control group! (Diehl, HW. & May, EL. Cetyl myristoleate isolate from Swiss albino mice: an apparent protective agent against adjuvant arthritis in rats. Journal of Pharmaceutical Sciences. March 1994).

CMO® is a totally naturally derived product (from beef tallow). Utilizing cerosomal technology to improve the bioavailability, and change the texture from a liquid to a waxy solid, this substance claims improved digestibility and bioavailability and has been trademarked.

**Suggested Dosage:** 2 tablets in the morning and two tables right before bed on an empty stomach for a minimum of 60 to 90 days; liver detoxification (Total Liver D-Tox) or gallbladder support (GB Plus) may be necessary before starting to take CMO. This is to ensure that the fatty acid ester can be digested. It is suggested that Total CMO be combined with Total Inflam and possibly Glucosamine Plus, Total Enzymes and Total Probiotics.

**Size:** 90 tablets

**Price:** € 65,80

**Vegetarian:** No

**Contraindications:** Liver detoxification or gallbladder support may be necessary before CMO is given. Do not drink alcohol, carbonated beverages, citrus juices, anything with caffeine or artificial sweeteners.
**TOTAL CORT**

**Ingredients:** Each Tablet Supplies: Phosphatidylserine 100mg, Vitamin B-1 1.5 mg, Vitamin B-2 1.5mg, Niacinamide 5mg, Folic Acid 40mcg, B-6 1.5mg, Pantotenolic Acid 2mg, B-12 25mcg, Beta Sitosterol 10mg, L-Theanine 5mg, Banaba Leaf Extract 12.5mg.

**Supportive Function:** Weight balance; stress management; restful sleep; memory; mental function; depression.

**When is cortisol support helpful?** Periods of stress; weight loss; depression, anxiety, insomnia.

**Clinical Applications/Research:** Phosphatidylserine is found in high concentrations in the brain. Phosphatidylserine is believed to allow individuals to sustain an adaptive response and minimize some of the systemic effects of stress (Kelly GS. Nutritional and botanical interventions to assist with the adaptation to stress. Altern Med Rev. 1999 Aug;4(4):249-65.) The effects of phosphatidylserine supplementation on the neuroendocrine responses to physical stress was examined in a placebo-controlled study in 9 healthy men. Phosphatidylserine blunted the cortisol responses, leading researchers to report that, “oral administration of phosphatidylserine may counteract stress-induced activation of the hypothalamo-pituitary-adrenal axis in man” (Monteleone et al. Blunting by chronic phosphatidylserine administration of the stress-induced activation of the hypothalamo-pituitary-adrenal axis in healthy men. Eur J Clin Pharmacol. 1992;42(4):385-8). Supplementation helps improve mental functioning in individuals diagnosed with Alzheimer’s disease (Crook et al 1992). After 45 days of supplementation, depression has been reported to be 60% less with phosphatidylserine supplementation than placebo controls in older women (Maggioni et al 1990).

**Vitamin B-1** works with B-2 and B-3 to release energy from our food. B Vitamins are necessary for the mitochondria to produce energy from carbohydrates in the Kreb's citric acid cycle.

**Vitamin B-2** is needed to convert carbohydrates, amino acids, and fats into energy. Restricted diabetic diets frequently result in B-2 deficiencies.

**Niacinamide**, a form of vitamin B-3, helps people with diabetes in small milligram amounts. Massive gram amounts of B-3 have been found to work against diabetics. B-3 is necessary to release energy from carbohydrates and is synergistic with B-1 and B-2. It increases the activity of two crucial enzymes needed to convert homocysteine into non-toxic substances and provide the nutrients necessary for liver detoxification. In a placebo-controlled study of 8000 men who had suffered one heart attack, niacin was shown to be beneficial in lowering the death rate and increasing longevity (Canner et al, J of the Am College of Cardiology 1986 Dec; 8 (6): 1245-55). Folic Acid helps alleviate depression and anxiety (Balch & Balch, 1997: 17). Folic acid is required for enzymatic reactions reducing homocysteine. Excess homocysteine can lead to muscular degeneration, ocular and neurological problems, cardiovascular disease, brittle hair, and thin skin (Stanbury et al, Metabolic Basis of Inherited Diseases, New York: McGraw Hill, 1983; N England Med J 1983; 309(8): 448-453). Folic acid is essential to the growth and repair of cells. Folic Acid helps prevent folic acid anemia, is essential in the formation of red and white blood cells, and can protect against parasite infections and food poisoning. Deficiencies are common and come from not eating fresh fruits and vegetables. Cooking and microwaving destroy folic acid. Some studies state that 80% of the population is deficient in folic acid. Tobacco smoking, drinking alcohol, and using oral contraceptives promote folic acid deficiency.

**B-6** is known to trigger the nighttime release of growth hormone (GH) during sleep. GH helps enhance the building and toning of muscle and enhances the immune response. It can facilitate weight loss, reduction of body fat, and increase muscle mass. It helps in the formation of anti-aging nucleic acids (Mindell, 1991:33). It helps convert tryptophan into niacin (B-3), alleviate nervousness, and reduce muscle spasms at night. B-6 is necessary for tryptophan metabolism, and together with vitamin C, enhances tryptophan uptake by the brain. B-6 helps shorten the time it takes for sleep onset, improve the quality of sleep, and induce a more relaxed waking state. Supplementation with vitamin B-6, by itself, can help change blood stickiness that characterizes atherosclerosis (Lancet June 1981; (1) 8233:12-99-1300).

**Pantotenolic Acid**, vitamin B-5, works with other B vitamins to produce ATP from sugar and fat, the energy molecule the body needs to run on. Pantotenolic Acid is known as an anti-stress nutrient. Deficiency can lead to low blood sugar levels and other blood and skin disorders.

**B-12** and folic acid are involved in different steps of the body’s use of carbohydrates and sugar. Supplementation has been reported to improve muscle strength and alleviate sensory impairment (Nagaishi et al
B-12 helps reduce stress, prevent anemia, and is necessary for all bodily functions. It is necessary for proper digestion and absorption of nutrients. It helps prevent nervousness, irritability, depression, headaches, memory loss, nerve and spinal cord degeneration. Vitamin B-12 is needed for healthy digestion, absorption of nutrients, and synthesis of protein. It helps prevent anemia and works with folic acid to form red blood cells. Beta Sitosterol boosts the effects of isoflavones (J of Urology 1995; (154): 391; Cancer Res 1991; (51): 3445). Isoflavones are special bioflavonoids that block the sorbitol pathway that is linked with free-radical damage in diabetes. They are also known as natural blood thinners that protect blood vessels and reduce blood stickiness. Bioflavonoids protect cholesterol from free-radical damage. (Kostner et al, “The interaction of human plasma low density lipoproteins with glucosaminoglycans: influence of the chemical composition,” Lipids Jan. 1985; 20 (1): 24-28; Linnerg et al, 1998:140-1; Potter, SM. "Overview of the proposed mechanisms for the hypo-cholesterolemic effect of soy," J Nutri 1995; 606S-611S). Sterols and sterolins, also known as phytosterols, have been shown to exert significant unique biochemical effects. Beta-sitosterol is the major phytosterol in higher plants along with its glycoside, beta-sitosterolin. Studies have reported that beta sitosterol and its glycoside, beta-sitosterolin possess anti-inflammatory, antipyretic, antineoplastic, and immune-modulating properties, showing promise in normalizing T-cell function, dampening overactive antibody responses, and normalizing DHEA:cortisol ratios (Bouic PJ et al. Monograph. Plant sterols and sterolins. Altern Med Rev. 2001 Apr;6(2):203-6). Additionally, researchers believe that restoring balance (with these phytosterols) to the immune system may be of therapeutic benefit in disease processes such as chronic viral infections, stress-induced immune suppression, tuberculosis, allergies, cancer, and rheumatoid arthritis and other autoimmune conditions" (Bouic, ibid)

Runners participating in an ultra-marathon who were supplemented with beta sitosterol showed significant increases in their total white blood cell numbers as well as in their neutrophils and significantly decreased the cortisol:DHEA ratio, suggesting that these volunteers had less of an inflammatory response and were less immune suppressed during the post-marathon recovery period. It is believed that the findings of this study demonstrate that phytosterols may prevent the subtle immunosuppression associated with excessive physical stress (Bouic PJ et al. The effects of B-sitosterol (BSS) and B-sitosterol glucoside (BSSG) mixture on selected immune parameters of marathon runners: inhibition of post marathon immune suppression and inflammation Int J Sports Med. 1999 May;20(4):258-62.)

L-Theanine has been shown to work antagonistically against the effects of caffeine, helping to lower stress, promote relaxation, reduce anxiety, lower blood pressure, and increase mental alertness (Lekh R J et al, “L-theanine--a unique amino acid of green tea and its relaxation effect in humans,” Trends in Food Sci & Tech June 1999, Vol 10 (6-7): 199-204).

Banaba Leaf Extract has been reported to significantly reduce weight and reduce body fat in animal studies (Suzuki et al 1999). Banaba has been traditionally used as a folk medicine for diabetes in the Philippines. Banaba contains a potent alpha-amylase inhibitor (Hosoyama et al 2003). Banaba extract has demonstrated blood sugar lowering and total-cholesterol lowering capabilities (Kakuda et al 1996).

**Suggested Dosage:** As directed, or one tablet in the evening and one at bedtime, whenever cortisol is high according to lab results.

**Size:** 90

**Price:** € 58,80

**Vegetarian:** Yes

**Contraindications:** Probably should be avoided during pregnancy or lactation.
TOTAL ENZYMES

**Ingredients:** 4,500 DU Amylase; 15,000 HUT Protease; 65 IU Lipase; .25 IAU Invertase; 150 DPI Malt Diastase; 200 LacU Lactase; 60 CU Cellulase, in a base of pure beet root fiber.

**Supportive Function:** Gentle, fast-acting plant enzymes assist in the normal breakdown of food that is necessary to extract vital nutrients from our diet. Often a pancreatic insufficiency limits the optimal utilization of essential vitamins, minerals, and other nutrients. Ideally, food should be completely broken down to assure that macromolecules do not pass into the system. Plant enzymes work in various pH environments, increasing their effectiveness along the gastrointestinal tract.

**When are plant enzymes helpful?** High-potency, plant-digestive enzymes are highly suggested to enhance digestion. They are extremely well tolerated, work in a wide range of pH environments (for the entire intestinal tract), and optimize the breakdown of food. Complete breakdown of food eliminates multiple allergen sources, and provides support for allergy-related conditions such as eczema.

**Clinical Applications/Research: Amylase:** Amylase breaks down large carbohydrates (starches and other polysaccharides) to disaccharides including sucrose, lactose and maltose. (Shils and Young, Modern Nutrition in Health and Disease, Lea & Febiger, Philadelphia, PA, 1988)

**Protease:** Protease breaks down long protein chains (polypeptides) into single amino acids (Shils and Young, Modern Nutrition in Health and Disease, Lea & Febiger, Philadelphia, PA, 1988)

**Lipase:** Lipase digests fats (triglycerides) into free fatty acids and glycerol. (Shils and Young, Modern Nutrition in Health and Disease, Lea & Febiger, Philadelphia, PA, 1988).

**Invertase:** Invertase is a concentrated source of disaccharidase enzymes. Invertase breaks down the disaccharide sucrose (refined table sugar) into glucose and fructose. The American diet contains high amounts of refined sugar. The inability to break the sugar down may contribute to digestive distress and may be a contributing factor in food allergies. Supplemental invertase will increase the assimilation and utilization of this sugar.

**Malt Diastase:** Malt diastase assures the breakdown of starch into maltose and then into glucose molecules, allowing greater absorption of this energy-giving sugar.

**Lactase:** Lactase deficiency is a common and well-known form of carbohydrate intolerance. Lactase digests lactose (milk sugar) into glucose and galactose. Lactase activity declines as we age, which causes maldigestion of milk and other lactose-containing foods. Approximately 70% of the world's population are deficient in lactase and are therefore unable to digest dairy products.

**Cellulase:** Cellulase is not found in humans, but it aids in breaking the bonds found in the fiber matrices which envelope most of the nutrients in plants. Cellulase increases the nutritional value of fruits and vegetables.

**Beet Root Fiber:** Beets aid in gallbladder function, lymphatic function and digestion. Red beetroot is excellent for liver and biliary detoxification.

**Testimonials/Nutrient Tidbits:** Michael McCann, M.D., describes his success with enzyme supplementation on a 37 yr. old woman with life long eczema, intermittent diarrhea and weight loss. In an abstract presented to the 1992 Food Allergy Symposium sponsored by the American College of Allergy and Immunology, he reports that supplementation resulted in a, “complete clinical remission and resolution of eczema for the first time in her adult life. She was also able to discontinue all other drugs” (from Crook, William G., The Yeast Connection Handbook. Professional Books, Inc. Jackson, Tenn. 1996 p. 172).

A doctor reports...It “never misses”. An osteopath came to see me and couldn’t move her neck (it was fused). After 2 weeks using Total Enzymes and Core Level Bone Matrix, her neck was moving freely. (Sylvia Flesner, N.D. Englewood, CO.)

Another doctor reports...Total Enzymes is my favorite product, and I much prefer it to other brands. It works very well! (Alex Rowell, DC, Fort Morgan, CO.)

**Suggested Dosage:** 1-2 tablets 3 times with meals or as directed

**Size:** 60 or 120 tablets

**Price:** € 33,40 en € 58,90

**Vegetarian:** Yes

**Contraindications:** None known.
**TOTAL EYEBRIGHT C**

**Ingredients:** Vitamin C 25mg, Vitamin D-3 75i.u, Vitamin E (as succinate) 10i.u, Vitamin B-1 1.5mg, Vitamin B-2 1.7mg, Vitamin B-6 2mg, Folic Acid 100mcg, Selenium (as chelate) 25mcg, Zinc (as chelate) 15mg, Chromium (as chelate) 1mg, Lycopene 2mg, Lutein (with Zeaxanthin) 3mg, D-Salina Beta Carotene 1000 i.u, SOD 25mg (which yields 200 i.u. of Glutathione, 625 i.u. Catalase), Quercetin 5 mg, Lemon Bioflavonoids 50 mg, Bromelaine 15 mg, Pancreatin 25mg, Lactase 10 mg, N-Acetyl Cysteine 5mg, Rutin 20 mg, Betaine HCL 10 mg, Oxbile 20 mg, Amylase-Diastase 15 mg, Pancrelipase 15 mg, Tryptsin (chymotrypsin 4 mg) 20 mg, Papain 15 mg, L-Taurine 10mg, L-Glycine 10 mg, L-Glutamic Acid 10 mg, L-Methionine 10mg, Lipoic Acid 5 mg, L-Histidine 5mg, L-Phenylalanine 5 mg, Eyebright (herb) 75 mg, Bilberry (25% anthocyanosides) (fruit/leaf) extract 4 mg, Ginkgo Biloba (leaf) 6 mg, Eleuthero (root) 5 mg, Gymnema Sylvestre (leaf) 75mg, Turmeric (rhizome) 10mg, Bilberry (fruit) 25 mg, Bitter Melon (fruit) 25 mg.

**Supportive Function:** Total Eyebright C is an eye care formula consisting of the eyebright herb, along with vitamins, minerals, enzymes and potent antioxidants intended to optimize homeostasis for the eyes. The eye is highly susceptible to free radical damage and is in need of optimal antioxidant protection. Total Eyebright C is a support product for general eye conditions or people prone to cataracts.

**When is eye support helpful?** Eye infections, any eye diseases (glaucoma, macular degeneration, cataracts), dry eyes, floaters

**Clinical Applications/Research:**

**Antioxidants:** Antioxidants include vitamin C, vitamin E, beta carotene, selenium, zinc, quercetin, ginkgo biloba, bilberry, bioflavonoids and turmeric. All of these substances are potent antioxidant radical scavengers; beta carotene specifically scavenges radicals caused by UV light, vitamin E protects the high concentration of lipid membranes, ginkgo biloba works in the micro capillaries of the eye, and bilberry seems to be an eye-specific radical scavenger.

**Eyebright:** Eyebright is a medicinal herb containing vitamins A, B3 (Niacin), B5 (Pantothenic acid), B12, C, D, and E; its properties lend to the recommendation that it is, “good for all eye disorders” (Presc for Nutr Healing, 1990, Avery Publ., NY, p.52).

**Bilberry:** Bilberry contains potent proanthocyanidins to prevent capillary fragility and inhibit platelet aggregation, and is an excellent anti-inflammatory herb. “Many clinical tests have shown that bilberry anthocyanosides given orally to humans improve vision in healthy people and also help treat people with eye diseases such as pigmentary retinitis” (Weiner, M.A. Herbs that Heal. 1994. Quantum Books, Mill Valley, Ca. p. 84).

**Ginkgo Biloba:** Ginkgo biloba was reported in Drugs Exp Clin Res (1991, 17:571-4), to have antioxidant properties that can protect the retina against oxidation. In a randomized, open clinical trial involving 42 patients, a significant increase in microcirculation and elasticity of blood vessels was noted (Fortschr Med. 1993, 111:170-2).

**Other Plant Nutrients:** Gymnema sylvestre is an herb that significantly reduces blood glucose and glycosylated proteins, an important factor in determining diabetic retinopathy damage (see diabetic retinopathy). Turmeric may increase detoxification systems in addition to its antioxidant properties. Turmeric is believed to counteract the effects of several dietary carcinogens (Plant Foods Hum. Nutr 1993, 44:87-92). Quercetin is a very powerful free radical scavenger. Lemon bioflavonoids and rutin are potent phytochemicals that prevent capillary fragility and reduce inflammation. They are particularly helpful in collagen formation of the microcirculation of the eye.

**Bromelaine:** Bromelaine is a proteolytic enzyme with strong anti-inflammatory properties. Pancreatin, papain, trypsin, chymotrypsin, pancrelipase and amylase are all enzymes, which decrease inflammation when taken away from meals, and increase digestion when taken with meals. They clear toxic debris from the inflammatory response and help tissue return to normal. Ox bile and HCL (hydrochloric acid) enhance the activity of the enzymes.

**Zinc:** Zinc has antioxidant activity, stabilizes cell membranes, and provides the cofactor for many enzymes involved in visual function. Research demonstrates that high levels of a zinc antioxidant enzyme, “protect mitochondria from oxidative damage that probably occurs with aging in the retinal pigment epithelium” (Invest. Ophthalmol. Vis. Sci. 1992, 33:1909-18). Zinc is also the important nutrient in the “zinc fingers” which is an integral part...
of gene expression. The Proceedings of the National Academy of Sciences reported that an eye-specific enzyme (containing these zinc fingers) is necessary to prevent rod degeneration (the eye is made up of rods and cones) (Proc. Nat. Acad. Sci. 1993, 90:11157-61).

**Vitamins:** Vitamin D aids in calcium absorption for healthy tissue maintenance. Sometimes eye conditions dictate avoidance from UV light, which is one of the main sources of vitamin D production by the body. Riboflavin is very easily destroyed by UV light, and is essential for cellular repair. Folic acid is also necessary, playing an important role in DNA/RNA synthesis.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 47,15

**Vegetarian:** No

**Contraindications:** None known.
**TOTAL EYEBRIGHT M**

**Ingredients:** Vitamin C 20mg, Vitamin E (as succinate) 15i.u, Vitamin A (fish liver oil) 1000i.u, Vitamin B-2 10mg, Selenium (as chelate) 33mcg, Zinc (as chelate) 15mg, Lycopene 2mg, Lutein (with Zeaxanthin) 3mg, Lipoic Acid 5 mg, Grapeseed Extract 2mg, Beta Carotene 2000 i.u, Quercetin 2 mg, Bioflavonoids 30 mg, Rutin 25 mg, N-Acetyl Cysteine 15 mg, Betaine HCL 10 mg, Trypsin (chymotrypsin 4 mg) 20 mg, Amylase-Distase 10 mg, L-Taurine 33 mg, L-Glutathione 2 mg, Eyebright (herb) 75 mg, Ginkgo Biloba (leaf) Extract 5 mg, Milk Thistle (herb/leaf) 50 mg, Spinach (with Zeaxanthin)(leaf) conc. 100 mg, Green Pea (vine) 50 mg, Bilberry (25% Anthocyanosides) (fruit) Extract 3mg, Blueberry (leaf) 25 mg.

**Supportive Function:** Total Eyebright M is an eye care formula consisting of the eyebright herb, along with vitamins, minerals, enzymes and potent antioxidants intended to optimize homeostasis for the eyes. The eye is highly susceptible to free radical damage and is in need of optimal antioxidant protection. Total Eyebright-M is general eye support for macular degeneration.

**When is eye support helpful?** Eye infections, any eye diseases (glaucoma, macular degeneration, and cataracts) dry eyes and floaters.

**Clinical Applications/Research:** Macular degeneration was one of five retinal disorders studied in the massive Eye Disease Case-Control Study, which obtained data from 421 patients with macular degeneration and 615 controls. Serum levels of carotenoids, vitamins C and E, and selenium were evaluated, and subjects were classified by level of the micronutrient (low, medium, and high). Persons in the medium and high carotenoid groups had, “markedly reduced risks” of macular degeneration. Risk in the “high” group was reduced to one half, and risk in the “medium” group was reduced to one third, demonstrating a dose-dependent result. “An antioxidant index which combined all four micronutrient measurements showed statistically significant reductions of risk with increasing levels of the index... these results suggest that higher blood levels of micronutrients with antioxidant potential, in particular, carotenoids, may be associated with a decreased risk of the most visually disabling form of age-related macular degeneration” (Arch. Ophthalmol. 1993, 111:104-9).

Authors of “Antioxidant protection of the ageing macula” report epidemiological evidence that suggests patients with macular degeneration have a lower intake of carotenoids, and, “moreover, a preliminary therapeutic trial in patients with AMD (Age-related macular degeneration) or diabetic retinopathy showed that supplementation with beta-carotene, vitamin C, vitamin E and selenium halted the progression of degenerative changes and in some cases even brought improvement” (Age and ageing 1991, 20:60-69). The authors note that even though the retina contains higher concentrations of carotenoids, vitamin E and vitamin C than many other tissues, “the fact that the development of AMD still occurs indicates that in these cases the balance between lifelong exposure to light and antioxidant protection has been disturbed in favor of light damage. A higher intake of these antioxidant nutrients may thus be required to counteract the influence of light” (p. 66).

**Antioxidants:** Antioxidants include vitamin C, vitamin E, beta-carotene, selenium, zinc, quercetin, ginkgo biloba, bilberry, and bioflavonoids. All of these substances are potent antioxidant radical scavengers; beta carotene specifically scavenges radicals caused by UV light, vitamin E protects the high concentration of lipid membranes, ginkgo biloba works in the micro capillaries of the eye, and bilberry seems to be an eye-specific radical scavenger.

**Eyebright:** Eyebright is a medicinal herb containing vitamins A, B3 (Niacin), B5 (Pantothenic acid), B12, C, D, and E; its properties lend to the recommendation that it is, “good for all eye disorders” (Presc for Nutr Healing, 1990, Avery Publ., NY, p.52).

**Bilberry:** Bilberry contains potent proanthocyanidins to prevent capillary fragility and inhibit platelet aggregation, and is an excellent anti-inflammatory herb. “Many clinical tests have shown that bilberry anthocyanosides given orally to humans improve vision in healthy people and also help treat people with eye diseases such as pigmentary retinitis” (Weiner, M.A. Herbs that Heal. 1994. Quantum Books, Mill Valley, Ca. p. 84).

**Ginkgo Biloba:** Test results published in Drugs Exp Clin Res (1991, 17:571-4), “confirm that the antioxidant properties of Ginkgo biloba can protect the retina against lipoperoxidation”. In a randomized, open clinical trial
involving 42 patients with pathophysiological visco-elasticity values (the elasticity of their blood vessels had already been compromised), the effect of a single intravenous injection of 50, 100, 150, or 200 mg of Ginkgo biloba extract was investigated. A significant increase in microcirculation and visco-elasticity was noted. The response was dose dependent, with effects increasing as the dose increased. “The present study thus confirms the positive effect of Ginkgo biloba extract on the microcirculation and whole-blood visco-elasticity values, already found in earlier studies, and shows it to be dependent on the dose employed” (Fortschr Med. 1993, 111:170-2).

A German study was conducted on 24 patients with retinal insufficiency. Utilizing a randomized, double blind study, Ginkgo biloba was used as a treatment, with a significant increase in retinal sensitivity seen within four weeks. Results in the lower dose group (80 mg/day) were not seen until the dose was increased to 160 mg/day. “The results presented here show that damage to the visual field by chronic lack of blood flow are significantly reversible” (Klin Monatsbl Augenheilk. 1991, 199:432-8).

Free radicals are responsible for much of the damage induced by ischemia (lack of adequate blood flow) and reperfusion (dilation of blood vessels and return of oxygen). This leads to damaging ion shifts in the eye, which were prevented by administration of 100 mg/kg/day Ginkgo biloba for 10 days in a rat model. It is interesting to note that the drug allopurinol, which was also tested, failed to correct the retinal shifts.

Other Plant Nutrients: Quercetin is a very powerful free radical scavenger. Lemon bioflavonoids and rutin are potent phytochemicals that prevent capillary fragility and reduce inflammation. They are particularly helpful in collagen formation of the vessels of the eye, which makes up the microcirculation. Lycopene, a carotenoid found in tomatoes has potent antioxidant properties and has also been shown to be helpful in eye problems. Lutein, a carotene found in dark green leafy vegetables (such as spinach and collard greens), is thought to protect the macula from light-induced damage.

Zinc: Zinc has antioxidant activity, stabilizes cell membranes, and provides the cofactor for many enzymes involved in visual function. Research demonstrates that high levels of a zinc antioxidant enzyme, “protect mitochondria from oxidative damage that probably occurs with aging in the retinal pigment epithelium” (Invest. Ophthal. Vis. Sci. 1992, 33:1909-18). Zinc is also the important nutrient in the “zinc fingers” which is an integral part of gene expression. The Proceedings of the National Academy of Sciences reported that an eye-specific enzyme (containing these zinc fingers) is necessary to prevent rod degeneration (the eye is made up of rods and cones) (Proc. Nat. Acad. Sci. 1993, 90:11157-61).

Vitamins: Vitamin D aids in calcium absorption for healthy tissue maintenance. Sometimes eye conditions dictate avoidance from UV light, which is one of the main sources of vitamin D production by the body. Riboflavin is very easily destroyed by UV light, and is essential for cellular repair. Folic acid is also necessary, playing an important role in DNA/RNA synthesis.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 42,85

**Vegetarian:** No

**Contraindications:** None known.
TOTAL FEMALE

**Ingredients**: Each tablet supplies: Dong Quai 52.5mg, Black Cohosh 25mg, Red Raspberry 52.5mg, Licorice Root (deglycerized) 25mg, Wild Yam Root 35mg, Red Clover 36mg, Vitus Agnus Castus (Chaste Tree Leaves & Berries) 100mg, Damiana 30mg, Motherwort 30mg, Pregnenolone 5mg, Gota Kola 20mg, American Ginseng (Panax) 30mg, Avena Sativa 30mg, Lemon Bioflavonoids 50mg, Chlorella (fractured) 20mg, Flaxseed 20mg, Burdock Root 10mg, Vitamin C 25mg, Vitamin A 1000i.u., B-1 1.5mg, B-2 1.8mg, B-6 3mg, B-12 100mcg, Niacin 5mg, Pepsin 1:3000 5mg, Amylase (veg source) 5mg, Lipase (veg source) 5mg, Magnesium Malate 20mg, Zinc Chelate 5mg, Boron Chelate 1mg, Selenium Chelate 20mcg, Potassium Chelate 10mg.

Supportive Function: This formula provides comprehensive nutritional support for Female Health.

**When is female support helpful?** Endocrine Balance, Libido, Vaginal & Breast Health, Menstruation & Menopause.

**Clinical Applications/Research:**

**Dong Quai** enhances the effects of ovarian hormones. It is used to treat vaginal dryness, premenstrual syndrome, hot flashes, and other menopausal symptoms. It has effective ginseng properties to balance female hormones, improve circulation, relieve stress, and purify and strengthen blood (Rector-Page 1991:162).

**Black Cohosh** helps alleviate painful menstrual cramps and enhance estrogen levels. In a clinical study comparing Black Cohosh to synthetic estrogen replacement therapy after hysterectomy, Black Cohosh was shown to be equally effective. It is used to help relieve endometriosis.

**Red Raspberry** helps alleviate menstrual cramps, morning sickness, and hot flashes. Red Raspberry has been shown to decrease menstrual bleeding, to relax uterine and intestinal spasms, and strengthen uterine walls. It also promotes healthy nails, bones, teeth, and skin.

**Licorice Root (deglycerized)** helps enhance estrogen levels, has estrogen and progesterone-like effects, helps reduce spasms, helps stimulate the production of interferon, and may stimulate natural defense mechanisms that increase the amount of mucous secreting cells in the GI tract.

**Wild Yam Root** is a good source of sterol compounds similar to progesterone. It contains a natural steroid called dehydroepiandrosterone (DHEA), which has been found to rejuvenate and enhance lovemaking. The root is used in the treatment of uterine fibroids, premenstrual syndrome, and for menopause-related symptoms. It helps relax muscle spasms and is said to be beneficial for many female disorders helping relieve mood swings, depression, irritability, insomnia, headaches, and cramps.

**Red Clover** is used in the treatment of fibrocystic breasts. It acts as a relaxant, appetite suppressant, mild antibiotic, blood purifier, and anti-inflammatory for skin, bowels and lungs. It is a rich herbal vitamin and mineral source of bioflavonoids, isoflavonoids, folic acid, biotin, choline, inositol, pantothenic acid, vitamins A, B-1, B-2, B-3, B-6, B-12, C, and copper, magnesium, manganese, selenium, and zinc.

**Vitus Agnus Castus (Chaste Tree Leaves & Berries)** has hormone balancing effects, helps treat long-term PMS symptoms, irregular or painful menstruation, alleviates hot flashes, and is used in the treatment of fibroids in uterine tissue, fibrocystic breasts, and endometriosis.

**Damiana** improves blood flow to the genitals. It is known as a sexuality tonic for women. It helps balance hormones for both sexes and acts as a tonic for the hormone system. It helps enhance libido, elevate mood, and raise sexual potency by increasing oxygen to the genital area. Damiana's alkaloids directly stimulate nerves and organs with a testosterone-like effect. Damiana provides nutritional support for both sexual organs and sexual pleasure.

**Motherwort** helps alleviate palpitations and anxiety accompanying hot flashes. It is used to alleviate endometriosis.

**Pregnenolone** converts into DHEA that helps produce estrogen and other sex hormones, stimulate bone deposition, and prevent osteoporosis. It enhances the immune system, memory, and promotes longevity. It may help prevent breast cancer, arterial disease, and other age-related conditions.
Gota Kola helps alleviate hot flashes and palpitations associated with menopause. It helps increase sex drive, helps eliminate excess fluids, shrink tissues, decreases fatigue and depression.

American Ginseng helps strengthen the reproductive and adrenal glands, alleviate hot flashes and stress, enhance fertility, and help stimulate the immune system.

Avena Sativa helps reduce water retention, promote relaxation, and alleviates insomnia.

Lemon Bioflavonoids are mildly estrogenic and help balance estrogen levels: they bind with estrogen receptor sites to increase estrogen when levels are low or reduce estrogen levels when excessively high. Bioflavonoids can also help with the heavy bleeding of perimenopause. High bioflavonoid consumption is associated with cultures that experience lower rates of breast cancer and few menopausal symptoms. Bioflavonoids help prevent fibroids by reducing high estrogen levels.

Chlorella (fractured), a micro-algae, is a vitamin-antioxidant-mineral rich nutritive tonic that accelerates tissue building and repair. It helps build blood and supports liver function.

Flaxseed is mildly estrogenic and rich in minerals needed by postmenopausal women. Flaxseed is also high in essential fatty acids (EFAs): deficiencies of EFAs are partly responsible for skin, hair, and vaginal dryness, as well as other mucous membranes.

Burdock Root is used to alleviate the symptoms of menopause.

Vitamin C is important in coping with stress and in maintaining normal glandular function. Vitamin C may aid in alleviating breast swelling and discomfort. Vitamin C is a powerful antioxidant that protects other antioxidants helping to promote arterial health and preserve blood flow to the genitals and other tissues.

Vitamin A may help increase progesterone levels. It helps protect the tissues of the genitourinary tract. Vitamin A, a powerful free radical scavenger, aids in maintaining a healthy immune system, healthy mucus membranes, and keeps the outer layers of sexual glands and tissues healthy.

B-1 is necessary for hydrochloric acid formation, proper digestion, and enhances circulation necessary for normal clitoral erectile function.

B-2 deficiency can present as poor digestion. B-2 maintains and improves the mucous membranes in the digestive tract. It is necessary for antibody production, cell respiration, and growth.

B-6 can alleviate symptoms of PMS. In animal studies, B-6 reduced the effects of estrogen: excess estrogen levels may be responsible for PMS symptoms. It not only helps in restoring estrogen levels to normal, but also increases oxygen flow to female organs, and reduces water retention. The need for B-6 increases with birth control pills.

B-12 helps prevent anemia, reduce stress, and is necessary for all bodily functions. B-12 is needed for proper digestion and absorption of nutrients. B-12 helps maintain fertility, cell formation, and the proper metabolism of carbohydrates and fats.

Niacin is necessary for the synthesis of sex hormones, improves circulation, and helps prevent muscular weakness.

Pepsin is a proteolytic enzyme that enhances the digestion of proteins, acts as anti-inflammatory, and aids in the treatment of food allergies.

Amylase (vegetable source), enhances the digestion of carbohydrates.

Lipase (vegetable source), enhances the digestion and extraction of nutrients from fats.

Magnesium Malate may help reduce PMS symptoms. Magnesium is frequently deficient in women subject to PMS. Magnesium helps prevent the calcification of soft tissue, protect the arteries from stress damage, and prevents cardiovascular problems, which can restrict blood flow to the genitals and sexual organs. Malate helps promote aerobic glycolysis, the most efficient mode of energy production for maintenance and repair of organs.

Zinc deficiency can result in impaired sexual functions.

Boron helps increase natural estradiol, estrogen, testosterone, and vitamin D levels. It enhances the uptake and spares the loss of calcium, magnesium, and phosphorous from the body helping prevent osteoporosis. Low levels of boron in tissues have also been linked to lower hormonal levels (Samman, S, et al, Biol Trace Elem Res Winter 1998; 66(1-3):227-35).

Selenium is an important trace mineral associated with hormone balance. Selenium helps prevent the oxidation of fats implicated in fatty plaque obstruction of blood flow to the sexual organs and genitals. Deficiency is associated with sterility.

Potassium supplementation helps replace potassium lost through perspiration in hot flashes.
**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 37,20

**Vegetarian:** No

**Contraindications:** Do not use in pregnancy/lactation.
**TOTAL FLAXSEED OIL**

**Ingredients:** Each Capsule Contains: Cold Pressed Flaxseed Oil 1000mg.

**Supportive Function:** One of the best natural sources of omega-3 essential fatty acids, also found in cold water fish such as albacore tuna, ocean-run salmon, and orange roughy. Flaxseed oil contains alpha-linolenic acid (ALA), while fish oil contains eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) that ALA is converted into in the body. Omega-3 EFA’s may help prevent blood clotting.

**When is flaxseed oil helpful?** Inflammation, skin condition (psoriasis, eczema, acne and dermatitis), allergies, heart disease, hypertension, premature aging, autoimmune disorders, ulcerative colitis (connection to vitamin D deficiency), neonatal development, arthritis, immune impairment, Alzheimer’s, dementia, PMS, menopause and fibrocystic breast disease.

**Clinical Applications/Research:** Flaxseed Oil: There are many signs and symptoms associated with EFA deficiency. These include dry skin and hair, cracked nails, fatigue, lack of endurance, dry mucous membranes, depression, constipation, digestive complaints, immune deficiency, aching joints, forgetfulness, arthritis, cardiovascular disease, hypertension, and angina. Allergy problems usually respond well to EFA’s. Many health conditions respond favorably to EFA supplementation (listed above).

Flaxseeds are high in both omega-3 fatty acids and lignans. Lignans are special compounds, which have shown some promise in relieving hot flashes, and containing antiviral, antibacterial, antifungal and anticancer properties. The gut flora converts the plant lignans into enterolactone and enterodiol, two compounds shown to have protective effects against breast cancer. Lignans bind to estrogen-receptor sites, preventing the cancer-promoting effects of estrogen on breast tissue.

**Note:** Flaxseed oil must be converted from alpha-linolenic acid and elongated to EPA and DHA using the delta-6 desaturase enzyme. This enzyme needs zinc, B6 and magnesium to function effectively. Trans fatty acids, saturated fats and alcohol also inhibit this enzyme.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 capsules

**Price:** € 33,90

**Vegetarian:** Yes

**Contraindications:** None known.
TOTAL GREEN
(PROTEIN POWDER)

**Ingredients:** Whey Protein 5,460 mg (18% Glycomacropeptide); Certified Organic sprouts: Asparagus sprouts 63 mg; Broccoli sprouts 63 mg; Cauliflower sprouts 63 mg; Wheat Grass sprouts 63 mg; Spirulina 126 mg, Chlorella (broken cell) 21 mg, Kelp 21 mg, Medium chain triglycerides, Chia seed 21 mg, Apple Pectin 168 mg, Beta Sitosterol 42 mg; Rosemary 42 mg, Parsley 84 mg, Carrots (freeze dried powder) 63 mg; Papaya 42 mg; Cloves 8.4 mg, Lactobacillus Acidophilus (enteric coated) 37,000 units, Lactobacillus Bulgaricus (enteric coated) 37,000 units, Protease (vegetable) 42 mg. Xylitol 42 mg, Luo Han Guo 10 mg, Lecithin 126 mg, Rice Bran 840 mg, Rose Hips 252 mg, Calcium (as Citrate) 16.8 mg, Magnesium (as Citrate) 16.8 mg, Yellow Dock 63 mg, Milk Thistle 63 mg.

**Calories:** 37; **Protein:** 5.86 g; **Fat:** 0.72 g; **Carb.:** 0.228 g

**Supportive Function:** For general health, supports all biochemical reactions in the body, provides vitamins, minerals, accessory nutrients, antioxidants, phytochemicals, etc. for a healthy profile and optimal function of all processes.

**When is Total Green Protein helpful?** Any condition that can be improved with comprehensive nutritional support. Supports energy, protein balance, detox, inflammation, weight, cholesterol levels, a strong immune system, intestinal homeostasis/bowel function, cell repair, and overall good health!

**Clinical Applications/Research:**

**Whey Protein** is an excellent source of protein to provide all the precursors for enzymes, cell receptors, hormones, and other biologically active compounds. Whey protein is believed to increase glycogen content in liver and skeletal muscle, which has implications for energy production and fitness capacity (Morifuji M. et al. 2005). Whey protein has even demonstrated antibacterial and antiviral effects (Sitohy M. et al. 2005). Whey contains one of the most bioavailable sources of calcium, and its beneficial effect on bone metabolism has been shown in adult humans, and is also believed to affect bone metabolism in earlier life (Kelly O. et al. 2003).

**Whey protein also has high anti-inflammatory potential** and has been utilized to help reduce the inflammation in critically ill trauma patients receiving enteral nutritional support; C-reactive protein concentrations (marker of inflammation) and total inflammatory index dramatically fell in one study (Vehe KL et al. 1991).

The whey protein source used for Total Green Protein has an 18% glycomacropeptide content (GMP). The biological activity of GMP “has received much attention in recent years. Research has focused on the ability of GMP to bind cholera and Escherichia coli enterotoxins, inhibit bacterial and viral adhesion, promote bifidobacterial growth and modulate immune system responses” (Brody E.P. 2000). In describing GMP, the Journal of Nutrition reports that the “magnitude of the anti-inflammatory effect was comparable to that of sulfasalazine, an established drug used in the treatment of Inflammatory Bowel disease”, and that GMP “acts as an anti-infectious factor, promoting the growth of bifidobacteria while inhibiting the proliferation of pathogens. In addition, GMP may combat infection by binding to lectins, viruses, and mycoplasma” (J Nutr 2005).

**Certified Organic Sprouts:** All sprouts in Total Green Protein are certified organic and free of toxic residues. Sprouts are one of the richest source of food enzymes, vitamins, mineral and phytochemicals available to us. As powerful and as protective as the cruciferous vegetables are, the sprouts are even more potent - researchers at Johns Hopkins University reported that sprouts from cruciferous vegetables can exhibit 10-100 times higher levels of the protective ingredients than the corresponding mature plants (Fahey J. et al. 1997). “Small quantities of cruciferous sprouts may protect against the risk of cancer as effectively as much larger quantities of mature vegetables of the same variety” (Fahey 1997). The healthful phytochemicals in sprouts include carotenoids, flavonoids, chlorophyll, indoles (indole-3-carbinol; DIM), glucosinolates, dithiolthiones, isothiocyanates, isoflavones, glycosides, phenols, glucoraphanin and sulphoraphane).
Broccoli Sprouts contain many of the beneficial phytochemicals, but are particularly high in sulforaphane, one of the key phytochemicals that induces key protective enzymes in tissues, especially the liver, that “enhance an already present capacity to detoxify carcinogens” (Fahey, J. 2003). Researcher Jeff Fahey also points out that the broccoli seed, and therefore the sprout, is the most concentrated source of the phytochemical sulforaphane, because the compound becomes diluted as the plant matures. Research has found the sulforaphane in broccoli sprouts to be a potent anti-bacterial agent effective in inhibiting the highly resistant stomach bug, Helicobacter pylori, and is also effective in “blocking gastric (stomach) tumor formation” (Fahey JW, et al. 2002).

Cauliflower is a cruciferous vegetable high on the list of recommended foods compiled by the American Cancer society that contain the protective sulforaphane. Cauliflower sprouts contain high amounts of sulforaphane, unlike the mature plant that is relatively low in sulforaphane. Total Green Protein contains organic cauliflower sprouts, even though, as researcher Jeff Fahey comments: “Cauliflower sprouts are exceedingly expensive to produce (Jeff W. Fahey, Ibid, p. 2). The indoles in cauliflower sprouts are believed to be responsible for strengthening the immune system, enhancing detoxification, and protecting the GI tract.

Wheat Grass sprouts are high in many of the beneficial nutrients characteristic of sprouts. Dr. Ann Wigmore, Hippocrates Health Institute, Boston, compares 1 pound of wheatgrass (high in chlorophyll) to the nutritional value of 25 pounds of the best vegetables.

Spirulina, Chlorella and Kelp are beneficial, healthful green algae nutrients. Spirulina is a particularly rich source of proteins, vitamins, amino acids, minerals, and other nutrients. Spirulina has been proven to be, “effective to treat certain allergies, anemia, cancer, hepatotoxicity, viral and cardiovascular diseases, hyperglycemia, hyperlipidemia, immunodeficiency, and inflammatory processes, among others” (Chamorro G. et al. 2002 Sep;52(3):232-40). These activities are attributed to some of the components in spirulina, including a recently isolated complex called Ca-Spirulan. Spirulina and chlorella have both been found to have antioxidant and antiproliferative qualities in rigorous scientific testing (Wu, L.C. et al. 2005). Kelp helps to regulate function of the thyroid and pituitary glands, and assists many other organs, such as pancreas, adrenals, and male and female organs. It also has antibiotic properties and is reported to help in weight regulation (Heinerman, John. 1988).

Medium chain triglycerides (MCT) are known to have a favorable effect on lipid levels, insulin, and body weight, and gut inflammation. Subjects on a MCT diet demonstrated significant decreases in body fat weight (Nosaka N. 2003). MCT are believed to decrease fat pads, down regulate key fat genes, improve insulin sensitivity/glucose tolerance, reduce enzymes affecting cholesterol and lipid levels (Han J. et al. 2003).

Apple Pectin contains soluble fiber that releases hormones signaling satiety (fullness), which can reduce hunger. Apple pectin slows absorption of glucose/food from the intestines, binds toxins, supports healthy cholesterol levels and normalizes bowel function. Pectin protects the stomach lining by strengthening the mucus layer and significantly inhibits ulcer formation (Nippon Shokakibyo Gakkai Zasshi 1991). The high fiber content supports normal appetite and weight balance.

Luo Han Guo, or Lo Han Kuo (from the Momordica grosvenori fruit) is a novel, natural sweetener that has many beneficial, health-promoting properties. The sweet elements, called triterpene glycosides, actually suppress the rise in blood glucose after a meal! (Suzuki YA t. al. 2005). Researchers have found the natural sweetener to exhibit significant anti-tumor activity by decreasing both initiation and promotion (Ukiya M. et al. 2002). Additionally, it prevents the oxidation of LDL (bad cholesterol) and may reduce the risk of heart disease by reducing the atherogenicity of the LDL (Takeo E. et al. 2002). Researchers have determined that it possesses many advantages, such as having high sweetness capability with low adherence (good news for the teeth!) (Mu, J. 1998; Lee, C. 1975).

Parsley & Carrots (freeze dried powder): These healthful plants are both high in phytochemicals and enzymes. Parsley is an excellent cleanser and assists in digestion. It is well known for being a tonic for the blood vessels and a good blood purifier. Carrot fiber increases and softens stool bulk, improves regularity, and helps keep the colon healthy. Carrot consumption is also connected with lower cholesterol levels. High betacarotene foods, especially carrots, help promote the health of many organ systems (Colditz GA et al, 1987).

Protease is a type of digestive enzyme that helps to break down protein so that we can extract an optimal amount from our food. Protease enzymes also optimize digestive processes and reduce allergic reactions (antibodies do not form against individual amino acids) and other problems of incomplete digestion.
Milk Thistle and Yellow Dock are detoxifying and tonifying herbs. Milk thistle contains silymarin and silybin, powerful antioxidants and cell protectors, especially in the liver (Shalan MG et al. 2005) Silymarin increases glutathione levels (a major detoxifying and conjugating nutrient). Yellow dock cleanses the skin and the blood, two of the major detox routes in the body. Yellow dock is antifungal, and has also exhibited antioxidant capabilities (Kim, JC et al2004; Yildirim A et al 2001.)

Lactobacillus acidophilus and Lactobacillus bulgaricus (enteric-coated) are probiotics that are helpful in maintaining a healthy balance of good gut flora in the intestines, supporting the immune system. Probiotic administration during remission of inflammatory bowel disease reduces the severity of recurrent colitis by inducing an immunoregulatory response (DiGiacinto C. et al2005).

Chia seed, high in omega 3’s, has many antioxidant and health benefits (Yen WJ et al. 2005). On diets with chia seed included, weight reductions up to 6.2% have been recorded (Averza R. et al 2002).

Clove possess many medicinal properties, including antibacterial and antimicrobial activity (Bagamboula CF et al. 2001; Lai PK & Roy J.) Clove also have “antioxidative, antimitagenic and anticarcinogenic properties” (Sengupta A. et al 2004)

Papaya is rich in phytochemicals, antioxidants, and contains papain, a helpful digestive enzyme. Papaya and rose hips, also rich in phytochemicals, are two of the few plant substances containing high amounts of the potent antioxidant lycopene (Mourvaki E, et al. 2005).

Rice bran is high in fiber, has antioxidant properties, and lowers post-prandial glucose concentrations, making it an excellent candidate for cholesterol and weight support (Seki T et al. 2005). Gamma oryzanol is derived from rice bran.

Xylitol is a natural sugar alcohol; we produce up to 15 grams of xylitol from food sources; some of the best sources are fruits and berries. Xylitol can also stimulate saliva, the natural tooth protector. A number of studies have demonstrated that xylitol is antibacterial and anticariogenic (fights cavities) (Sahni PS et al. 2002)

Anti-inflammatory, natural cox-2 inhibitors: Cox 2 is the enzyme that causes inflammatory substances to be produced in the body and is also the enzyme targeted by the cox-2 inhibitor drugs (some of these drugs were pulled from the market). The following nutrients all inhibit cox-2 naturally:

Rosemary reduces pathogenic substances such as bacteria, raises detoxification enzymes in the liver, and decreases inflammation and liver cell injury (Ahn J. et al. 2004; Sotelo-Felix JI, et al. 2002). Carnosol, rosmanol, and epirosmanol, are all components of the rosemary herb and all demonstrate high antioxidant activity (Zeng HH, et al. 2001). Carnosol is a potent inhibitor of cox 2 (Subbaramaiah K. et al. 2002).

Beta Sitosterol is a plant sterol possessing “anti-inflammatory, antipyretic (fever-reducing), antineoplastic, and immune-modulating properties, showing promise in normalizing T-cell function, dampening overactive antibody responses (uncontrolled autoimmune response), and normalizing DHEA:cortisol ratios (abnormal ratios can lead to disease) (Bouic PJ et al. 2001). Beta-sitosterol also decreases the inflammatory PGE2 prostaglandin, with the mechanism believed to be alteration of the cox-2 enzyme (Awad AB et al. 2004). It is one of the ingredients in grape skin extract that gives it its anti-inflammatory properties (Zhang Y. et al. 2004).

Testimonials/Nutrient Tidbits: I LOVE the green drink!!! You have created the protein shake I've been waiting for. Here's my favorite so far: Celestial Seasoning Decaf Teahouse Chai (made the night before) for the liquid part. I add probiotics & a banana in with the green stuff. Mmmm.... :-} (Halimah Chambers).

Suggested Dosage: 1 Tbsp (or more if desired) mixed in water, juice, rice milk, etc. Can be blended with fruit and milk in the blender. Also good sprinkled on salad or blended with yogurt.

Size: 16 oz.
Price: € 49,50
Vegetarian: No
**Contraindications:** Total Green is high in vitamin K, so caution is indicated with blood-thinning drugs. Should not be used by whey-sensitive people. The components of whey include lactoferrin, beta-lactoglobulin, alpha-lactalbumin, glycomacropeptide, bovine serum albumin and immunoglobulins. Those sensitive to dairy may be sensitive to the whey portion, however, that does not mean that all of those sensitive to dairy will necessarily be sensitive to the whey portion.

**DAILY DETOX DELIGHT recipe**:  
1-cup vanilla flavored rice milk  
2 Tbsp Total Green protein powder  
2 tsp. walnut oil  
½ cup frozen organic blueberries  
(Strawberries/mixed fruit is good)  
1 banana  
2 capsules Total Systemic Detox, opened & Emptied into shake  
Blend all ingredients and enjoy!  
**For other shake ideas, see your NW distributor for newsletters and fact sheets (shake idea fact sheets are on the NW-Brimhall article CD).**
TOTAL HEART

Ingredients: Each Tablet Supplies: Crataegus Oxycantha Extract (hawthorne) (berry) 50mg, Heart 100mg, Spleen 40mg, Co-Enzyme Q-10 2mg, Vitamin C (sago palm) 100mg, Vitamin E (as succinate) 50 i.u., Magnesium (as Chelate) 20 mg., Selenium (as Chelate) 50 mcg, Potassium (as Chelate) 20 mg., L-Taurine 50 mg., L-Arginine 50 mg., L-Carnitine 20mg.

Supportive Function: Synergistic heart support is boosted with other ingredients, including the electron-carrier nutrient Co-enzyme Q-10, a vitamin-like molecule best known for its supporting actions on energy, circulation, and the heart. Supports heart health, and the health of the vessels.

When is Total Heart helpful? Support for heart health and all cardiovascular functions; such as blood pressure, workload capacity, etc.

Clinical Applications/Research: Vitamin C has been shown to reverse arteriosclerosis in humans (Rath & Pauling, Proceed of N Academy of Sci of the USA, Aug 1990; 87 (16): 125-134). Vitamin C is essential to maintain and repair the integrity of arteries, may help prevent the oxidation of cholesterol by protecting against free radicals, and has been shown to boost the immune system (Cameron & Pauling, 1982; Cordoba, 1982; Leibovitz & Steigal, 1978; Pauling, 1970). Vitamin E: In European population studies, those with low serum levels of vitamin E were shown to be at greater risk from heart disease than those with high cholesterol levels and high blood pressure (Gey et al, “Inverse Correlation between Plasma Vitamin E and Mortality from Ischemic Heart Disease in cross-cultural Epidemiology,” (Am J of Clin Nutri Jan 1991; 53 (1): 326S-334S). Vitamin E supplements may inhibit platelet formation, prevent blood clots, and help repair the lining of blood vessel cells (Hennig et al, “Protective Effects of Vitamin E in Age-Related Epithelial Cell Injury,” International J of Vitamin & Nutri Research 1989; (59): 273-279). In one Harvard Medical School Study of 87,245 female nurses, those who took 100 i.u. of vitamin E for more than 2 years had a 46% lower risk of developing heart disease (Stampfer et al, “Vitamin E and Heart Disease Incidence in the Nurses Study,” Am Heart Assoc Annual Meeting, Nov 18, 1992). Another Harvard study of 39,910 male health professionals, who took 100 i.u. of vitamin E for an undisclosed period of time, had a 37% lower risk of heart disease (Rimm et al, “Vitamin E and Heart Disease Incidence in the Health Professionals Study,” Am Heart Assoc Annual Meeting, Ibid.). Magnesium: People who die suddenly from heart attacks have been found to have lower levels of magnesium and potassium than controls (Wood et al, Lancet Jul 1984; 2 (8395): 117-21). Magnesium may help dilate arteries and ease the heart’s pumping of blood, which may help prevent irregular heartbeats. It can help raise HDL cholesterol, lower total cholesterol, inhibit platelet aggregation, and help prevent calcium deposits in blood vessels (Seelig & Heggtveit, Am J Clin Nuti 1974; 27: 59-79). Selenium is a co-factor in an antioxidant enzyme, glutathione peroxidase, and is reported to strengthen the immune system. Low serum selenium has been associated with higher incidence of cardiovascular disease (Salonen et al, Brit Med J Mar 1991; 302 (6779): 756-760). Supplementation of selenium has been shown to reduce platelet aggregation (Stead et al, Am J Med Sci Dec 1985; 290 (6): 228-233). Potassium: heart muscle deficiency in potassium has been associated with irregular heartbeats, EKG abnormalities, and decreased tolerance to cardiac medications. Potassium is reported to reduce a patient’s reliance on blood pressure and diuretic drugs (NE Ctr for Env. Med. Health Letter, Fall 1992). Hawthorne Berry extract may help increase blood flow to the heart by dilating blood vessels, increasing the strength of heart contractions, and relieving spasms of arterial walls. The extract has been reported to reduce the production of the blood vessel constricting substance angiotensin II (Weiss, Herbal Medicine, 1988). Heart: heart tissue supplies whole nutritional support to strengthen the heart, including co-enzyme Q-10. Co-enzyme Q-10 concentration in heart and heart tissue is 10 greater than in brain or colon tissue. Spleen tissue supplies nutritional support factors to help enhance the spleen’s role in immune functions. Co-Enzyme Q-10 has been shown to have antioxidant properties protecting against oxidized cholesterol. It has been demonstrated to scavenge free-radicals produced by lipid peroxidation, stabilize cellular membranes, and prevent depletion of metabolites necessary for resynthesis of ATP in mitochondria (Beyer, 1985). It helps strengthen

**L-Carnitine** deficiency has been reported to be a common feature of heart disease. Supplemental L-Carnitine helps enhance cardiac function in human and animal studies. It has been successfully used to treat heart disease, cardiac arrhythmia, and angina pectoris. It has also been shown to lower triglyceride levels and increase beneficial HDL cholesterol levels in humans (Leibovitz, *Carnitine, The Vitamin BT Phenomenon*, NY, Dell, 1984). L-Carnitine has been reported to support both energy production and cardiovascular health. It has been reported successful in combating fatigue and increasing stamina by utilizing the body’s ability to use fat for energy. Deficiencies can cause symptoms of muscle weakness, severe confusion, and angina (Bazzato, 1981; Dipalma, 1988).

**L-Taurine** is reported to help the heart pump and regulate heartbeat. It is a by-product of homocysteine metabolism, when homocysteine is broken down correctly. Supplemental taurine has been reported to help those with congestive heart failure and prevent digitalis-induced arrhythmia. Taurine spares the loss of potassium from heart muscle and is thought to regulate the osmotic flow of calcium and potassium in heart muscle.

**L-Arginine** may enhance immune function. Arginine is a precursor of nitric oxide, which may help dilate blood vessels and increase the flow of oxygen to the heart. In rabbit studies, arginine has been shown to reduce hypercholesterolaemia and atherosclerosis (Chaitow, 1988: 44-48).

**Testimonials/Nutrient Tidbits: Tidbit:** For those who may be sensitive to Hawthorne berries, Total Heart II does not contain that herb. The dimethylglycine and folic acid in Total Heart II will additionally support the homocysteine pathway.

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 40,15

**Vegetarian:** No

**Contraindications:** Hawthorne berries are used with caution concomitantly with ACE inhibitors (the berries also have some ability to inhibit ACE, a vasoconstrictor.)
TOTAL HEART II

**Ingredients:** Each tablet contains: Heart 100mg, Spleen 40mg, Co Enzyme Q-10 2mg, Vitamin C 100mg, Vitamin E (natural succinate) 100 i.u, NN-Dimethylglycine 25mg, Folic Acid 50mcg

**Supportive Function:** Synergistic heart support is boosted with other ingredients, including the electron-carrier nutrient Co-enzyme Q-10, a vitamin-like molecule best known for its supporting actions on energy, circulation, and the heart. Supports heart health, and the health of the vessels.

**When is Total Heart II helpful?** Support for heart health and all cardiovascular functions; such as blood pressure, workload capacity, etc.

**Clinical Applications/Research:** Vitamin C has been shown to reverse arteriosclerosis in humans (Rath & Pauling, *Proceed of N Academy of Sci of the USA*, Aug 1990; 87 (16): 125-134). Vitamin C is essential to maintain and repair the integrity of arteries, may help prevent the oxidation of cholesterol by protecting against free radicals, and has been shown to boost the immune system (Cameron & Pauling, 1982; Cordoba, 1982; Leibovitz & Steigal, 1978; Pauling, 1970).

Vitamin E: In European population studies, those with low serum levels of vitamin E were shown to be at greater risk from heart disease than those with high cholesterol levels and high blood pressure (Gey et al, “Inverse Correlation between Plasma Vitamin E and Mortality from Ischemic Heart Disease in cross-cultural Epidemiology,” *Am J of Clin Nutri* Jan 1991; 53 (1): 326S-334S). Vitamin E supplements may inhibit platelet formation, prevent blood clots, and help repair the lining of blood vessel cells (Hennig et al, “Protective Effects of Vitamin E in Age-Related Epithelial Cell Injury,” *International J of Vitamin & Nutri Research* 1989; (59): 273-279). In one Harvard Medical School Study of 87,245 female nurses, those who took 100 i.u. of vitamin E for more than 2 years had a 46% lower risk of developing heart disease (Stampfer et al, “Vitamin E and Heart Disease Incidence in the Nurses Study,” Am Heart Assoc Annual Meeting, Nov 18, 1992). Another Harvard study of 39,910 male health professionals, who took 100 i.u. of vitamin E for an undisclosed period of time, had a 37% lower risk of heart disease (Rimm et al, “Vitamin E and Heart Disease Incidence in the Health Professionals Study,” Am Heart Assoc Annual Meeting, Ibid.). As a natural antioxidant, supplementation may also protect against the cardiotoxic effects of alcohol and cardiomyopathy caused by magnesium deficiency.

Heart: heart tissue supplies whole nutritional support to strengthen the heart, including co-enzyme Q-10. Co-enzyme Q-10 concentration in heart and heart tissue is 10 greater than in brain or colon tissue.

Spleen: tissue supplies nutritional support factors to help enhance the spleen’s role in immune functions.

Co-Enzyme Q-10 has been shown to have antioxidant properties protecting against oxidized cholesterol. It has been demonstrated to scavenge free-radicals produced by lipid peroxidation, stabilize cellular membranes, and prevent depletion of metabolites necessary for resynthesis of ATP in mitochondria (Beyer, 1985). It helps strengthen the heart muscle and the cardiovascular system in many heart patients. (Dolkers et al, 1985). Co-enzyme Q-10 may protect against atherosclerosis (Hanaki et al, *New Eng J of Med* Sept 1991; 325 (11): 814-5).

Dimethylglycine (betaine in red beets) and Folic Acid reduce homocysteine, which can be toxic to the cardiovascular system. Dimethylglycine is a methylator for important biological functions, including synthesis of brain neurotransmitters.

**Testimonials/Nutrient Tidbits:** Tidbit: For those who may be sensitive to Hawthorne berries, Total Heart II does not contain that herb. The dimethylglycine and folic acid in Total Heart II will additionally support the homocysteine pathway.

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 90 Tablets

**Price:** € 42.85

**Vegetarian:** No

**Contraindications:** None Known.
TOTAL INFLAM

**Ingredients:** Each Tablet Supplies: Boswellia Serrata (70% Boswellia Acids Standardized) 50mg, Turmeric (95% Curcuminooids Standardized) (herb) 30mg, Ginger (5% Gingerols Standardized) (herb/root) 20mg, Cayenne (fruit) 1mg, Lemon Bioflavonoids 20 mg, Lipoic Acid 1mg, Quercetin 5 mg, Glutathione 2mg, Silymarin Extract 80% (20% Silybin Standardized) 5mg, Milk Thistle (leaf/seed) 50mg.

**Supportive Function:** Natural substances that have reported anti-inflammatory effects, with decades of anecdotal history. For joint and ligament support we recommend you add TOTAL CMO.

**When are inflammatory herbs helpful?** Any site of inflammation, trauma, surgery, swelling, redness, acute arthritis pain, ovarian cysts, sinus infections, etc.

**Clinical Applications/Research:**

- **Ginger** is an herb known mostly for its therapeutic effect in nausea. Ginger also has powerful abilities to combat inflammation, and these anti-inflammatory effects are well backed by scientific studies. Ginger contains phenolic compounds that inhibit the enzymes responsible for generating important mediators of pain and inflammation in more than one pathway (Kiuchi et al. Inhibition of prostaglandin and leukotrienes biosynthesis by gingerols and diarylheptanoids. Chem Pharm Bull. 1992; 40:387-91).

- **Turmeric** is a root belonging to the ginger family, in which the rhizome part is used in many flavorings but most noticeably in curry powder. Research has demonstrated excellent anti-inflammatory and antioxidant properties of turmeric, and especially of curcumin, which is the active component of turmeric that is responsible for the yellow pigment (Reddy AP & Lokesh, BR. Mol Cell Biochem. 1992; 111-117). The anti-inflammatory properties are due to the ability of curcumin to reduce histamine levels and possibly increase natural cortisone production by the adrenal glands (Aora RB, Basu N, Kapoor V, Jain AP. Anti-inflammatory studies on Curcuma longa (turmeric). Ind.J.Med Res. 1971:59:1289-95).

- **Milk thistle** has always had a strong reputation for supporting liver function and pathways of detoxification. Removal of wastes and toxins is crucial in decreasing inflammation. Silymarin, which is one of the main ingredients in milk thistle, has an anti-inflammatory effect on blood platelets (Altorjay I et al. Acta Physiol Hung 1992; 80:375-80), and the ability to inhibit free radical production and leukotrienes synthesis means that it prevents the powerful, inflammatory leukotrienes from wreaking havoc in the body (Alareon de la Lastra, C. et al. Planta Medica 1995; 61:116-119; Fiebrich F and Kock H. Experientia 1979; 35:148-150).

- **Boswellia serrata** is reported to have strong analgesic (pain-relieving) effects (Kar, A. & Menon, M.K. Life Sci. 1969; 8:1023), along with anti-inflammatory and antiarthritic activity. Clinical trials in India report beneficial results on arthritic patients, and boswellic acids are marketed as antiarthritic drugs in India (Handa, S.S. et al. Fitoterapia. 1992; 63(1): 3).

- **Bioflavonoids** are plant nutrients with healthful properties. Bioflavonoids in general operate to stabilize cell membranes, decrease the release of inflammation mediators, inhibit the inflammatory process, decrease the contraction of smooth muscle (Amella et al. Inhibition of mast cell histamine release by flavonoids and bioflavonoids. Planta Medica 1985; 51:16-20), as well as improve capillary integrity (decrease permeability) and stabilize the collagen matrix by preventing free radical damage (Merck Index, 11th ed. 1989, Merck & Co. Rahway, New Jersey, p.1243).

- **Quercetin** is a potent bioflavonoid - in fact, it has been named, "the most important flavonoid" by a leading peer-reviewed journal (Nutr. Cancer 1993, 20:21-9). It is a powerful antioxidant, and Michael Murray suggests that, "quercetin appears indicated in virtually all inflammatory and allergic conditions" (Murray, M. Encyclopedia of Nutritional Supplements, 1996, Prima Publ., Rocklin, Ca. p. 327).

- **Lipoic acid** is an excellent antioxidant that also binds heavy metals and toxins, thereby removing many of the substances that can cause and/or aggravate inflammation.

**Testimonials/Nutrient Tidbits:** Many doctors report...this product is great for chronic inflammation.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 30,70

**Vegetarian:** Yes

**Contraindications:** None known.
**TOTAL JOINT SUPPORT**  
*(FORMERLY GLUCOSAMINE PLUS)*

**Ingredients:** Glucosamine Sulphate 100mg, N-Acetyl Glucosamine 50mg, L-Glutathione 2mg, N-Acetyl Cysteine 5mg, L-Cysteine 50mg, L-Glutamic Acid 50mg, L-Glycine 50mg, L-Taurine 25mg, Vitamin C 50mg, Vitamin E (Succinate) 25i.u, Pantothenic Acid 50mg, Soluble Trachea 25mg, Silymarin 5mg, Milk Thistle 100mg, Green Lipped Mussel 25mg.

**Supportive Function:** Glucosamine Plus is a superb formula tested against individual nutrients for its synergistic action in supporting bone and connective tissue. In the body, some glucosamine sulfate is converted to N-acetyl glucosamine (NAG), which is listed by the Merck Index in its own antiarthritic category. Liver detox, gastrointestinal and antioxidant nutrients all lend support that can be helpful when arthritis affects bone and connective tissue. Mucopolysaccharides are also important building blocks, which are furnished in this formula by green-lipped mussel.

**When is glucosamine support helpful?** Osteoarthritis, tissue and joint pain, and injury.


N-Acetyl Glucosamine (NAG) has been shown to reduce joint pain, swelling, and restricted motion in clinical trials. NAG is also important in maintaining the protective layer of digestive organs. Dr. Braly found that RA is frequently caused by leaky gut, or abnormal permeability of the intestinal wall, allowing undigested food particles to deposit in tissues resulting in inflammatory responses and autoimmune attacks on many tissues (The Burton Goldberg Group, 1995: 531; Freed D, *Brit Med J* April 1999: 318:1023-25; *J Cell Biochem* 1994; 56: 225-35).

L-Glutathione helps bind with toxins in the liver for removal and helps prevent free-radical damage associated with collagen cross-linking, poor cellular circulation, and stiffness (Chaitow, 1988:88-9). L-Glutathione has been reported to counteract the cross-linking effects and cellular damage of free-radical activity. This tripeptide composed of glutamic acid, Glycine, and cysteine helps deactivate lipid peroxidation, enhance immune system function, and detoxify the heavy metals lead, cadmium, mercury, and aluminum. The primary use of this nutrient has been reported helpful in the prevention and treatment of degenerative conditions. Through the action of glutathione-S transferases, glutathione enables the liver to detoxify undesirable compounds for excretion through the bile (*Functions of Glutathione*, New York: Springer-Verlag, 1978).

N-Acetyl Cysteine has been reported to help prevent degenerative changes in the liver, has strong antioxidant activity, and is generally cell-protective (Gaby, AR, *Wright, JV, J of Advancement in Med Spring* 1993; 6 (1): 27-39). People with Inflammatory Bowel Disease and other conditions have an impaired metabolism that will not allow them to convert L-Cysteine into its NAG bioactive form. As a liver nutrient, it helps remove toxins that accelerate degeneration and interfere with healing. N-acetyl cysteine is an important building block for L-glutathione (Chaitow, 1988: 79-81).

L-Cysteine cannot be metabolized from the basic amino acid methionine in many chronic diseases, so supplementation has proved useful in many conditions. It helps remove many heavy metal deposits, which suppress immune responses, and protects against environmental pollutants. It also protects the brain, liver, and other organs from the damaging effects of smoking and alcohol. Cysteine boosts the levels of protective enzymes that slow cellular damage (Chaitow, 1988: 95; Balch & Balch, 1997:43).

L-Glutamic Acid serves as a source of fuel for cells lining the intestines, which support uptake of nutrients, and helps prevent bowel permeability noted in arthritis. It has been reported to aid in peptic ulcer healing. It is a component of folic acid and glucose tolerance factor. It is also used to alleviate depression (Lininger, 1998:166, Chaitow, 1998:95, 99).
L-Glycine supplementation has been reported to increase the secretion of gastric acid, which enhances digestion, converts into betaine, important in protein digestion, is a component of bile acids, and is major component of glutathione, which plays a detoxification role in the body (Chaitow, 1988: 83-84). Glutathione has been reported to counteract the cross-linking effects and cellular damage of free-radical activity (Functions of Glutathione, New York: Springer-Verlag, 1978).

L-Taurine is a component of bile acids, which are essential in absorbing fats and fat-soluble vitamins such as vitamin A. It is also an important component that helps maintain cell membrane stability (Lininger, 1998:206). Vitamin C is a very potent antioxidant that protects the cells of the body as well as protecting other antioxidants such as Vitamin E. Vitamin C detoxifies many other harmful substances that threaten to damage the tissues of the body (Balch & Balch, 1997:45). People who have high levels of antioxidants in their diet show a much slower rate of joint deterioration (McAlindon TE, et al, "Do antioxidant micronutrients protect against the development and progression of knee osteoarthritis?" Arthrit Rheum 1996; 39:648-56).


Pantothenic Acid, also called vitamin B5, may be deficient in people subject to Rheumatoid Arthritis (Lininger et al, 1998:116). Pantothenic acid supplementation alone has been reported to alleviate morning stiffness, disability, and pain (General Practitioner Research Group,"Calcium pantothenate in arthritic conditions," Practitioner 1980; 224:208-11).


Milk Thistle has been used for 2000 years to support liver function and liver detoxification. It helps protect liver cells by blocking the entrance of toxins and removing toxins from the liver. Silymarin, a bioflavonoid complex in Milk Thistle, has anti-inflammatory effects on blood platelets and helps prevent inflammatory free-radical production. Silybin, the most active ingredient of Silymarin, has the ability to help regenerate liver cells (Lininger et al, 1992:290-1; Alarcon de la Lastra C et al, Planta Medica 1995(61): 116-9; Sonnenbichler J et al, Proceed of the Internat Bioflav Symp (Munich, Frg) 1981).

Green Lipped Mussel (Natural source of Mucopolysaccharides and Superoxide Dismutase): Mucopolysaccharides are building blocks for chondroitin sulfate, the major constituent of bone and cartilage (Lininger et al, 1998:149). Superoxide Dismutase (SOD) is a powerful free radical scavenger that helps protect against the superoxide free radical responsible for cartilage damage and pain. SOD is known to repair cells and reduce the rate of cell destruction (Toohey L, "Natural alternatives to drugs," Nutri-Notes 1999; 6(3): 3; Balch & Balch, 1997:45).

Testimonials/Nutrient Tidbits: Tidbit: Some people, (especially Inflammatory Bowel Disease people) with compromised health and conversion capabilities, cannot acetylate their glucosamine into N-acetyl glucosamine (NAG). These people miss out on getting one of the most important building blocks of connective tissue. When they take 1500 mg of glucosamine, they are assuming that some will be converted to NAG, however that doesn’t happen due to their inability to convert glucosamine to N-acetyl glucosamine. Glucosamine Plus includes a synergistic combination of several building blocks necessary for building healthy cartilage tissue.

Testimonials: In older women with low back pain, hip pain, inguinal pain, sacroiliac pain or leg pain which appears to be associated or referred from a degenerating hip socket, the combination of chiropractic and Glucosamine Plus will usually eliminate most of the pain within three weeks. This has been very consistent and striking. This is much quicker than the response to most products. In one case, a woman (who also had gut problems) went off the Glucosamine Plus and onto a glucosamine/chondroitin product from the drug store. Within one week her pain was back almost full force. Within 3 days of restarting the Glucosamine Plus the pain started abating again (Daniel Flemming, D.C., Colorado).
**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 50 or 120 tablets

**Price:** € 32,70 en 59,90

**Vegetarian:** No

**Contraindications:** High doses of glucosamine sulfate can cause high blood sugar levels and/or GI distress (smaller synergistic amounts are used in this formula and there are no reported problems).
TOTAL LEAKY GUT

**Ingredients:** L-Glutamine 150mg, Buffered Vitamin C (Sago) 25mg, N-Acetyl Glucosamine 75mg, Vitamin E Succinate 10i.u., Lipoic Acid 2mg, Ginkgo Biloba Extract 2mg, Deglycerrhized Licorice 50mg, Slippery Elm 100mg, Lactobacillus Acidophilus 1 million units, Cats Claw 15mg, Ginkgo Biloba Herb 50mg, Jerusalem Artichoke 25mg, Zinc Chelate 5mg, Lactobacillus Bifidus I million units

**Supportive Function:** Total Leaky Gut provides a comprehensive array of nutrients to support the integrity of the intestinal lining, one of the most crucial assets to health we have.

**When are leaky gut nutrients helpful?** Healing the gut lining is applicable in: asthma, arthritis, food allergies, ulcers, Crohn’s, ulcerative colitis, celiac disease, autoimmune diseases, alcoholism, chronic fatigue, joint pain, migraines, diarrhea, parasitic infections, dysbiosis, candidiasis, multiple sclerosis, diabetes, T-cell lymphomas, and generally as a preventative measure, since we all have permeability to some degree. People who smoke, drink, take aspirin/ibuprofen/antibiotics/drugs, get exposed to environmental toxins, have poor digestion, sluggish liver detoxification, or stored toxins, or who have bacterial/microbial infections or inflammation are all at high risk for intestinal permeability.

**Clinical Applications/Research:** Glutamine is the main fuel that the intestinal cells need for maintenance and repair (they slough off every three days). Glutamine reinforces the immune system, and there is considerable evidence that glutamine can enhance the barrier function of the gut against viral, bacterial, and food antigen invaders (Hall JC et al. Br J Surg 1996 Mar; 83(3): 305-312). Glutamine has been proven to stimulate intestinal cell growth while reducing cell injury and infection. It also stimulates mucosal cells, which are highly protective against the damage seen in ulcers.

Lactobacillus Bifidus are friendly bacteria that offset populations of bad bacteria and boost the immune system. Overpopulation of bad bacteria can beat away at the intestinal lining. Friendly bacteria especially counteract candida, which can spread long mycelial arms right through the intestinal lining and perforate it, permitting wide-open entry to microorganisms and toxins. Candida can also release over 60 known candidal toxins which activate the immune system, and which can further increase the “leakiness” of the gut. Jerusalem artichoke is a dietary source of FOS (fructooligosaccharides), which attracts beneficial bacteria to inhabit the gut.

NAG (N-acetyl glucosamine), aside from being able to heal the extra cellular tissue surrounding intestinal epithelial cells, has the unique ability to decrease the binding of some lectins to the intestinal lining. Lectins are antinutrients found in many grains and legumes that increase intestinal permeability and can cause immune responses. Recent research shows that in susceptible people, food proteins can have “molecular mimicry” with self-proteins in the body, and lectins allow them to enter through the lining. This means that the wheat protein causes antibodies to be formed, which then attack collagen tissues because they have similar protein structures. Recent research also shows that NAG is one of the few nutrients with the power to bind to some of these lectins and prevent their damage to the intestinal lining.

**Antioxidants:** Vitamins C and E, lipoic acid, zinc and ginkgo biloba are all antioxidants, which protect the lining from free radical damage. Additionally, vitamin C and lipoic acid bind heavy metals, which can cause disease, when deposited in the tissues instead of being detoxified in the liver. Vitamin E maintains the integrity of all lipid cell membranes. Ginkgo biloba also increases circulation in the smaller vessels and capillaries, which increases nutrient delivery and tissue healing. Zinc is essential for proper immune system functioning. It is believed to play a role in regenerating epithelial tissue and protecting it from damage, making it an excellent nutrient to support gut healing.

**Cat's Claw** is a novel herb that has been researched lately for its, "remarkable ability to cleanse the entire intestinal tract and help those suffering from different stomach and bowel disorders," including Crohn's disease, gastritis, ulcers, parasites, candidiasis, diverticulitis, hemorrhoids, leaky gut, and intestinal flora imbalance (Dr. Brent Davis, DC Wellness Advocate Feb 1995; 5(1): 1-4).
DGL (deglycyrrhizinated licorice) increases the integrity of the mucosal cells - it increases the life span of the intestinal cells, improves the quality of protective substances, and improves the blood supply of nutrients (Glick L. Lancet ii: 817, 1982). Additionally, it has a high healing rate and significantly low relapse rate for ulcers (Kassir ZA Irish Med J 78:153-56, 1985).

Slippery Elm is a soothing, protective demulcent renowned for its beneficial effects on the gastrointestinal lining. Slippery elm calms the inflamed mucous membranes of the stomach (Balch JF Presc for Nutr Healing 1990, Garden City, NY). In addition to a soothing texture that coats the stomach lining, slippery elm contains the fiber-rich ingredient mucilage, which stimulates mucous secretion (especially protective against ulcers).

Testimonials/Nutrient Tidbits: Many doctors report . . . This product works great for “leaky gut” problems! A doctor reports… My patient had had a leaky bowel for years, and had even tried other nutritional formulas that contained glutamine. I put her on Total Leaky Gut, and she started improving within the week. She thinks I walk on water now! (Ian Smith, D.C., Calgary, Canada).

Another doctor reports… Total Leaky Gut really works! It sure calms things down. (Carolyn Groff, DC, Centennial, CO.)

Another doctor reports… I utilized Total Leaky Gut and L-Glutamine Plus for a Lupus patient, and within a year all symptoms were gone, the doctor told her “come back when you have symptoms”. (Bob tank, L Ac)

Suggested Dosage: 1-2 tablets 3 times daily or as directed

Size: 60 tablets

Price: € 37,15

Vegetarian: No

Contraindications: Ginkgo in large quantities is contraindicated with anticoagulant drugs (only a small amount is used in this synergistic formula). Use caution in pregnancy (a small amount of cat's claw is included).
**TOTAL LIPOTROPIC**

**Ingredients:** Each tablet supplies: Policosanol Extract 90% 5mg, Cordycepts 75mg, Beta Glucan 50mg, Beta Sitosterol 45mg, Inositol Hexanicotinate 15mg, Guggulipid 25mg, Apple Pectin 100mg, Deodorized Garlic (bulb) 50mg.

**Supportive Function:** Supports the ability of the body to regulate lipid/cholesterol balance.

**When is lipid/cholesterol support helpful?** High blood cholesterol levels increase the risk for heart disease. Maintaining low levels of lipids/cholesterol is a good idea for preventive maintenance of a healthy heart.

**Clinical Applications/Research:** High cholesterol levels are known to be a risk factor for heart disease. Low-density lipoprotein cholesterol, or LDL as we call it, is known as the “bad cholesterol”. Maintaining good ratios between the “bad cholesterol” and the “good cholesterol”, or high-density lipoprotein cholesterol (HDL) is necessary for a healthy balance.

Heart disease is the number one cause of death in the United States and in Europe. Americans suffer more than 1.5 million heart attacks each year and more than 1/3 die on their first attack.

Even though heart disease causes over 40% of all deaths in the USA, responsible for over 550,000 heart attack deaths and 500,000 strokes each year in the United States alone, heart disease is believed to be one of the most preventable of chronic conditions.

When deposits of cholesterol, fat, and calcium form in the major arteries (atherosclerosis) supplying the heart, blood flow to the heart can become restricted and trigger heart attacks. Atherosclerosis in arteries supplying blood to legs causes a condition called intermittent claudication. People with elevated cholesterol levels are at much higher risk of developing atherosclerosis, hardening of the arteries, than people with low cholesterol levels (Linner et al, 1998: 11).

Most doctors believe that total cholesterol levels should stay under 200 mg/dl. As levels fall below 200, heart disease risks decline. The balance of "bad" LDL cholesterol to "good" HDL cholesterol is thought to be more important than total cholesterol.

Overweight conditions and diabetes are other risk factors increasing the likelihood of heart disease.

Favorable dietary changes: Minimize high fat intake from dairy and meat. Avoid refined sugars and hydrogenated fats, especially margarine. Limit alcohol intake (no more than 1 to 2 drinks per day). Drink only paper-filtered coffee. Eat smaller, more frequent meals, consisting of more fish, more vegetables, and other high fiber foods such as whole grains (Linner et al, 1998: 62-3).

Many nutrients have a favorable, natural effect in maintaining healthy and balanced cholesterol levels. **Policosanol** is a purified mixture of primary alcohol’s isolated from sugar-cane wax or beeswax that helps prevent LDL oxidation. It helps lower total and LDL cholesterol by inhibiting cholesterol synthesis and helps reduce the cholesterol content of liver, heart, and fatty tissues. Policosanol helps reduce platelet aggregation by altering prostaglandin synthesis. Policosanol also helps prevent and reverse atherosclerotic lesions and thrombosis. In diabetic patients, policosanol favorably increased ratios of good HDL cholesterol to LDL cholesterol. In a study of patients with intermittent claudication, policosanol helped increase walking distance and reduce lower-limb symptoms of claudication. Policosanol also has anti-ischemic effects that may benefit patients with cerebral vascular disorders. **Suggested cautions:** high doses should be used cautiously by patients also taking propranolol, nifedipine, other antihypertensive agents, anticoagulant, or antiplatelet medications. Use cautiously in patients taking acetyl-cholinesterase inhibitors and cholinomimetic agents, since policosanol may increase the release of acetylcholine at the neuromuscular junction.

**Apple pectin** contains both soluble and insoluble fiber; it aids in candida elimination, decreases cholesterol and increases metal detoxification. In addition to apple pectin's ability to bind water and toxins, slow food absorption, and decrease fat absorption, it has the ability to, "protect gastric mucosa by strengthening the mucous-phospholipid layer" (Scand J Gastroenterol 1993; 28(10): 894-9.) and inhibit ulcer formation (Nippon Shokakibyo Gakkai Zasshi 1991; 88(10): 2636-43) In other words, apple pectin is a great nutrient for working on leaky gut! By slowing the
absorption of food, pectin has proven helpful to diabetics. In Russia, they have a drink called, “Anti-cholesterol” comprised solely of apple pectin. Deodorized Garlic has been shown to lower cholesterol (Pharmacotherapy. 1993; 1314:406-407) and help in digestion (Balch & Balch, *Prescription for Nutritional Healing, 2nd Edition*, New York: Avery, 1997:54). Garlic contains an active ingredient which is a sulphur-containing amino acid allicin (5-ally-L-Cysteine sulfoxide). It also exhibits significant triglyceride-reducing properties (Arzneim. 1993;43(9):978-81; J Postgrad Med 1991;37(3):132-5.) More than 32 human studies demonstrating the lipid-lowering effects of garlic have been conducted since 1975 (Foster S: Herbal medicine: An introduction for pharmacists. NARD J 10:127-144, 1996. 3.Brown DJ, Foster S: Phytotherapy: Herbal medicine meets clinical science: Part II. America's Pharmacist 6:31-48, 1997.) Two meta-analyses have examined the major clinical trials of garlic supplementation for high cholesterol, and they both reported favorable effects on cholesterol levels, both LDL and HDL (Foster and Brown, ibid.) It is thought that one of the mechanisms involved in lowering cholesterol is the ingredient nicotinic acid, which plays a major role in inhibiting HMG-CoA reductase activity (Lipids 1993; 28(7): 613-19.) Recent evidence indicates that a person’s susceptibility to the oxidation of cholesterol and LDL may be more important than the total cholesterol level, and this is one reason antioxidants are so important in prevention of heart disease. Garlic, being an antioxidant, was shown to lower the LDL oxidation by 34% in a garlic-treated group compared to controls (Lipids 1993; 28:475-477.) One of garlic's components, methyl allyl trisulfide, lowers blood pressure by dilating blood vessel walls. Garlic helps thin blood by inhibiting platelet aggregation, reducing the risk of blood clotting and aiding in the prevention of heart attacks. Beta Glucan consist of polysaccharides that make up part of the insoluble fiber of oat bran that help it to its claim of fame on cholesterol maintenance. The beta attachment is less likely to be broken down than an alpha attachment in the intestines; hence it is not as absorbable. Fiber binds to fat, cholesterol, and cholesterol containing substances and helps remove them from the body (Ripsin, CM, et al, "Oat products and lipid lowering--a meta-analysis," JAMA 1992; (267): 3317-25). Beta Sitosterol boosts the effects of isoflavones (J of Urology 1995; (154): 391; Cancer Res 1991; (51): 3445), which are known to have a favorable effect on cholesterol. Isoflavones are special bioflavonoids that block the sorbitol pathway that is linked with oxidative damage in diabetes. They are also known as natural blood thinners that protect blood vessels and reduce platelet aggregation. As antioxidants, bioflavonoids protect cholesterol from oxidative damage. High cholesterol levels in themselves may not be the problem they were first thought to be, but oxidized LDL cholesterol may be the greater issue (Kostner et al, “The interaction of human plasma low density lipoproteins with glucosaminoglycans: influence of the chemical composition,” Lipids Jan. 1985; 20 (1): 24-28, Lininger et al, *The Natural Pharmacy*, Rocklin, CA: Prima Health, 1998:140-1; Potter, SM, "Overview of the proposed mechanisms for the hypo-cholesterolemic effect of soy," J Nutri 1995; 606S-611S). Inositol Hexanicotinate appears to be a safer form of taking niacin without the side effects of the niacin form of vitamin B-3 (Lininger et al, ibid, 1998:64). Large dosages of niacin-B-3 have been shown to lower cholesterol (Brown, NV, "Niacin for lipid disorders," Postgrad Med 1995; (98): 185-93). The Inositol Hexanicotinate form of B-3 has the same effects as niacin in lowering serum cholesterol without side-effects (Head, KA, “Inositol hexanicotinate: a safer alternative to niacin,” Alt Med Rev 1996; (1): 176-84; Murray, M. “Lipid lowering drugs vs. inositol hexanicotinate,” Am J Natural Med 1995; (2): 9-12). Fiber can naturally bind to bile acids and help in the removal of these cholesterol-containing substances from the body. When cholesterol is removed from the body, the body makes more. However, there are also natural substances, such as garlic and policosanol, which can affect the natural regulation of the liver enzyme that regulates cholesterol production. There are many types of fiber, both soluble and insoluble. Both types of fiber are found in apple pectin. Soluble fiber can regulate blood sugar by decreasing gastric emptying and glucose uptake. This reduces insulin response and fat storage. The glycemic index studies of Jenkins et al. (among others) have proven that fiber has an important place in the diet of diabetics (Adv Nutr Res 1984; 6:169--202.) (Larson, D. Mayo Clinic Family Health Book, 1990. William Morrow & Co. Inc. NY, NY. p. 635.) By lowering fat absorption, soluble fiber also has a favorable effect on blood cholesterol. Insoluble fiber, such as the cellulose found in plant cell walls, has an effect mostly by binding to cholesterol, toxins, and carcinogenic secondary bile acids and drawing them out of the body. Both types of fibers can speed fecal transit time by adding bulk and holding water. Additionally, the delayed passage rate induced by fiber results in greater absorption of some of the amino acids (J Nutr 1994; 124(6): 833-41.) Apple pectin contains soluble and insoluble fiber, whereas beta glucan is a good insoluble fiber. Testimonials/Nutrient Tidbits: The wife of a chiropractor reports... My husband’s blood pressure was so
high he was on 6 meds. After one week on Total Lipotrophic, he could cut out one drug entirely and could cut back on another drastically because the blood pressure was lowered (finally!) (Amy Hare, North Carolina).

A doctor reports…Total Lipotrophic is great support… my assistant and I both took it and within weeks we saw a difference in our cholesterol levels. (Grant Watkins, D.C. Aurora, CO.)

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 Tablets

**Price:** € 47,30

**Vegetarian:** Yes

**Contraindications:** High doses should be used cautiously by patients also taking propranolol, nifedipine, other antihypertensive agents, anticoagulant/antiplatelet medications or cholesterol medications. Use cautiously in patients taking acetyl-cholinesterase inhibitors and cholinomimetic agents, since policosanol may increase the release of acetylcholine at the neuromuscular junction.
TOTAL LIVER D-TOX

**Ingredients:** Glucuronic Acid 10mg, Liver 5mg, Vitamin A 1,000i.u, Vitamin C 25mg, Vitamin B1 5mg, Vitamin E 10i.u, Black Currant Seed Oil 5mg, Cellulase 50mg, Amylase 50mg, Lipase 50mg, Protease 50mg, Lipoic Acid 2mg, Phosphatidyl Choline 5.75mg, Choline Bitartrate 15mg, DL-Methionine 5mg, Calcium Chelate 50mg, Magnesium 50mg, Zinc Chelate 5mg, Selenium Chelate 25mcg, Manganese 1mg, Milk Thistle 100mg, Silymarin 5mg, Garlic 50mg, Beet Root 25mg, Beet Leaf 25mg

**Supportive Function:** This formula provides comprehensive nutritional support for liver detoxification.

**When is Total Liver D-Tox helpful?** Detoxification, sluggish liver, toxic burden, environmental overload, any condition that can benefit from the clearing of waste and toxins, (especially Fibromyalgia, multiple chemical sensitivity, allergies, etc.), female disorders (clears excess estrogen), constipation, hemorrhoids, etc.

**Clinical Applications/Research:** Glucuronic Acid inhibits the enzyme that breaks apart conjugated substances that the liver is trying to clear, i.e., estrogen. By keeping the substances conjugated, glucuronic acid speeds removal.

Liver: A glandular extract of liver provides the specific amino acid sequencing for support of the liver.

Vitamin A has been reported by some investigators to enhance antibody and cell-mediated immune response. It is necessary for growth and repair of body tissues and is important in the healing process due to its important role in proper cellular reproduction. Deficiency can cause breakdown of the integrity of the GI barrier, resulting in leaky gut syndrome.

Vitamin C is a potent antioxidant and immune enhancer. Vitamin C neutralizes toxic substances and contributes to cytochrome P450 activity in the liver, which is necessary for proper liver detoxification.

Vitamin B-1: Thiamine acts as a cofactor to thiamine pyrophosphate (TPP), which plays a key role in glucose metabolism and for metabolism of branched chain amino acids.

Vitamin E: Vitamin E is a powerful antioxidant that protects the liver from cellular damage by contributing to cytochrome P450 activity in the liver.

Black Currant Seed Oil (BCSO) is a major source of gamma-linolenic acid (GLA), which is an essential fatty acid that has numerous functions in the body.

Enzymes: Cellulase is a plant wall-digesting enzyme, amylase is a starch-digesting enzyme, lipase is a fat-digesting enzyme, and protease is a protein-digesting enzyme.

Lipoic Acid is also known as thioctic acid. It is a sulfur-containing, vitamin-like substance, and can efficiently address the sulphydryl-reactive metals (mercury, lead, and cadmium) that bind to sulfur-containing proteins. Lipoic acid is also a good mobilizer for metal removal. It is an important co-factor in important energy-producing reactions in the body. Lipoic acid is effective as an antioxidant, both for water- and fat-soluble free radicals. Lipoic acid is found in high amounts in liver and yeast (Murray, M., Encyclopedia of Nutritional Supplements, Prima Publishing, Rocklin, CA, 1996, p.343).

Phosphatidylcholine: Sometimes called lecithin, phosphatidylcholine is a molecule composed of saturated, unsaturated and/or polyunsaturated fatty acids, as well as glycerin, phosphorus and choline. It is a main component of our cell membranes and protects against oxidant damage. It aids in synthesis of acetylcholine, a potent neurotransmitter.

Choline Bitartrate has potent lipotropic activity (fat-digesting properties). Without choline, fats become trapped in the liver, where they block metabolism. A study recently showed that humans fed a diet deficient in choline developed liver disorders.

DL-Methionine is an essential sulfur-containing amino acid in one of the most usable forms. It is considered to have therapeutic, lipotropic activity similar to choline. Cysteine and taurine biosynthesis are dependent upon methionine. These two amino acids are both required for phase II liver conjugation. It has been shown to be useful in detoxifying heavy metals, especially the sulphydryl-reactive metals (mercury, cadmium, and lead), that are responsible for stealing sulfur from biologically active proteins.
**Calcium Chelate:** Calcium maintains healthy bones and tissues and acts as a co-factor in many enzyme reactions. Calcium plays a role in the intricate balance of ion transport, muscle contraction, heart maintenance, nerve impulses and muscle tone. Calcium is a natural chelating agent, which binds toxins in the body.

**Magnesium** increases the solubility and retention of calcium. It is important in neuromuscular contractions/relaxations, it activates enzymes necessary for metabolism of carbohydrates and amino acids, and it is integral for any healing process. Magnesium is necessary for ATP (energy) production in the mitochondria.

**Zinc Chelate:** Zinc acts as an antioxidant and has shown major immune-boosting effects. It aids in the liver's role of detoxification and metabolism. Zinc activates a form of SOD, a potent detoxifying enzyme.

** Selenium Chelate:** Selenium is a powerful antioxidant and detoxifier of a number of environmental pollutants. Selenium activates glutathione peroxidase, a potent detoxifying enzyme.

**Manganese** is an essential co-factor in the activity of the free radical detoxifying enzyme SOD. Manganese supplementation has been shown to increase SOD activity. High iron competes with manganese, thus high iron in the diet can deplete the body of manganese.

**Milk Thistle** contains silymarin, which is a very potent liver-specific antioxidant. It works by inhibiting free radical damage and promoting synthesis of new protein to replace damaged liver cells. It protects the liver against poisoning by chemicals.

**Silymarin** is known as "one of the most potent liver medicines known." It is the main active ingredient in milk thistle.

**Garlic** has been used for centuries as an antimicrobial compound. It has been found to be effective against candida and parasites, it provides radiation protection, and it is used for cholesterol and triglyceride reduction.

**Beet Root and Leaf:** Beets aid in gallbladder function, lymphatic function and digestion. Red beetroot is excellent for liver and biliary detoxification. Beets are high in iron and possibly possess "anti-tumor activity." Betaine accounts for the red color in beets, is listed in the Merck Index as a hepatoprotectant, and is also used as a digestive aid. A cancer clinic in Hungary did a study using red beet administration, and remarkable results were recorded (Heinerman, Heinerman's Encyclopedia of Fruits, Vegetables and Herbs, Parker Publishing Company, W. Nyack, NY, 1988).

**Testimonials/Nutrient Tidbits:** A doctor reports...I use Total Liver D-Tox (4-5 per day). Sometimes this product will cause the parotids to swell and the armpits to smell because the body is trying to detox the toxins. I add in Core Level D-Tox to make sure the colon is moving to eliminate all the added toxins (A. Hare, D.C.).

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets or 180 tablets

**Price:** € 34,80 en € 87,50

**Vegetarian:** No

**Contraindications:** None known.
TOTAL MALE

**Ingredients:** Each tablet supplies: Maca (Lepidum Meyenii) 60mg, American Ginseng (Panax) 50mg, Quercetin 10mg, Eleuthero 50mg, Damiana 10mg, Flaxseed 20mg, Chlorella (fractured) 20mg, Pepsin 1:3000 5mg, Lipase (veg source) 5mg, Amylase (veg source) 5mg, Vitamin A 1000i.u., Vitamin C 50mg, Vitamin E 25i.u. mixed tocopherols natural, Niacin 5mg, Folic Acid 150mcg, B-12 100mcg, B-1 1.5mg, B-2 1.8mg, B-6 3mg, Chrys (Passiflora Coerulea) 10mg, Epimedium Saggitatum (Horny Goat Weed) 20mg, Tribulus Terrestris (40% Furostanols-Standardized) 10mg, Muira Puma 30mg, Avena Sativa 10mg, Serenoa Repens (Saw Palmetto) 20mg, Green Oats 10mg, Pumpkin Seed 25mg, Pygeum Extract 2mg, Selenium Chelate 20mcg, Zinc Chelate 5mg, Magnesium Malate 20mg, Boron Chelate 1mg.

**Supportive Function:** This formula provides comprehensive nutritional support for Male Health and vitality:

**When is male health support helpful?** Endocrine Balance, Male Potency & Libido, Prostate & Testes health, etc.

**Clinical Applications/Research:** Maca (Lepidum Meyenii), called the Andean Ginseng for its invigorating properties, maca's lysine and arginine have been found to promote female and male fertility and sexual desire. Maca's sterols, brassycosterol, ergosterol, carnpesterol, delta 7.22 ergostadienol, and specially sitosterol and glucosinolates are associated with balancing reproductive hormones (Espinoza CL and Poma LP, Determinación de aminoácidos esenciales de la maca (Lepidum meyenii) y elaboración de una mezcla protéica a base de alimentos andinos, Thesis, Universidad Nacional Del Centro Del Perú, Huancayo, 1995 Fitomédica, "Maca, ginseng andino," in Fitomédica, Madrid, 1998; Johns TA, Ethnobotany and phytochemistry of Tropaeolum Tuberosum and Lepidium Meyenii from Andean South America Ph.D. Thesis, The University of British Columbia, Canada, 1980).

American Ginseng helps strengthen male reproductive and adrenal glands, improves fertility, alleviates stress, and enhances immune function. It has long been prized as an aphrodisiac, helps stimulate and rebuild all body systems, and is considered the most effective of all tonic herbs. It contains measurable amounts of germanium, which helps oxygenate all cells.

Quercetin is an important member of the flavonoids. It has been reported to protect cholesterol from oxidative damage that potentially leads to blocked arteries and capillaries, which can restrict blood flow to the penis and heart. Quercetin and other flavonoids protect and potentiate vitamin C’s roles in the body (Lininger, 1998:201-2).

Eleuthero helps increase blood flow, raise sexual potency, and rebuild energy and endurance. It helps stimulate and regenerate adrenal and immune function and lower blood pressure. It is considered superior by Traditional Chinese Medicine to treat impotence.

Damiana improves blood flow to the genitals. It helps balance hormones for both sexes and acts as a tonic for the hormone system. It helps enhance libido, elevate mood, and raise sexual potency by increasing oxygen to the genital area.

Flaxseed is high in omega-3 oils. Essential fatty acids (EFAs) are necessary in large amounts for the normal function of the prostate gland. Flaxseed oil has been successfully used to alleviate Benign Prostatic Hyperplasia with increases in libido. EFAs also reduce blood clotting associated with prostate cancer and help lower the potential for spreading of tumors.

Chlorella, a micro-algae, is a vitamin-antioxidant-mineral rich nutritive tonic that accelerates tissue building and repair. It helps build blood and supports liver function.

Pepsin is a proteolytic enzyme that enhances the digestion of proteins, acts as anti-inflammatory, and aids in the treatment of food allergies.

Lipase (vegetable source), enhances the digestion and extraction of nutrients from fats.

Amylase (vegetable source), enhances the digestion of carbohydrates.

Vitamin A is a powerful free radical scavenger; aids in maintaining a healthy immune system, healthy mucus membranes, and keeps the outer layers of glands and tissues healthy.

Vitamin C, a major constituent of the prostate, the seminal vesicles, and prostatic fluid, is a powerful antioxidant that protects other antioxidants helping to promote arterial health and preserve blood flow to erectile tissues.
Vitamin E helps increase circulation important in erectile function.
Niacin is necessary for the synthesis of sex hormones, improves circulation, and helps prevent muscular weakness.
Folic Acid is necessary for energy production, the production of DNA-RNA, and may alleviate depression and anxiety.

B-12 is needed for the proper digestion of food and absorption of nutrients. B-12 helps maintain fertility, cell formation, and the metabolism of carbohydrates and fats.
B-1 is necessary for hydrochloric acid formation, proper digestion, and enhances circulation, which is necessary for normal erectile function.
B-2 deficiency can present as poor digestion. B-2 maintains and improves the mucous membranes in the digestive tract. It is necessary for antibody production, cell respiration, and growth.
B-6 aids in the prevention of arteriosclerosis, promotes the formation of DNA-RNA, is needed for formation of hydrochloric acid and proper absorption of proteins and fats.

Chrysin (Passiflora Coerulea), a natural bioflavonoid (isoflavone), is a potent inhibitor of aromatase, the enzyme that converts testosterone to estradiol. Normal testosterone levels promote healthy sexual, physical, and mental health in males (Kao YC et al, "Molecular basis of the inhibition of human aromatase (estrogen synthetase) by flavone and isoflavone phytoestrogens: site-directed mutagenesis study," Environ Health Perspect 1998 Feb;106 (2):85-92).

Epimedium Saggitatum (Horny Goat Weed) helps enhance libido, potency, androgen and sperm production and helps strengthen the testes, prostate, levator ani, and kidneys.

Tribulus Terrestris (40% Furostanols-Standardized) has been found to help enhance erectile function, sperm production and motility, cholesterol levels, promote better moods, and self-confidence, according to a 1981 study by the Chemical Pharmaceutical Institute in Sofia, Bulgaria, of more than 200 men suffering from impotence (Harrington C, "Puncture Vine, Tribulus Terrestris, Plant dubbed "Nature's Viagra," Canadian Press, www.GreenCanyon.com).

Muira Puma is known as an aphrodisiac and sexual stimulant. It enhances male and female libido, helps alleviate impotence, and supports endocrine organ regeneration.

Avena Sativa (oat seeds) have anxiety reducing and relaxing effects attributed to their alkaloids, gramine and avenine, and their saponins. They are also a rich source of iron, manganese, and zinc.

Green Oats (rapidly dried green, aerial part of the oat plant) contain steroidal compounds, vitamins B-1, B-2, D, and E, alkaloids and flavonoids. Green oats help elevate mood, counteract anxiety, and nourish nerves. "Feeling one's oats" is an expression that has merit in male health: Dr. Robert Frankt, Budapest University, reported that green oats helped create great increases in sexual vitality and energy.

Serenoa Repens (Saw Palmetto) helps maintain a healthy prostate and alleviates benign prostatic hypertrophy.

Selenium helps provide relief from benign prostatic enlargement when combined with zinc and vitamin E. Selenium helps prevent the oxidation of fats implicated in fatty plaque obstruction of blood flow to the heart and genitals. Deficiency is associated with sterility.

Zinc is needed for prostate gland function and reproductive organ growth. Zinc supports the concentration of vitamin E in the system, which promotes circulation. Deficiencies are associated with impotence, infertility, BPH, prostatitis, prostate cancer, and high cholesterol levels.

Magnesium helps prevent the calcification of soft tissue, protect the arteries from stress damage, and prevent cardiovascular disease, which can restrict blood flow to the penis and heart. Malate helps promote aerobic glycolysis, the most efficient mode of energy production for maintenance and repair of organs.
Boron supplementation in both animals and humans results in higher estradiol, natural human estrogen levels, higher testosterone levels, and higher vitamin D levels. Low levels of boron in tissues have also been linked to lower hormonal levels (Samman, S, et al, Biol Trace Elem Res Winter 1998; 66(1-3):227-35).

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 33,50

**Vegetarian:** Yes

**Contraindications:** Those with gluten sensitivity should not take green oats.
**TOTAL MANGANESE**

**Ingredients:** Each tablet supplies: Manganese (as chelate) 10 mg, Vitamin B-6 25 mg, Pyridoxal-5-Phosphate 5 mg.

**Supportive Function:** Manganese is essential for healthy skin, bone, cartilage formation, lubricating synovial fluid in joints, glucose tolerance, activating superoxide dismutase (SOD), protein and fat metabolism, healthy nerves, healthy brain function, muscular strength, a healthy immune system, and normal reproduction (Balch & Balch, 1998:26; Liningter, et al, 1997:183; Pfeiffer, 1978:67; 71-72). Supplementation has been reported to help activate enzymes for the body’s use of biotin, B1, and vitamin C, and to be necessary for proper digestion and utilization of food, and the thyroid’s production of thyroxin.


**Clinical Applications/Research:** Manganese (as chelate) is necessary for bone mineralization and formation of chondroitin sulfates and other glycosaminoglycans (GAGs). Signs of deficiency include abnormal formation of bone and cartilage (Mertz, W. ed. *Trace Elements in Human and Animal Nutrition*, Vol I. Orlando, FL: Academic Press, 1987: 185-223). Studies have shown women with osteoporosis have lower manganese levels than control groups. Deficiency is also associated with glucose intolerance, diabetes, atherosclerosis, drug induced Parkinson’s-like symptoms, and schizophrenia. Manganese exerts protective effects against aluminum and cadmium toxicity, helps displace excess copper from the liver, and is antagonistic to iron (Eck & Wilson, 1989:xiv,12; 22; 28). **Caution:** May be counterindicated in cirrhosis (Linninger, 1998:184).

**Vitamin B6** is the major vitamin needed in the formation and breakdown of many amino acids, proteins, and some hormones. B6 helps in the building of several neurotransmitters, serotonin, melatonin, and dopamine. Because of this, it is an essential nutrient in the regulation of mental processes. It has been reported to be supportive in asthma, atherosclerosis, athletic performance, autism, carpal tunnel syndrome, depression, diabetes, osteoporosis, and chemotherapy (Balch & Balch, 1997: 214-5). B6 is essential in the breakdown of the toxic chemical homocysteine, which has been associated with heart disease. McCulley found that heart patients had 80% less of vitamin B6 than healthy people (*Atherosclerosis Reviews* 1983; (11): 157-246). Supplementation with vitamin B6, by itself, can inhibit the platelet aggregation that characterizes atherosclerosis (*Lancet* June 1981; (1) 8233:12-99-1300). B6 is essential to break down potentially toxic homocysteine into harmless and beneficial forms that do not cause oxidation, clotting, or injury to blood vessel walls. It aids digestion by helping form hydrochloric acid and in the absorption of fats and protein. B6 acts as a mild diuretic and is helpful in alleviating premenstrual symptoms (Linninger, 1998: 16). B6 is essential for the production of antibodies and red blood cells, can help prevent nerve and skin disorders, alleviate nausea, and promote the formation of antiaging nucleic acids (Mindell, 1991: 33). B6 has been reported to help alleviate the pain associated with the cancer-chemotherapy-agent Fluoracil’s effects on palms and soles (Vukelja, S, et al, “Pyroxidine [sic] for the palmar-plantar crythrodysesthesia syndrome,” *Ann Intern Med* 1989; 111:688-89). B6 has been reported to help remove lead from the brain (Balch & Balch, 1997:364). The B vitamins, especially B6, has been reported to be important in helping rid the intestinal tract of excess metals, removing them from the body, and protecting the cells and the brain: identified heavy metals include aluminum, copper, and mercury (Balch & Balch, 1997: 123, 386, The Burton Goldberg Group, 1995:928).

**Pyridoxal-5-phosphate**, the Co-enzyme form of vitamin B-6, is included because some individuals cannot convert vitamin B-6 into its active enzymatic form. A portion of vitamin B6 is one of 3 vitamins known to trigger the nighttime release of Growth Hormone during sleep. It has been reported to help in the synthesis of anti-aging nucleic acids (Mindell, 1991:33).

**Suggested Dosage:** 1-2 tablets daily or as directed

**Size:** 90 tablets
**Price:** €15,75

**Vegetarian:** Yes

**Contraindications:** Amounts found in supplements have not been linked with any toxicity. Manganese may be contraindicated in cirrhosis because of an inability to excrete it (Linnerger, S, Wright, J, Austin, S, Brown, D, Gaby, A, *The Natural Pharmacy*, Rocklin, CA: Prima Health, 1998:184).
**TOTAL MITOCHONDRIA**

**Ingredients:** Vitamin E (succinate) 45 i.u, Vitamin C (as ascorbate) 44.4 mg, Vitamin B-1 15 mg, Niacin 5 mg, Folic Acid 250 mcg, Selenium (as chelate) 34 mcg, Manganese (as chelate) 83 mcg, Zinc (as chelate) 500 mcg, Copper (as chelate) 10 mcg, Magnesium (as malate) 11.25 mg, Sodium (as ascorbate) 6.55 mg, Niacinamide 10 mg, Vitamin K (phyloquinone) 6 mcg, Alpha Lipoic Acid 15 mg, Co-enzyme Q-10 10 mg, Acetyl L-Carnitine 10 mg, N-Acetyl Cysteine 10 mg, L-Glutathione 10 mg, Phosphatidylserine 2 mg, Lecithin (50 mg of Phosphatidylcholine) 109 mg, Catechin extract 75 mg.

**Supportive Function:** Nutritional support for the efficient production of energy. The mitochondria are called the “powerhouses of the cell” because it is in the mitochondria that our energy is made. The energy we need for everyday biochemical reactions and existence is derived from ATP, the currency for energy that is produced in the mitochondria of every living cell in the Kreb’s cycle. Protecting the mitochondria from damage is believed to help prevent the cell from aging.

**When is mitochondrial support helpful?** Total Mitochondria is suggested in any instance where energy support is indicated, such as fatigue, chronic fatigue, Fibromyalgia, exercise training, etc., and also where support of the anti-aging process is indicated.

**Clinical Applications/Research:** The mitochondria have the unique ability to make ATP, which is the energy that fuels virtually every biochemical function in the body, from protein synthesis and muscle contraction, to digestive enzyme production and nerve conduction. ATP is like an energy exchange, just like we use dollar bills for a money exchange. Without ATP, we would not have the energy to maintain normal function. The mitochondria accomplish this energy production by using electrons, derived from the carbohydrate, fat, and protein in our food, to produce ATP. When we lose energy from not being able to produce ATP, we see everything from muscle wasting, fatigue, energy loss, sleep disturbances, and impaired cognitive function. The aging of the mitochondria is one of the major theories of what causes the aging of our bodies.

The mitochondria produce energy by being able to convert the electrons from our food into usable energy. The electron transport system, which utilizes Co-enzyme Q-10 as a major electron carrier, provides for the change in the energy of electrons to the energy of ATP production. Carnitine, which brings fats across the mitochondrial membrane for oxidation, facilitates energy production by providing the electrons from the fatty acids. The electron transport system is also believed to play an integral role in branched chain amino acid metabolism (Shils M & Young V, eds. Modern Nutrition in Health and Disease. 7th ed. 1988. Lea & Febiger, Philadelphia, Pa. p.453.), which has been studied for its role in exercise performance. Vitamin C is needed for carnitine synthesis, and the symptoms such as fatigue that are seen in vitamin C-depleted human volunteers may actually be the result of poor energy production due to decreased carnitine biosynthesis" (Ibid, p. 422.)

**Magnesium (as malate):** Magnesium combines with lactic acid, neutralizing the negative effect of excess lactic acid, normalizing breathing for asthma, emotional disturbances, and restoring the ill health of people in many disease conditions (Scholte HR et al., “Carnitine deficiency, mitochondrial dysfunction and the heart. Identical defect of oxidative phosphorylation muscle mitochondria in cardiomyopathy due to carnitine loss and in Duchenne Muscular Dystrophy”. Wiener Klinische Wochenschrift. January 6, 1989; 101(1): 12-17.) It is possible that chronic fatigued patients may have impairment of mitochondria and the oxidative metabolism that produces energy. (McCully, KK et al., Use of exercise for treatment of chronic fatigue syndrome. Sports Medicine, January 1996; 21 91): 35-48.)

**Magnesium (as malate):** Magnesium combines with lactic acid, neutralizing the negative effect of excess lactic acid, normalizing breathing for asthma, emotional disturbances, and restoring the ill health of people in many disease conditions (Reich C, "Calcium and Vitamin D Deficiency," The Arthritis Trust, www.arthritis-trust.org). Magnesium is needed in the oxidation of fats into energy; essential for muscle contraction and relaxation, nerve health, normal blood pressure and heartbeat; helps build muscle. Szent-Gyorgyi found that malic acid (malate) stimulates cells into using oxygen to produce its energy, signaling the mitochondria to use oxygen to burn food as fuel, its most efficient mode of energy production. Malate has been used for CFS/CFIDS and FM to improve energy and reduce pain. ("Open Your Mind to the Possibilities," CFIDS Chronicle, Summer 1993; Lehninger A, Principles of Organic Chemistry (1982):
Co-enzyme Q-10 is a necessary catalyst in the creation of all energy that cells need for life. It is a major electron carrier in the production of ATP energy. Low levels of Co-Q-10 are associated with aging and nearly all disease states. It has been used successfully to improve the health of people with hypertension and heart disease, those undergoing chemotherapy, in diabetes, infertility, and gum disease. It has been reported to have anti-aging effects and to significantly boost the immune system (Lininger, et al, 1998:152; Bliznakov, 1987; Balch & Balch, 1997: 43). Co-enzyme Q-10 has been used therapeutically in conditions of mitochondria defects and Duchenne muscular dystrophy (Scholte HR, et al, "Carnitine deficiency, mitochondrial dysfunction and the heart. Identical defect of oxidative phosphorylation muscle mitochondria in cardiomyopathy due to carnitine loss and in Duchenne Muscular Dystrophy," Wiener Klinishe Wochenschrift Jan. 1989; 101(1): 12-7).

Alpha Lipoic Acid plays a key role in converting food into energy in the mitochondria. It enhances the antioxidant functions of Vitamins C, E, and glutathione (Balch & Balch, 1997:43).

Acetyl L-Carnitine transports fatty acids across the membranes of the mitochondria where they can be used as sources of fuel to produce energy. Muscle weakness, extreme fatigue, and excess storage of fat in muscles have been reported to be common signs of L-Carnitine deficiency. Supplementation has reduced blood lipids by 50% and liver fat levels significantly. Carnitine supplementation has been reported to increase levels of ATP in heart muscle, to benefit heart strength, angina, and arrhythmia, and to lower blood lipids and triglycerides. Carnitine helps increase physical performance and appears to have an anti-fatigue effect in both animals and humans (Chaitow, 1988:75-7; Leibovitz, 1984: 109; 169; 171; 201; 207).

Vitamin C is necessary for the body to synthesize carnitine. Deficiencies of vitamin C have been associated with extreme fatigue linked to poor energy because of decreased carnitine synthesis (Shils M and Young V, eds, Modern Nutrition in Health and Disease, 7th Ed., Philadelphia, PA: Lea & Fibiger, 1988:453).

Vitamin E and B Vitamins have been successfully used in therapy for conditions of mitochondria defects and Duchenne muscular dystrophy (Scholte ibid.). B Vitamins are necessary for the mitochondria to produce energy from carbohydrates in the Kreb's citric acid cycle. FM patients have been found to have low B-1 status and reduced activity of B-1 dependent enzymes. B Vitamins are necessary for the mitochondria to produce energy from carbohydrates in the Kreb's citric acid cycle. FM patients have been found to have low B-1 status and reduced activity of B-1 dependent enzymes.

Folic Acid is lost in food processing; folic acid alleviates pain; promotes antibody activity, cellular division, and is necessary for utilization of sugars and protein.

Niacin, Niacinamide (B3) can increase energy by properly utilizing food; necessary for healthy digestion, nervous system, and brain functions.

Vitamin K deficiencies are found in people with malabsorption problems. K increases resistance to infection; is necessary for converting and storing glucose energy as glycogen in the liver; promotes healthy liver function (Balch & Balch, 1997:20).

Vitamin E provides antioxidant protection against mitochondria damage and aging of cells. Positive to dramatic benefits have been achieved with E supplementation in FM (Lininger et al, 1998:54; 222; Mindell, 1985: 55; 60-1).


Selenium is necessary to activate glutathione. Deficiency is linked with loss of stamina; synergistic with E in protecting cells from aging and hardening; necessary to activate thyroid hormones.

Manganese is needed for the formation of thyroxin, the major hormone of the thyroid; essential for conversion of food into energy. Manganese helps eliminate fatigue; is an essential part of Mn SOD, which protects the mitochondria; aids muscle reflexes; improves memory; reduces nervous irritability (Mindell, 1985: 88-9; 83; Balch & Balch, 1997:45).

Sodium (as ascorbate) is a buffered form of Vitamin C that is easier on the stomach. Sodium itself helps keep other minerals soluble in the blood; helps nerves and muscles function properly. Low sodium intake has been linked with fatigue and with impaired carbohydrate metabolism (Mindell, 1985: 90-1).

Phosphatidyl Serine and Lecithin (Phosphatidyl Choline) help transport lipids across cell membranes to reach the mitochondria and support the fluidity and integrity of cell membranes of the mitochondria. They help support both energy creation and brain function.

Zinc helps promote energy production, resistance to infections, regulation of blood sugar; protects against free-radical damage to cells and promotes tissue repair (Lininger et al, 1998: 14; 224).
Copper is essential to make ATP (adenosine triphosphate), the energy molecule the body needs to run on. Copper and Zinc are also necessary parts of SOD, super oxide dismutase, which protects and revitalizes cells (Balch & Balch, 1997:45).

L-Tyrosine is a mood elevator and a precursor to active thyroid hormone. Deficiency symptoms include low body temperature and restless legs. Supplementation can be helpful against chronic fatigue. **Caution: should not be taken with MAO inhibitor drugs** (Balch & Balch, 1997:42).

L-Glycine in proper amounts produces more energy in the body, retards muscle degeneration, and is essential to the formation of DNA and RNA, bile, gastric acid, and glutathione (Balch & Balch, 1997: 39; Chaitow, 1988:83-4).

L-Glutamic Acid helps metabolize sugars and fats, detoxifies ammonia from tissues, and converts into glutamine. Glutamine prevents muscle wasting, helps build and maintain muscle health; helps fuel the brain; enhances mental function; and enhances energy in treating chronic fatigue (Balch & Balch, 1997:38-9).

Catechin Extract has been reported to enhance energy levels in chronic fatigue, has very powerful antioxidant protection, has antiviral and antibacterial inhibiting properties especially against *H. pylori*, and promotes ulcer healing (Lininger et al, 1998:104; 140; Konlee M, "Free radicals in HIV progression: pycnogenol reverses their effects," Townsend Letter for Doctors, Dec. 1994).

**Testimonials/Nutrient Tidbits:** “The patient started taking Total Mitochondria and now feels great and finally has energy!” (Kristi Campbell, D.C.)

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 66,90

**Vegetarian:** No

**Contraindications:** Tyrosine should not be taken with MAO inhibitor drugs. Liver disease patients should take magnesium only under the supervision of a doctor.
**TOTAL MULTIMUNE**

**Ingredients:** One tablet includes: Vitamin A (as FLO) 750 i.u, Vitamin C 50 mg, Vitamin B-6 10 mg, Calcium (as chelate) 34 mg, Magnesium (as chelate) 20 mg, Zinc (as chelate) 8 mg, Manganese (as chelate) 2 mg, IP6 (Inositol Hexaphosphate) 40 mg, Lycopene 2.5 mg, Colostrum 200mg, Lymph 10 mg, Spleen 10 mg, Thymus 10 mg, Parotid 10 mg, Maitake Mushroom 30 mg, Green Tea Extract 20 mg, Astragalus 40 mg, Pomegranate (root) (with Ellagic Acid) 10 mg.

**Supportive Function:** Provides support for the immune system with many well-known powerful nutritional ingredients.

**When is immune support helpful?** When susceptibility to infection by bacteria, virus, and pathogens. Also, depressed immune system, cellular breakdown, and autoimmune disease.

**Clinical Applications/Research:** Vitamin A is necessary for the maintenance and repair of the skin and mucous membranes that make up the body’s first line of defense, vitamin A protects against colds, flu’s, and infections of mucous membranes. Without adequate levels of vitamin A, bacteria and viruses can penetrate the skin, lungs, intestinal lining, and other mucous tissues. Calcium is essential for cellular metabolism. When the metabolism is revved up during an infection, and when an enormous amount of energy is being used just to produce antibodies for viral invaders, calcium is in high demand for metabolic processes. One of the theories of the purpose of fever is that the increased body temperature draws calcium from the bones out into the system, where it is needed for biochemical reactions and clearing of infection. magnesium like calcium, is an essential co-factor for biochemical reactions. It helps to maintain the body’s pH and help produce the energy needed for antibody production and immune defenses, along with aiding in the production of DNA and RNA for protein synthesis. Both magnesium and calcium bind to heavy metals, which can be part of the problem of a lowered immune system. Zinc enhances immune function and increases white blood cell activity. Zinc is a powerful antioxidant that can protect against the metal poisoning that lowers immune function. When a sore throat is involved, zinc lozenges bathe epithelial cells in the throat and provide increased protection. Manganese is an important mineral for activating enzymes in the many processes of infection fighting. It helps to maintain cellular integrity, and is essential for utilization of vitamin C. Lycopene is a carotenoid that has gotten a lot of press lately as one of the newly discovered potent antioxidants. Found in tomatoes in high concentration, lycopene is such a strong immune nutrient that it has been found to have protective qualities against cancer, most notably prostate cancer. One study, which looked at the correlation of tomato consumption and decreased risk for prostate cancer suggested that even pizza could lower the risk because of its tomato content. Some people took this as a green light to have massive amounts of pizza, which is high in refined carbohydrates and saturated fat (similar to justifying chocolate when we heard it contains flavonoids!) One doesn’t want to raise the risk for other diseases (such as heart disease) while lowering risk for prostate cancer. Which means that the lycopene in tomatoes may be making a difference, but that organic tomatoes consumed without the “junk food” would foster an even healthier scenario. Astragalus is a Chinese herb that has been shown to restore T-cell counts to relatively normal ranges. It contains a wide variety of phytochemicals to support antiviral functions. The results of one study even suggest that astragalus increased natural killer cell activity, and exerted an anticarcinogenic effect in carcinogen-treated mice (Cancer Invest 1999; 17(1): 30-5.) Astragalus contains triterpene glycoside compounds, nineteen of which have shown immunostimulatory effects (Biol Pharm Bull 2000 Jul; 23(7): 834-7). Maitake mushroom is full of phytoneutrients that stimulate white blood cells and trigger an enhanced immune response. It has been mostly researched for its role in maintaining healthy blood pressure, and has also been researched in cancer studies. It has been used for a long time in Chinese medicine as an adaptogen (nutrient which brings systems back into homeostasis). Maitake has complex polysaccharides in its structure, one of the primary ones being beta-D-glucan. Beta glucan is currently being studied for it immune properties, specifically

**Glandular extracts** can be an important part of any immune protocol. They target immune glands (such as thymus, lymph, spleen, etc.) and help repair tissues by supplying amino acids that are essential building blocks. They are believed to repair damaged or deteriorated glands, and help restore them to normal function (homeostasis). The thymus is the organ that produces T-cells; the lymph supports white blood cells and toxin removal, and the spleen produces and stores antibodies and phagocytes, and filters toxins from the blood.

**IP6 (Inositol hexaphosphate)** has been touted lately as a strong immune nutrient, offering particular support for natural killer cells. IP6 is a naturally occurring plant fiber, otherwise known as phytate. It is present in legumes and whole grains, especially wheat bran. As with some other plant fibers, IP-6 appears to have a beneficial effect on blood sugar control. It seems to possess several beneficial health properties, including antioxidant (Free Rad Biol Med1990; 8:61-9) and anticancer (Life Sci 1997; 61:343-54) properties, showing particular results in the event of colon cancer (animal study; Nutr Canc 1993; 19:11-19) and breast cancer (animal/pilot study, Canc Lett 1993; 75:95-102). In the animal/pilot study conducted on pure IP-6, significant results were obtained, however these results were not obtained when IP-6 was given in the form of wheat bran (Nutr Canc 1997; 28(1): 7-13). IP-6 injected into mice with cancerous tumors has resulted in partial regression of the tumors (Anticancer Res 1998; 18:4091-96). IP-6 has also been used in the protocol for kidney stones. Phytate is a substance associated with reported reduced mineral absorption, iron in particular (Am J Clin Nutr 1999; 70:240-46), and as such is recommended to be taken at least an hour away from meals.

**Colostrum** is breast milk, and as such confers immunity onto offspring by the transfer of antibodies and other immune factors. Bovine colostrum has been used as a nutritional supplement to confer these factors of immunity onto humans. Unlike bovine milk, which may contain allergens, the bovine colostrum is a different substance, which is thought to have immunomodulatory activity. One study notes that colostrum, “contains factors that are protective for the neonate and may be a source of immunomodulatory molecules that positively influence the immune status of the neonate (Vet Immunol Immunopathol 2000 Oct 31; 76(3-4): 183-190).

**Pomegranate** is a fruit containing ellagic acid, the same compound found in wine that has been identified as a strong antioxidant with healthful properties. Some studies have shown pomegranate to be strong enough to protect against cell mutation.

**Green tea extract** contains catechins, one of the most widely investigated flavonoids. It has been in the news lately for its reported ability to boost immune function. For example, a recent review in Sept. 2000 reports that, “Catechin and its gallate are major ingredients in green tea and their antioxidant and cancer preventive effects have been widely investigated. A Phase I study of green tea extract has been conducted in adult patients with solid tumors” (Wang HK. The therapeutic potential of flavonoids. Expert Opin Investig Drugs 2000 Sep; 9(9): 2103-19.)

A report in Epidemiology stated that the antioxidant compounds found in tea, wine, fruits and vegetables may lower the risk of having a non-fatal heart attack for some men (Epidemiology January, 2000). Antioxidants combat the effects of free radicals, which are naturally-occurring particles that can contribute to chronic disease and aging when they are produced in excess.

**Vitamin C** has always been heralded as one of the best vitamins to boost the immune system; a deficiency of this vitamin has been highly correlated to a greater susceptibility to infection. Vitamin C elevates antiviral activity and supports the manufacturing of the immune cells necessary to fight infection. Vitamin C is carried to the site of infection by the white blood cells, and vitamin C helps the mobility and power of those white blood cells.

Additionally, vitamin C indirectly helps fight cold and flu infection by addressing some of the other main causes for a depressed immune system: it promotes thymic hormone secretion, acts as an antioxidant to eliminate by-products of infection, stimulates adrenal function, aids in thyroid hormone production, detoxifies certain metals and drugs, recycles other antioxidants such as vitamin E, and aids in phagocytosis (digestion of damaged, dead or foreign cells) that can cause inflammation.

In a study where dockworkers took 100 mg of vitamin C for 10 months, they caught influenza 28% less than controls that took no supplemental C. The average duration of illness in those who took the supplemental C was 10% less than controls (Deutsche Gesundheitswesen 1954; 9:702-06). Other studies have shown rapid improvement in
symptoms when vitamin C was taken in high amounts (2 grams every hour for 12 hours) (South Med Surg 1949; 111:210-14; Pauling, L. Vitamin C, the common cold, and the flu. San Francisco, WH Freeman & Co. 1976 [review]), however high dosing should be supervised. Caution exists for iron overload disease, kidney-stone formers, and those with gout. Some people have a bowel tolerance to vitamin C around a gram, and experience diarrhea past that amount.

**Testimonials/Nutrient Tidbits: A doctor reports...** I had a patient with Ankylosing Spondilitis who responded wonderfully to a protocol of Total Multimune, Total GHR, and Liga-PN – (Dr. Sigh, Loveland, CO.)

**Many doctors report...** This is a great product for immune system problems.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 45,70

**Vegetarian:** No

**Contraindications:** Caution exists for high levels of vitamin C and iron overload disease, kidney-stone formers, and those with gout. Some people have a bowel tolerance to vitamin C around a gram, and experience diarrhea past that amount. However, only a small amount of vitamin C is utilized in this synergistic formula.
TOTAL PARA

**Ingredients:** Artemisia Annua 50mg, Garlic Powder 50mg, Black Walnut 50mg, Pumpkin Seed 50mg, Oregano Oil 1mg, Tea Tree 2mg, Grapefruit Seed Extract 50mg, Bromelaine 50mg, Papain 50mg

**Supportive Function:** It’s hard enough these days to combat environmental assaults on our immune system without the added stress of unwanted visitors trying to drain energy from human hosts, not to mention their toxic excretions, which compound systemic imbalance. This formula was specifically developed to strengthen nutritional support for environments plagued with the persistent, problem-causing little critters.

**When is parasite support helpful?** Parasitic infestations and related conditions, including colicky pains, dysentery, weight loss, intestinal toxemia, nausea, and diarrhea.

**Clinical Applications/Research:** Artemisia is a parasitic cleansing herb that has been used by the Chinese for centuries to rid the body of unwanted organisms. In fact, the Chinese name for artemesia is “wormwood.” The Merck index lists artemesia as an anthelmintic, which means that it is effective at expelling worms and parasites. Garlic has many active components, including allicin, which is the molecule responsible for the odor of garlic, and also for many of the purported benefits it offers as an herb. Allicin has been known for very many years as an antimicrobial compound. Garlic’s antibacterial characteristics have been tested even against drug-resistant varieties, and shown to have therapeutic activity (Indian J Med Res 1991; 93:33-6). Garlic extracts have been found to be safe and effective in treating parasites. Thirty-six children were administered two capsules, 2x day for three days, and their parasites were eliminated; garlic, “was found to be efficient, safe and shortened the duration of treatment” (J Egyp Soc Parasitol 1991; 21(2): 497-502). The sulfides in garlic may also work in a way similar to that of penicillin and sulfa drugs, to counter the growth of bacteria and harmful organisms.

Black Walnut is an herb that has also been used for centuries to cleanse parasites from the body. Black walnut is listed in many herbals as an effective remedy for eradication of intestinal parasites (Heinerman, John. Heinerman’s Encyclopedia of Fruits, Vegetables and Herbs. Parker Publishing, West Nyack, NY p. 236). Asian and American Indian tribes would use black walnut to expel various kinds of worms, and success has also been reported with tapeworms (Leung A. Chinese Herbal Remedies. Universe Books, NY, NY 1984).

Pumpkin Seeds have a high zinc content, which contributes to immune defenses. Its main characteristic action is that of an anthelmintic (dewormer), and has been used as a popular remedy for ridding parasites. Pumpkin seeds are used as a safe deworming agent, particularly useful against tapeworms, and as an anti-inflammatory agent (Chevallier A. The Encyclopedia of Medicinal Plants. Dorling Kindersley Ltd, London 1996).

Oregano Oil has a reputation for being effective against a variety of different organisms, including candida and worms.

Grapefruit Seed Extract (GSE) has been proven to be effective against intestinal pathogens. It is a potent antimicrobial. In one study of 15 patients, it exhibited strong effects, and all patients experienced improvement with constipation, flatulence, and abdominal discomfort (J Orthomol Med 1990; 5:155-157). GSE has the ability to efficiently wipe out invading pathogens without harming the good bacteria needed to keep our immune systems strong.

Bromelaine and Papain are digestive enzymes, which can help clear parasites and their toxic debris. More than 200 studies document the anti-inflammatory action of bromelaine.

**Testimonials/Nutrient Tidbits:** Many doctors report . . . I love this product. I have seen it work fast and it is very effective in treating for parasites!

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 17.85

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy.
TOTAL PROBIOTICS

**Ingredients:** Jerusalem Artichoke (rich source of Fructooligosaccharides) 200mg, Cellulase 1,200 CU, Lactobacillus Acidophilus 400 million units, Acerola Extract 25mg, Rose Hips 25mg, Bifidobacterium Bifidum 200 million units, Bifidobacterium Longum 200 million units, Protease 7,500 HUT, Lipase 52 LU, Lactobacillus Casei 100 million units, Lactobacillus Plantarum 100 million units, Rueteri 100 million units, Lactobacillus Salicarius 100 million units, Amylase 275 DU, EDS Mineral Mix (Kelp, Calcium Ascorbate, Magnesium Citrate, Zinc Gluconate, Manganese Gluconate), in a base of pure plant fiber.

**Supportive Function:** In an age where the human body is subjected to numerous immune insults, from environmental toxins to endogenous parasites, it is imperative to remember the balance of friendly flora in the large intestine. A healthy balance supports immune function and decreases colony populations of harmful bacteria. Total Probiotics contains FOS, molecules, which attract bifidobacteria in the gut, and are especially helpful when populations of flora have been decreased from antibiotic use.

**When are probiotics helpful?** A high-potency, probiotic combination is necessary to rebuild the "good bacteria" in the gastrointestinal tract. Suggested uses: daily to maintain intestinal integrity, colds/flu’s, candida, parasites, intestinal complaints, colic

**Clinical Applications/Research:** Jerusalem artichoke is a rich source of fructooligosaccharides (FOS). The human body does not metabolize FOS. Bifidobacterium in the presence of FOS is the primary source of biotin production in infants. FOS helps promote the growth of friendly bacteria, especially bifidobacteria and lactobacilli, while decreasing the amount of bad bacteria. FOS also increases butyrate production (short-chain fatty acids), enhances liver function and increases elimination of toxic substances. Onions, garlic and asparagus are also natural sources of FOS (Murray, M., Encyclopedia of Nutritional Supplements, Prima Publishing, Rocklin, CA, 1996, p. 362).

Cellulase is composed of hydrolytic food enzymes that aid in the breakdown and assimilation of nutrients. Lactobacillus Acidophilus provides protection for the intestinal wall by enhancing antigen-specific immune defense. Lactobacilli produce a variety of substances that inhibit bad bacteria and inhibit the production of toxins by pathogenic species. Lactobacillus acidophilus "has been found to inhibit Candida albicans" (Microbios, 1990; 62 (250): 37-46).

Acerola Extract is a natural source of vitamin C and bioflavonoids, which have powerful effects on the immune system.

Rose Hips are a natural source of vitamin C and bioflavonoids, which have powerful effects on the immune system.

Bifidobacterium Bifidum and Longum prevents pathogenic enterobacteria from colonizing the gut. In particular, research has shown that nitrite-producing organisms are specifically inhibited by these probiotics.

Protease, Lipase and Amylase: Protease is a protein-digesting enzyme, lipase is a fat-digesting enzyme, and amylase is a carbohydrate-digesting enzyme.

Lactobacillus Casei creates a desirable microbial balance and controls the production of toxins upon vital organs and body cells. Lactobacillus casei contributes to intestinal peristalsis and elimination of harmful amines from amino acids. It coats the intestinal mucosa and protects against invasion and activities of harmful organisms (Brimhall, J., Paper presented on Total Probiotic, 1997).

Lactobacillus Plantarum produces a high percentage of lactic acid, which acts to inhibit harmful microorganisms (Brimhall, J., Paper presented on Total Probiotic, 1997).

Lactobacillus Rueteri has been shown to stabilize the intestinal flora and is used with acidophilus and bifidobacteria as extra support. It promotes additional benefits such as protection against pathogens, provision of certain nutrients and enzymatic reactions, involvement in tissue morphogenesis, peristalsis activity and interaction with the immune and endocrine systems (Brimhall, J., Paper presented on Total Probiotic, 1997).
**Lactobacillus Salvarius** has been shown to produce alpha-galactosidase, which can help reduce flatulence. In addition, Lactobacillus Salivarius has been shown to be highly resistant to tetracycline and other types of antibiotics (Brimhall, J., Paper presented on Total Probiotic, 1997).

**Mineral Mix:** A mineral mix containing kelp, calcium ascorbate, magnesium citrate, zinc gluconate and manganese gluconate in a base of pure plant fiber can add to a probiotic combination.

**Testimonials/Nutrient Tidbits:** A distributor reports...the patient was extremely constipated from chemotherapy. Nothing was working, so we doubled the dose of Total Probiotics, and she started to move.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 or 120 tablets

**Price:** € 38,55 en € 65,50

**Vegetarian:** Yes

**Contraindications:** None known.
TOTAL PROTECT

**Ingredients:** Each tablet supplies: Soy Isoflavones 40.80% (Genistin 6.34%, Genistein 6.34%, Daidzin 8.52%, Daidzein 17.43%, Glycitin 1.10%, Glycitein 1.09%) 48mg, DIM (Diindolylmethane) 24mg, Indole-3-Carbinol 23.5mg, Cordycepts 25mg, Lactoferrin 7mg, Artemesia (Yin Chen Hao) 25mg, Artemesia (Qing Hao) 25 mg, Organic Cauliflower Sprouts 5mg, Organic Broccoli Sprouts 5mg (7500 ppm/gm Sulphoraphane), Betaine HCL 5mg

**Supportive Function:** This formula provides comprehensive nutritional support for a healthy immune system. An array of powerful phytochemicals facilitate the detoxification of harmful substances both by supporting phase I liver detox (cytochrome P450 system), and also phase 2 liver detox (conjugation)

**When is phytochemical support helpful?** Challenged immune systems, cancer support, intense support of toxic clearance, protection against toxic insult and tissue damage.


**Indole-3-Carbinol** is a protective phytochemical found in cruciferous vegetables. It is a powerful free-radical scavenger, protects against the potentially damaging chemicals in cigarette smoke, and helps remove them from the body. Indole-3-carbinol protects cells from damage by pesticides. It has hormone balancing and protective effects on the cells and tissues of the larynx, breast, cervix, colon, and liver. Indole-3-carbinol helps improve estrogen metabolism and helps protect estrogen-sensitive tissues. (Chen DZ et al, Ibid; Lord RS et al), “Estrogen


**Lactoferrin** helps protect against harmful oxidation, has been reported to stimulate the immune system, has both antibacterial and antiviral properties, promotes protective flora in the gut, and helps regulate iron metabolism. Lactoferrin is one of the body’s protective polypeptides, called defensins. Lactoferrin is an iron binding glycoprotein that blocks unfriendly bacteria from obtaining a source of iron. Lactoferrin is found in the products of all exocrine glands located in the gateways of the digestive, respiratory, and reproductive systems, in saliva, tears, nasal secretions, and seminal plasma. In blood, lactoferrin is derived from a special group of white blood cells, the neutrophils (Levy PF, Viljoen M, “Lactoferrin: a general review,” *(Haematologica 1995; 80:252-67; Reiter B)*, “The biological significance of the non-immunoglobulin protective proteins in milk,” *(Developments in Dairy Chemistry, vol 3, 1985: 281-336)*.


**Organic Cauliflower Sprouts**: Cauliflower is a member of the cruciferous family of vegetables, including broccoli, cabbage, radish, kale, mustard, turnip, cress, horseradish, rutabaga, kohlrabi, and Brussels sprouts. Cauliflower sprouts are rich in food enzymes that protect against depletion of the body’s own enzymes and reduce stress on the body. The superoxide dismutase (SOD) enzyme in cauliflower protects against cell damage caused by one of the most dangerous free radicals, superoxide. Three-day-old sprouts of cruciferous vegetables
contain 10-100 times the protective phytochemical, sulforaphane, than do mature plants. Cauliflower’s high indole component is believed to be responsible for strengthening the immune system, enhancing detoxification, and neutralizing damaging agents in the GI tract. Population studies in Norway show that high consumption of cauliflower and other cruciferous vegetables is linked with low incidence of polyps of the colon. (Carper, 1989:160-1; Balch & Balch, 1997:45; 48; Fahey JW et al), “Broccoli sprouts: an exceptionally rich source of inducers of enzymes that protect against chemical carcinogens,” (Proc Natl Acad Sci U S A Sep 16 1997; 94(19):10367-72).


**Betaine HCL** helps digest proteins in the stomach, reduce bacterial colonization of the stomach, and enhance the absorption of minerals and other nutrients.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 90 tablets

**Price:** € 59.90

**Vegetarian:** No

**Contraindications:** Use with caution in conjunction with blood-thinning drugs.
TOTAL SYSTEMIC D-TOX

**Ingredients:** Each 6 Capsules Supplies: Vitamin A Palmitate 2,000i. u, Vitamin C 750mg, Vitamin B-1 20mg, Niacin 25mg, Vitamin B-12 50mcg, Folic Acid 300mcg, Calcium Aspartate 75mg, Magnesium Glycinate 200mg, Magnesium Aspartate 100mg, Chromium Picolinate 50mcg, Zinc Picolinate 20mg, N-Acetyl Cysteine 30mg, L-Glutamine 200mg, Silymarin Extract 5mg, Quercetin 25mg, L-Taurine 50mg, L-Ornithine 20mg, L-Glutamic Acid 20mg, L-Carnitine 20mg, Choline 50mg, Propolis 20mg, Yellow Dock 25mg, Beta Carotene 7,500i. u., Vitamin E Succinate Natural 200i. u., Vitamin B-2 20mg, Pyridoxal-5-Phosphate 20mg, Pantethenic Acid 50mg, Biotin 200mcg, Calcium Gluconate 75mg, Magnesium Citrate 100mg, Selenomethionine 150mcg, Manganese Aspartate 5mg, Molybdenum Citrate 50mcg, Reduced Glutathione 20mg, Milk Thistle 50mg, Beet Root 50mg, Glucuronic Acid 5mg, L-Glycine 50mg, L-Methionine 50mg, L-Arginine 20mg, L-Tyrosine 20mg, Inositol 50mg, Curcumin 5mg, Chlorophyll 10mg, Asparagus 15mg, Dandelion Root 25mg, Eleuthero 30mg, Broccoli 15mg, Mullein 25mg, Co-Enzyme Q-10 1mg.

**Supportive Function:** A new, technologically advanced product utilizes the latest research in the development of a scientific formula designed to optimize support of all the detoxification pathways. Nutrients help mobilize, bind, and remove toxins. From the liver and colon to the skin, lymph, lungs, blood and kidney, every eliminative organ system is addressed in an effort to contribute to a homeostatic, smooth-running system. The comprehensive formula provides maintenance support when caloric intake has been reduced, and the formula is boosted with high levels of conjugating agents, antioxidants and supporting herbs, from cleansing garlic to balancing chlorophyll. This is an ideal nutritional supplement and may be chosen by those undergoing a whole, systemic approach to detoxification and those who are predisposed to toxin buildup.

**When is systemic detoxification helpful?** Any condition arising from toxin buildup; especially indicated in food allergies, asthma, gastrointestinal complaints, multiple sclerosis, cancer, arthritis, multiple-chemical sensitivity, candida and heavy metal toxicity.

**Clinical Applications/Research: Detoxing:** Reducing caloric intake can facilitate the process and rest the liver, but fasting can release the toxins from the fatty tissue too quickly. If detox pathways are not running efficiently, released toxins are left to recirculate and redeposit in body tissues, causing pain, inflammation and disease. For best results, adding a good detox supplementation product to the regimen can assure efficient removal of toxins. It is important to remember that there are seven detox pathways in the body - liver, bowel, blood, lungs, lymph, skin and kidney. All of these pathways should be addressed, and the proper nutrients should be provided to ensure a slow, efficient, healthy removal of stored toxins, both environmental and internal.

**Multi-vitamin/Mineral/Nutrient Approach:** Chelators bind heavy metals, antioxidants and nutrients facilitate detox pathways, and multi-vitamin/mineral support provides energy and balance when caloric intake has decreased to rest the liver and optimize detox functioning. Eleuthero contributes to energy and support of the adrenal glands, which provide blood sugar support. Combined with a healthy diet and plenty of filtered water, a good detox regimen can allow disease-causing toxins to be flushed from the system.

**The Liver:** The liver gets first crack at our nutrients, but it also gets a crack at all those toxins that get in, which can put stress on the liver. Continued overload on the liver interferes with the enzymes of detoxification and can result in pancreatic insufficiency and digestive problems. The liver uses nutrients such as glutathione to hook onto the toxins (conjugate them), make them water soluble, and eliminate them. Other important conjugating agents include taurine, Glycine, and methionine. One of the reasons the cruciferous vegetables, like broccoli, have a reputation for being anticarcinogenic is because they have beneficial effects on the liver’s detox paths. As part of the detoxification process, free radicals are generated. It is imperative to have adequate antioxidant protection. Antioxidants include vitamin C, vitamin E, beta-carotene, quercetin, selenium, Co-enzyme Q-10, taurine and curcumin. Zinc, selenium and glutathione are necessary for antioxidant enzymes in the body. When glutathione is taken in the reduced, active form, it saves the body the energy it takes to reduce it to its active form. N-acetyl cysteine has specific antioxidant action in the liver and is known to protect cells. Red beets are very cleansing and have a target action on the liver. Chlorophyll helps with liver detox and reduces carcinogen
binding to DNA (J Nat Canc Inst Jan 4 1995; 871): 11). Dandelion has been traditionally used to treat liver congestion and inflammation of liver and gallbladder (Hoffman D. The New Holistic Herbal, 1992, Element, Rockport, Ma.), and yellow dock also helps in liver detoxification.

**The Bowels:** Our colon is sometimes called, “the final elimination pathway.” Since it is an elimination pathway for toxins, it is important that this pathway is not obstructed. Inefficient colon elimination results in toxin storage instead of removal. There are many nutrients, which can facilitate the optimal functioning of the bowels. Many plant substances are high in fiber, such as beetroot, asparagus, and broccoli. Additionally, there are many phytochemicals in these plants that favorably influence detox pathways. Yellow dock stimulates bile and can relieve constipation (Tierra L. The Herbs of Life. The Crossing Press, Freedom, Ca. 1992 pp. 82-83). Dandelion can also relieve constipation.

**Blood:** Chlorophyll is the main component of the plant's blood, just as hemoglobin is the main component in human blood. Chlorophyll even resembles hemoglobin in structure. Chlorophyll has long been used for its blood-cleansing and medicinal properties (J Nat Prod 1992; 55:1241-44). Chlorophyll has been known to correct bacteria-scavenging activity in the blood (Vestn-Dermatol-Venerol 1990; (8): 67-9). Dandelion purifies the blood, mainly by straining and filtering toxins and wastes from the bloodstream. Yellow dock is so well known for its blood-cleansing properties, it is used synonymously with the term, “blood purifier” (Tyler V. The Honest Herbal. PPP, NY, NY 1993).

**Lungs/Lymph:** Mullein is important in the detox pathway of the lungs and the lymph; it tones mucous membranes, reduces inflammation, and facilitates expectoration (Hoffman D. The New Holistic Herbal. Element Publ. Rockport, Mass. 1990). One of the flavonoids contained in mullein is Hesperidin, which inhibits histamine release from mast cells (histamine can cause sneezing, itching, watery eyes, etc.) and has proven to have effective anti-allergic action (Yakugaku-Zasshi, 111:193-98). Additionally, mullein possesses antibacterial properties to prevent toxic invasion.

**Skin:** Yellow dock is helpful in skin conditions, especially those caused by blood-borne toxins; it has a natural iron content which builds the blood (Mowry DB. Scientific Validation of Herbal Medicine. Keats Publ. New Canaan, Conn. 1986). Robyn Landis advises that skin conditions that are the result of accumulated wastes can temporarily appear worse after yellow dock administration, because backed-up wastes are released into the blood; the more aggressive the liver detox, the more that is unleashed (Landis, R. Herbal Defense. Warner books, NY, NY 1997). (This is why a gentle, non-fasting, nutrient-supported detox regimen is recommended!)

**Kidney:** Dandelion works on four of the major detox pathways: kidney, blood, liver, and colon (Mowry DB. Scientific Validation of Herbal Medicine. Keats Publ. New Canaan, Conn. 1986). It has the power to stimulate kidney function and the urea detox path, while preserving potassium status. "This herb is a most valuable general tonic and perhaps the best widely applicable diuretic and liver tonic" (Hoffman D. The New Holistic Herbal, Element Publ. Rockport, Mass. 1990 p. 196).

**Testimonials/Nutrient Tidbits:** Use as a multi-vitamin and mineral: Six Total Systemic Detox are roughly equivalent to taking three Core Level Health Reserve, the top-selling multi-vitamin and mineral (with the exception of vitamin D, which is in a daily capsule of F-complex). The wide array of vitamins and minerals addresses deficiencies and shortages, and at the same time, works on removing toxic buildup.

**Constipation:** This product has worked very well for some people in regards to constipation. It really moves the bowels.

A doctor reports . . . This is my standard de-tox formula. It works great.

See: “Total Green” for protein shake ideas utilizing Total Systemic Detox for a health building, detoxifying drink without the added sugars of most drinks (excellent for candida patients). Also, making the shake eliminates the fillers, binders, and emulsifiers that are present in most pre-made drink mixes. Compare the ingredients to most of these other formulas, and the Total Systemic Detox – Total Green shake comes out ahead – more powerful nutritional ingredients, more effective, and more cost efficient.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets
Price: € 32,80

Vegetarian: Yes

Contraindications: High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease. Vitamin E does not involve contraindications at amounts up to 80 times the RDA (800 IU/day). Since vitamin E is an anticoagulant, large amounts of vitamin E (800 IU or greater) can potentiate blood-thinning drugs such as coumadin and should not be used concurrently. Large doses of vitamin E are contraindicated in hypertension. Eleuthero in large quantities is contraindicated in hypertension (only a small amount is used in this synergistic formula). Use caution in pregnancy.
TOTAL THYROID

Ingredients: Each tablet supplies: Thyroid (thyroxine free) 100mg, L-Tyrosine 50mg, Choline 100 mg, Beta Carotene 5 units, Betaine HCL 75mg, Glutamic Acid 20mg, Thymus 40mg, Spleen 10mg, Pituitary 3mg, Adrenal 10mg, Parotid 3mg, B-1 10mg, B-2 10mg, B-6 10mg, B-12 100 mcg, Vitamin A 1000 i.u., Vitamin C 100mg, Vitamin E (natural as succinate), Folic Acid 100mcg, Iodine (as kelp, irish moss) 50 mcg, Calcium (as chelate) 25mg, Copper (as chelate) 25mcg, Manganese (as chelate) 800 mcg, Zinc (as chelate) 1.5mg

Supportive Function: This formula provides comprehensive nutritional support for a healthy thyroid.

When is thyroid support helpful? Underactive thyroid conditions, Wilson’s syndrome, Hashimoto’s disease, overproduction of thyroid hormone, goiter, Graves’ disease, etc.

Clinical Applications/Research: Vitamin B-1 is necessary for proper digestion and the production of hydrochloric acid. Deficiency symptoms can include: fatigue, constipation, irritability, loss of appetite, nervousness, and general weakness. Deficiency is commonly found in people with malabsorption problems (Lininger et al, 1998: 211).

Vitamin B-2 is needed for the health of the whole glandular system, especially important for the adrenal glands. Vitamin B-6 helps in the absorption of B-12, antibody production, and immune system function. It is necessary for the production of hydrochloric acid and the absorption of protein and fat. Deficiency symptoms include: fatigue, depression, irritability, hair loss, headache, skin, and mouth disorders.

Vitamin B-12 is needed for healthy digestion, absorption of nutrients, synthesis of protein, the metabolism of fats and carbohydrates. It helps prevent anemia and works with folic acid to formulate red blood cells. Deficiency symptoms include fatigue, depression, constipation, depression, headaches, irritability, moodiness, nervousness, and spinal cord degeneration.

Vitamin A and Beta Carotene help nourish the thymus and increase antibody production. All glands with duct systems need these nutrients. Deficiency symptoms of vitamin A include dry hair and skin, frequent infections and colds, fatigue, skin disorders, and weight loss.

Vitamin C is necessary for proper adrenal function and tissue growth and repair. It helps in the production of interferon and anti-stress hormones. It enhances immunity and scavenges for free radicals in bodily fluids.

Vitamin E (as natural succinate) helps prevent cell damage, promotes healing and tissue repair, and improves circulation.

Niacin is necessary for the production of hydrochloric acid and proper digestion. It aids the metabolism of proteins, fats, and carbohydrates. It is important in the synthesis of sex hormones, stomach fluids, and bile. Deficiency symptoms include: dementia, depression, diarrhea, fatigue, headaches, indigestion, and loss of appetite, low blood sugar, muscular weakness, and skin eruptions.

Folic Acid promotes immunity by helping in the healthy formation and function of white blood cells, is needed in the production of red blood cells, and promotes healthy cell division. It has been used to alleviate depression and anxiety. Deficiency symptoms include: fatigue, graying hair, paranoia, weakness, and insomnia.

Iodine (as kelp, Irish moss) is necessary for the synthesis of thyroid hormone. Two-thirds of the body’s store of iodine is located in the thyroid gland (Mindell, 1991:77).

Calcium (as chelate) promotes energy production and helps structure the protein in RNA and DNA. It is important in breaking down fats for utilization by the thyroid and by the body. Deficiency can lead to depression, hyperactivity, nervousness, cramps, eczema, and insomnia.

Copper (as chelate) promotes the healing process, energy production, skin and hair color, and taste sensitivity. It helps proper bone formation, red blood cell production, and hemoglobin synthesis. Deficiency signs include: anemia, diarrhea, baldness, general weakness, and skin disorders.

Manganese (as chelate) is important in the production of thyroxine, which regulates metabolic function.

Zinc 1.5mg is necessary for the proper function of the thymus, needed by the immune system, the pancreas, and the sex glands.
Choline promotes hormone production, alleviates nervous system disorders such as tardive dyskinesia and Parkinson’s disease. Deficiency signs include: inability to digest fats, kidney and liver dysfunctions, and high blood pressure.

Betaine HCL promotes healthy digestion and prevents unfriendly bacterial colonization of the stomach and intestines. HCL helps make some minerals and other nutrients more easily absorbable (Lininger et al, 1998:140).

Glutamic Acid is important in the metabolism of sugar and fat, the detoxification of ammonia from the brain, and functions as an excitatory neurotransmitter that increases the functioning of neurons in the central nervous system. In converting into glutamine, it is used by white blood cells and is important in healthy immune function. It is one of the building blocks for cells lining the intestines, is a key component of folic acid, and Glucose Tolerance Factor.

L-Tyrosine is necessary in the formation of active thyroid hormone, triiodotyrosine, by attaching itself to iodine. Low plasma levels of tyrosine have been associated with hypothyroidism. Tyrosine deficiency symptoms include low body temperature, cold hands and feet, low blood pressure, and restless leg syndrome. Tyrosine is needed to synthesize thyroid hormones, the pituitary’s TSH, and adrenocortical hormones. It may help people diagnosed with Parkinson’s disease and has been used to benefit people with chronic fatigue, anxiety, depression, headaches, allergies, and withdrawal from drugs (Balch & Balch (1997:42; Chaitow, 1998:78).

Thyroid (thyroxine free) a raw, concentrated form of animal gland may help improve the health of the thyroid by supplying nutrients that the thyroid needs. Raw glandulars may also help neutralize autoimmune attacks and aid the body in healing itself, (Balch & Balch, 1997:552).

Thymus glandular helps stimulate immune function. The thymus produces thymosin, which is necessary for proper immune system function, and works together with the thyroid.

Spleen glandular helps nourish the proper functioning of the spleen, which provides lymphocytes and phagocytes for healthy functioning of the immune system.

Pituitary glandular helps supply necessary nutrients that a healthy pituitary needs. The pituitary is the master gland regulating the functions of other glands. It produces TSH (Thyroid-stimulating hormone), which helps regulate thyroid hormone production.

Adrenal concentrated glandular helps supply critical nutrients for the healthy functioning of the adrenals. The adrenals produce corticosteroid hormones that affect proper carbohydrate metabolism, sex gland, and electrolyte metabolism.

Parotid is known for supporting detoxification of heavy metals, and some metals may adversely affect the thyroid. The glandular helps support the healthy function of the salivary glands, important in carbohydrate metabolism, and the proper digestion of food.

Suggested Dosage: 1 tablet 3 times daily or as directed

Size: 90 tablets

Price: € 36,15

Vegetarian: No

Contraindications: Large amounts of tyrosine should not be taken with MAO inhibitor drugs.
**TOTAL TRIM**

**Ingredients:** Each tablet supplies: Vitamin B-1 15 mg, Vitamin B-2 15 mg, Vitamin B-6 5 mg, Vitamin B-12 (methylcobalamine) 75 mcg, Pantothenic Acid (D-Calcium Pantothenate) 5 mg, Folic Acid 200 mcg, Niacinamide 25 mg, Magnesium (as malate) 2.4 mg, Calcium (as citrate) 3 mg, Zinc (as chelate) 5 mg, Chromium (as nicotinate) 175 mcg, Banaba (leaf) Extract 1% 25 mg, Coleus Forskohlii Extract 10% 75 mg, Ox bile 25 mg, Inositol 10 mg, 5-Hydroxy-Tryptophan 3 mg, Alpha Lipoic Acid 5 mg, Selatane HCL 10 mg, Amylase 15 mg, Lipase (vegetable) 7.5 mg, Lecithin (Phosphatidyl Choline 10 mg) 22 mg, L-Carnitine 5 mg, L-Tyrosine 10 mg, L-Ornithine Alpha- Ketoglutarate 10 mg, L-Phenylalanine 10 mg, L-Glutamine 15 mg, Apple Pectin 125 mg, Siberian Ginseng (root) 10 mg, Dandelion (root) 5 mg, Kelp (plant) (Iodine 0.750 mcg) 5 mg, Catechin Extract 25 mg, Gymnema Sylvestre (leaf) 25 mg, Guggulipid 10 mg.

**Supportive Function:** This formula supports the balance of normal functions and organ systems that contribute to the HEALTHY maintenance of proper weight.

**When is weight support helpful?** Overweight conditions, diabetes, etc.

**Clinical Applications/Research:** Nutritional enzymes called lipases split the fat molecule into smaller units, making it easier to burn the fat as energy. Amylase breaks down the carbohydrates. In animal experiments, pancreatic (enzymes) reduced food intake and led to weight loss. When weight gain is triggered as a response to the body’s perceived lack of calories or nutrients, “the weight gain may be reversed following the improved digestion which comes with the use of pancreatic or following the use of nutrient-rich foods” (Clouatre, Ibid p. 34). Ox bile will emulsify the fat and allow the enzymes to work on the fat. Banaba leaf extract stimulates glucose transport into cells to be burned for energy, and has demonstrated an anti-obesity effect in obesity-prone mice. It may work by increasing metabolism. Coleus forskohlii raises cyclic AMP in some tissues, which may work to increase fat burning and lean body mass. Coleus forskohlii is reported to affect the thyroid’s ability to increase thermo genesis and metabolic rate, and also regulates insulin secretion. An effect on glucagon levels may increase the breakdown of stored liver glycogen getting burned for energy. Carnitine brings the free fatty acids across the mitochondrial membrane to oxidize them for energy. It is thermogenic (increases fat burning as heat), and reduces ketone levels and fatigue. Magnesium is needed for the first step of oxidation of fats into energy; it also supports the thyroid. Calcium – Research indicates that low intakes of calcium are associated with the expression of a gene in fat cells that activates fat synthesis and suppresses fat breakdown. Core body temperature, which is a measure of basal energy use, falls on the low-calcium diet, but climbs with the high-calcium diet. Analysis of five studies by endocrinologist Robert P. Heaney demonstrated a significant correlation of increased weight to decreased calcium intake (Science News, 2000; 157:277).

**B vitamins and Antioxidants** – B vitamins and reduced flavoproteins (NADH & NADP/PH) are needed for the biochemical process of burning fat for energy. Antioxidants prevent free radical formation during the energy cycle. Tryptophan (goes to 5HTP) can be metabolized to an altered form of niacin that is essential to many Co-enzymes. 5 HTP produces serotonin, a powerful “feel good” brain neurotransmitter that also produces feelings of fullness (satiety). Some B vitamins, such as B-6, are also necessary for brain neurotransmitter production. Lipoic acid is a powerful antioxidant; increased metabolism increases the production of free radicals and the need for antioxidants. Lipoic acid is also an integral part of TPP, an important substrate in the fat-burning energy cycle. Chromium is part of the glucose tolerance factor, which helps regulate blood sugar and insulin levels (insulin decreases the activity of hormone-sensitive lipase, or HSL). Insulin antagonists will protect levels of HSL. Controlling blood sugar helps to control appetite cravings.
Phosphatidylcholine and inositol are fat transporters (lipotropic) to help with the process of fat metabolism and removal from the body. Lipotropics also stimulate thymus activity.

**Fiber** releases hormones that signal satiety (fullness), and can reduce hunger. Soluble fiber reduces insulin and lowers the glycemic response of food (preventing cravings). Two excellent soluble-fiber substances are apple pectin and guggulipid. **Apple pectin** slows absorption of glucose from intestines, binds toxins, and normalizes bowel function. **Guggulipid** is very filling, and suppresses appetite. It may cause an increase in thyroid hormone levels (both T4 and T3), and several studies show indications for guggulipid as a fat reducing compound.

**Siberian ginseng** – Siberian ginseng is an adaptogen that has a reputation for balancing organ systems back into balance, whether function is low or high. It normalizes the pituitary (sends signals for hormone releasing factors to designated organs), stimulates energy and supports the adrenal glands. Some ginseng ingredients have been shown to improve sugar metabolism (Chun-Su Yuan, clinical pharmacologist at the University of Chicago's Tang Center for Herbal Medicine).

**Tyrosine** is believed to be thermogenic; it stimulates the burning of brown fat, releases growth hormone, and stimulates CCK (the hormone that facilitates the enzymatic pathway of fat breakdown and signals satiety). Tyrosine is necessary for the production of thyroid hormones (the thyroid regulates the basal metabolic rate of almost all cells).

**Dandelion** is an herbal lipotropic (helps fat mobilization and transport) and diuretic (helps dispense water weight) and is used as a liver cleanser for toxins released from fat stores. Toxins contribute to fatigue, discomfort, and imbalance and can interfere with weight loss.

**Kelp** is an herbal seaweed (detoxifying) that contains natural iodine and supports the thyroid gland.


**Gymnema sylvestre** supports insulin sensitivity, changes perception of sweetness and reduces cravings.

**Catechin extract** - Tea extracts stimulate thermo genesis in brown fat (Dullo et. al., Int. J. Obesity 20, Suppl 4 (1996), and the antioxidant polyphenol catechin from green tea slows destruction of adrenaline and increases thermo genesis (Clouatre, Dallas PhD. Anti-Fat Nutrients. 1997. Pax Publ., San Fran, Ca.: 58.).

**L-phenylalanine** converts in the body to L-tyrosine, and both are utilized as weight support nutrients. L-phenylalanine works to diminish appetite, and provides a building block for many important weight-supporting nutrients, including neurotransmitters and hormones, such as adrenaline (norepinephrine), dopamine and thyroid hormones. (Ibid, p 28-29.).

**Tyrosine** acts as an appetite suppressant, releases growth hormone (GH), helps to control depression and anxiety, and functions as a mild antioxidant (Ibid, p. 12). It stimulates CCK, a hormone that controls appetite by signaling that we’ve eaten enough (serotonin works in a similar fashion) (Ibid, p. 26). Tyrosine can help prevent adrenal and thyroid exhaustion, and, “L-Tyrosine is a precursor to a number of neurotransmitters and hormones, such as adrenaline (norepinephrine), dopamine and thyroid hormones. This means that L-tyrosine is a precursor to important stimulants to the metabolism (including thermo genesis) and to the nervous system… and may help correct minor hypothyroidism” (Ibid, p. 28.).

**Testimonials:** "If I take Total Trim, my blood sugar is even and I don't experience the roller-coaster feeling of high-to-low blood sugar that makes me crave carbohydrate foods. I’ve tried a lot of weight loss programs, but they never worked for me. I lost 20 pounds in 10 weeks, nice and slow, but it didn’t come back on. I followed all the advice and retrained my body to eat right". (Becky Norton, Hoover AL)

**Suggested Dosage:** 1 tablet 3 times daily ½ hour before meals or as directed. Taken before meals, Total Trim supports satiety and reduced appetite.

**Size:** 90 tablets

**Price:** € 59,90
Vegetarian: No

Contraindications: Contraindicated in phenylketonurics and with MAO inhibitors. While large quantities of 5 HTP are contraindicated with SSRI's (serotonin anti-depressant drugs), this formula only includes a synergistic amount and is not contraindicated with these drugs (consulting a licensed professional is advised).

Disclaimer: Total Trim is not intended to treat elevated insulin, blood glucose levels, diabetes, or any disease. These are nutritional suggestions only. Any supplementation should be done under the supervision of a Licensed Practitioner.

“The road to health, well-being, and the right weight” with Total Trim

Maximizing optimal weight loss with the new TOTAL TRIM supplement:
Faddish diets pop up faster than broccoli sprouts these days, and only one common theme runs amongst all – they all claim you can lose large amounts of weight easily, quickly, and efficiently. First it was lo-Calorie, then lo-fat, then hi-protein, and now lo-carb. Any diet that works has to make realistic demands for a lifestyle that meets healthy guidelines. Otherwise, it is bound to either fail, or have temporary results at best. A good diet means it can be followed for a lifetime, and that is necessary to maintain healthy weight for a lifetime.

Balancing is one of the keys to facilitating weight loss, and balance includes proper percentages of macronutrients (protein, carbohydrate and fat). The TYPE of fat, the TYPE of protein, and the TYPE of carbohydrate are crucial to keeping a balance that favors weight loss. Also, any imbalance makes it impossible to manage a healthy weight. Nutritional deficiencies and metabolic problems can cause imbalances and really throw a cog into the works. If the body is deprived of nutrients, it will only create cravings to let one know that it can’t survive without the necessary fuels.

The lo-carb diets that are the rage these days do not necessarily have a bad message – unrefined, high glycemic carbohydrates can increase insulin levels and sabotage weight loss efforts, it’s true. BUT, unless one pays attention to the “rest of the story”, things like permanent weight loss, ultimate well-being, and happiness will always be out of reach.

Eat right, exercise, and take the weight support product from Nutri-West, TOTAL TRIM

The Total Trim formula supports the balance of normal functions and organ systems that contribute to the HEALTHY maintenance of proper weight. These functions addressed by Total Trim include: Digestion, Appetite, Satiety, Metabolism, Thermo genesis, Fat mobilization/breakdown, Calorie-burning in the Kreb's cycle, Glucose regulation, Muscle tone, Neurotransmitter production, etc.

Multiple-organ support for energy (adrenals), metabolism (thyroid), cleansing (liver), elimination (colon), etc. WITHOUT the use of stimulants (caffeine, ephedra), digestion blockers, nutrient binders, allergenic substances and other harmful ingredients that upset the balance needed for results!
Rules for fast, easy and effective weight balance with Total Trim:

Adopt a regular exercise routine that increases energy expenditure and lean muscle mass, which in turn, burns more fat. Exercise increases endorphin production and energy.

Provide all the nutrients the body needs to function, produce energy and maintain balance. “It is known experimentally that concentrated complete foods tend to reduce the appetite and partition energy into the body's lean tissues”...(Clouatre, Dallas PhD. Anti-Fat Nutrients. 1997. Pax Pub, SF, Ca. p 28.)

Make as much of your own food as you can. Eating out is where most hidden calories are consumed. Avoid processed foods from the grocery store.

Use moderation. Depriving usually invites craving, but don’t use that as an excuse to stray off a healthy path.

Count the nutritional value, and not just the amount, of macronutrients (are they providing you with the vitamins and minerals you need to stay in balance?) For instance:

**The macronutrients: Protein, Fat and Carbohydrate:**

**Protein** – Lean, organic, unprocessed, unfried meat is a good choice. For fish, choose wild Atlantic salmon, or similar fish high in omega 3’s but low in mercury content. Grabbing a burger from the local fast food restaurant and throwing away the bun may be a high protein choice, but it is NOT a healthy choice that leads the body into balance. **Fat** – Good fats will maintain balance; bad fats will increase weight gain. **Good fats**: olive oil, omega 3 oils (i.e. fish oil & flax oil), black currant seed oil, some vegetable oil in moderation; **Bad fats**: trans fats (hydrogenated oils), peroxidized fats (cooked at high temperatures), and saturated fats. Some saturated fats are better than others, such as coconut oil and shorter chain saturated fats, however, if the source isn’t known (such as on labeled processed food), avoid them! Olive oil sprays can be used for sautéing. **Carbohydrates** – Get as many as you can from dark-colored/cruciferous vegetables. Make sure they are unrefined (unprocessed), low glycemic index (don’t turn to sugar rapidly), high fiber and hypoallergenic. Many high protein pastas are wheat-free and made with alternative sources, such as high protein quinoa. Eat at least (hopefully more!) five servings of fruits and veggies per day. The energy cycle of the body runs on carbohydrate, and if you tried to eliminate them from the diet, it would become very apparent, very soon, how much they are needed. Eat the GOOD ones, and in moderation.

A few tips and tricks:

The Paleo diet by Loren Cordain, PhD, is an excellent reference for healthy eating habits that foster weight loss without any unhealthy messages (and great recipes!) If avoiding grains is too restrictive and no allergies exist, moderate the diet to meet your needs.

Drink lots of filtered water every day. Water lubricates the cells, provides the necessary environment for metabolism, balances osmotic pressure, flushes toxins, and can provide a full feeling. Thirst is often misinterpreted as hunger.

Utilize Healthy Sauces and Soups: Make non-creamy, nutritious sauces when possible, and read labels carefully when you can’t. Tomato based sauces (if not allergic to night shades) can be nutritious, healthy, and also provide lycopene (antioxidant). Marinate protein choices in tasty sauces. Annie’s low-fat Gingerly Vinaigrette, for example, has only 40 calories, 4 carbs, and 2 fat grams (no saturated fat) per serving. Soups can be a nutritious meal. Besides, studies show that soup provides a fuller feeling, reduces appetite, and prevents hunger more than the same food in solid form with the same amount of calories.
**Enhance flavor:** Utilize spices to jazz up the flavoring of foods. Lemon fools the taste buds into thinking they’ve had salt; mixed with olive oil it can be the base of a great healthy salad dressing. **Avoid too much salt:** Salt leaches calcium from the body, causing potential mineral imbalances.

**Avoid processed foods!** They usually contain unhealthy ingredients that cause imbalances, like hydrogenated fats (trans fatty acids). It doesn’t matter if they are low carb; yet contain unhealthy, or high fat, high calorie/sugar ingredients. Not only that, but low carb labels can be deceptive. Channel 4 News, Denver, reported Jan 2004 they sent products in to be tested for actual net carbs. Some were close, some were not so close, and some weren’t close at all. Dr. Andrew Weil states, “What is undermining our health is processed foods. They are the main source of bad fats and bad carbohydrates, along with additives we don’t need, and they displace from our diets the fruits, vegetables, and whole grains we do need for the protective elements they contain”.

**Avoid soda pop:** Most artificial sweeteners, such as aspartame, cause imbalances. They can also detract from weight loss by inducing an insulin response. Soda pop also leaches calcium, causing an imbalance and removing an essential mineral for weight loss. Caffeine wreaks havoc with blood sugar. The Department of Agriculture reported that the most consumed substance taken in by a typical American in a year was carbonated drinks, the leader at over 400 pounds per year.

Spread the caloric intake throughout the day to regulate blood sugar and prevent fat storage. Eating larger meals (without snacks), and eating infrequently, can cause larger insulin responses. **Stay in energy balance!** Taking in fewer calories than the body needs will send it into starvation mode, and the body will become more efficient at storing fat.

**Eat moderate portions of food,** whether they are protein portions, fat portions, or carbohydrate portions. They are all essential for health. Calories do count, and an excess of any one macronutrient (fat, carbohydrate, or protein) can cause weight gain.

**Avoid fried foods:** High temperatures oxidize fats and can result in free radical formation. Also, some foods, such as fried potatoes, can form acryl amides that are known carcinogens.

**Get the most out of your food!** Make everything count towards total balance. Foods should include unprocessed, unsprayed, nutrient-dense, high-fiber, phytochemically rich, vitamin and mineral rich whole foods and uncontaminated protein sources low in total fat but high in “good fat” concentrations. “It is known experimentally that concentrated complete foods tend to reduce the appetite and partition energy into the body's lean tissues”...(Clouatre, Dallas PhD. Anti-Fat Nutrients. 1997, Pax Publ., San Fran, Ca., P 28.).

**Exercise** increases lean muscle mass, which in turns burns fat. Exercise improves the body’s ability to use glucose, decreasing the amount of insulin needed. Exercise also increases the body’s sensitivity to insulin, which can help reverse the insulin resistance that often occurs when people become overweight. Additionally, exercise aids in glucose transport, as contracting muscles help stimulate the movement of glucose throughout the body.

Above all, **Use good judgment:** Follow healthy guidelines without obsessing about perfectionism. Stress raises cortisol levels, and that’s not good for weight loss!
Correcting Metabolic Problems and Nutritional Deficiencies: The Solutions

(A licensed practitioner will help determine)

Endocrine disruption:
When the body is off kilter, it is hard to maintain the homeostasis of many systems, including the endocrine system, which has such a profound effect on weight balance. For instance, the thyroid gland controls the basal metabolic rate for almost every cell in the body. Less than optimal functioning in various organs of the endocrine system will thwart efforts to bring weight into balance. The pancreas secretes insulin to bring glucose into the cell to be burned for energy, the liver stores glycogen to be used for energy storage, and the adrenal glands secrete factors that regulate blood sugar, water retention, and metabolism. Impaired function of any of these organ systems can impede weight loss. Suggested Nutri-West products: Total Thyroid, Pan-Lyph chelate, Total Liver Detox, DSF etc.

Balancing blood sugar is essential!
Eating habits have a lot less to do with will power than they do with blood sugar. When blood sugar drops, the brain signals the body that it is in a hunger state; mental confusion and weakness generally follow. This is why starving all day to make up for the calories to be consumed in the evening is not a smart approach! Adding protein to a meal in the form of a supplement or protein powder can help balance blood sugar. Eliminating sugar and simple, unrefined carbohydrates will help achieve balance. This is the basic principal behind the Low Carb diets. Suggested Nutri-West products: Total Alpha Lipoic Acid, Amino-All, Total Green Protein and Complete-Whey-G

Food allergies can cause weight gain!
It is highly important to address FOOD ALLERGIES! Food allergies can cause weight gain by causing edema, water weight gain, and actual weight gain by producing substances that trigger the body to store fat (Haas, Elson, M.D. The False Fat Diet, Ballantine Publ., NY, NY. 2001). Additionally, it is thought that one of the reasons a high protein diet works can sometimes be attributed to reduction in allergenic foods! Suggested Nutri-West products: Hypo-D, Total Leaky Gut, Total Systemic Detox

Cortisol increases fat deposition:
Cortisol decreases TSH and enzyme activity, which can decrease metabolic rate, and make it hard to lose body fat. It also increases insulin resistance. Suggested Nutri-West product: Pro-Cortisol Balance

Essential Fatty Acids:
Complete Omega 3 Essentials fish oil balances the ratio of omega 3 to omega 6, providing concentrated amounts of EPA and DHA (the good fats in fish oil) for healthful benefits.
Black currant seed oil – there is evidence that gamma- linolenic acid reduces appetite and weight in animal studies (Clouatre, Dallas PhD. Anti-Fat Nutrients. 1997. Pax Publ., San Fran, Ca., p.16).

Additional support for appetite/satiety: Total 5 HTP contains the serotonin precursor 5-HTP. Serotonin provides a feeling of fullness. Take at bedtime if any sleepiness occurs during the day.

Additional support for growth hormone (GH) production: Total GHR has the ingredients to facilitate the natural release of GH from the pituitary.

Utilize protein powders: Protein powders can be very helpful when added to foods and shakes, because the protein content will lower the index of a carbohydrate meal. When used for a healthy snack, a protein shake can stabilize blood sugar and prevent later cravings. Try to find a powder without added simple sugars. This appears on labels as glucose, sucrose, corn syrup, rice syrup, etc. A great choice would be “Total Green” Protein Powder, or “Complete-Whey-G” Protein Powder.
TOTAL UPPER GI

**Ingredients:** L-Glutamine 50mg, Okra 25mg, Stomach 125mg, Folic Acid 250mcg, Vitamin A 1,500i.u, Parotid 10mg, Aloe Vera 5mg, N-Acetyl Glucosamine 50mg, Bromelaine 25mg, Duodenum 125mg, Deglycerrhized Licorice Root 156mg, Cabigen Extract (Vitamin U) 20mg, Slippery Elm 25mg, Magnesium Chelate 75mg

**Supportive Function:** The stomach is where the processes of digestion really begin (minimal starch digestion in saliva), which in turn will determine how effectively we extract vital nutrients from our food. Upper GI was formulated in an effort to completely support these sensitive, all-important cells of digestion and includes soothing herbals and nutrition for healthy maintenance.

**When are upper GI nutrients helpful?** Heartburn, ulcer, and gastrointestinal distress and complaints

**Clinical Applications/Research: L-Glutamine:** Glutamine is the main fuel that the intestinal cells need for maintenance and repair (they slough off every three days). Glutamine reinforces the immune system, and there is considerable evidence that glutamine can enhance the barrier function of the gut against viral, bacterial, and food antigen invaders (Hall JC et al. Br J Surg 1996 Mar; 83(3): 305-312). Glutamine has been proven to stimulate intestinal cell growth while reducing cell injury and infection. It also stimulates mucosal cells, which are highly protective against the damage seen in ulcers. In Japan, glutamine is known as the most popular anti-ulcer treatment.

**Okra** has beneficial phytochemicals, and as mucilage is capable of covering the stomach lining and protecting cells. Its soothing effect on the lining helps the healing process.

**Glandulars** are thought to provide precursor substances that the body can use to support and enhance the function of a specific gland. They may provide the potential “life force” the body needs to enhance function of a specific organ or gland. Glandulars are tissue concentrates, usually of a bovine source, which stimulate their respective glands.

**Folic acid** is essential to the growth and repair of cells. It plays an integral role in DNA/RNA replication, and is required whenever there is a large turnover of cells, such as when the stomach lining has been injured and is in need of cellular repair.

**Vitamin A** is considered to be an essential immune vitamin. It is necessary to cellular growth, repair, and regeneration. Its role in regenerating epithelial tissue is vital to immune organs. It has been known for a long time that a lack of vitamin A in the diet will result in reduced resistance to infection.

**Aloe Vera** is a soothing, mucilaginous herb that aids in the healing of stomach disorders and ulcers, by providing tissue protection to the gastro-intestinal mucosa. (Balech JF Presc for Nutr Healing 1990, Garden City Park, NY). Aloe vera improves wound healing and inhibits inflammation, and regenerates epithelial cells.

**N-acetyl Glucosamine (NAG)** is important to the extra cellular matrix that helps to comprise our, “cellular cement.” NAG is needed for synthesis of the chondroitin proteoglycans (big building blocks of connective tissue) (Biochem J. 1991 Jan; 273(Pt 2): 283-88). It provides the extra cellular layer of cells, which forms a protective layer over the stomach lining.

**Bromelaine** has been documented in over 200 studies as being a potent anti-inflammatory agent. Additionally, double blind studies have shown that bromelaine can combat infection by affecting mucosal inflammation (Headache 1967; 7:13-17; Acta Obstet Gynaecol Jpn 1972; 19:147-153).

**Deglycyrrhizinated Licorice (DGL)** increases the integrity of the mucous\bicarbonate-producing cells in the stomach. A natural licorice extract, deglycyrrhizinated licorice (DGL), has been found to increase the life span of the intestinal cells, improve the quality of protective substances, and improve blood supply of nutrients (Glick L. Lancet ii: 817,1982). DGL has been effective in treating both gastric and duodenal ulcers, and can reduce the gastric bleeding caused by aspirin (Rees WDW et al. Scand J Gastroenterol 14:605-7.1979). When DGL was compared to antacids and H2 receptor antagonists in over 800 patients, all had a high healing rate. DGL, however, had a significantly lower relapse rate (Kassir ZA Irish Med J 78:153-56, 1985), probably because of its ability to inhibit helicobacter pylori, the bacteria suspected of causing over 90% of ulcers.
Cabbage is reported to heal ulcers; it has a high glutamine content (glutamine is involved in the synthesis of the mucoproteins present in the mucous secretions). Cabbage is defined in the Merck index as “vitamin U,” named so because of its powerful antiulcer properties.

**Slippery Elm** calms the inflamed mucous membranes of the stomach (Balch JF Presc for Nutr Healing 1990, Garden City, NY). In addition to a soothing texture that coats the stomach lining, slippery elm contains the fiber-rich ingredient mucilage that stimulates mucous secretion (protective against ulcers).

**Suggested Dosage:** 1 tablet 3 times daily or as directed.

**Size:** 60 tablets

**Price:** € 32,10

**Vegetarian:** No

**Contraindications:** None known.
TOTAL VEGGIE

Ingredients: Each tablet supplies: Wheat Grass Sprouts* 75 mg, Cauliflower Sprouts* 50mg, Broccoli Sprouts* 100mg (7500ppm/gm Sulphoraphane), Cabbage Sprouts* 75mg, Cordycepts 23.5mg, Maitake Mushroom 23mg, Shiitake Mushroom 25mg, Resveratrol Extract 20% (Polygonum Cuspidatum Extract) 7mg, Parsley 25mg, Kale Sprouts* 25mg, Red Clover Sprouts* 50mg, Green Tea Extract (Catechin 40%) 25mg, Lignan (from Flax Seed) 50mg, Vitamin A 50i.u., Vitamin C 5mg, Vitamin E Succinate (natural) 2i.u., Carrot 25mg, Oat Sprouts* 38mg, Alfalfa Sprouts* 41mg, Asparagus 25mg, Okra 25mg, Betaine HCL 10mg. *All sprouts are certified organically grown.

Supportive Function: This formula has comprehensive nutritional support for a healthy immune system and provides totally organic sprouts with the potent properties of concentrated phytochemicals. Phytochemicals in fruits and vegetables are associated with the prevention or treatment of at least four of the leading causes of death in the United States. Phytochemicals are involved in many processes that help prevent cell damage, decrease cholesterol levels, and protect against disease (Bloch A et al, “Position of the American Dietetic Association: Phytochemicals and functional foods,” JADA 1995; 95: 493-496).

When are organic sprouts helpful? Challenged immune systems, protection support in a toxic environment, chemical exposure, detoxification support, health maintenance, etc.

Clinical Applications/Research: Organically grown sprouts are free of pesticide residues. 75 Environmental Protection Agency officials ranked pesticide residues among the top 3 health risks. Sprouts are the richest source of food enzymes that protect the bodies own stores of enzymes, reduce stress on the body, and protect against superoxide induced cell damage. Three-day old sprouts of cruciferous vegetables contain 10-100 times the protective phytochemical sulphoraphane, than do mature plants. (Balch & Balch, 1997:181; 47-8; Fahey JW et al), “Broccoli sprouts: an exceptionally rich source of inducers of enzymes that protect against chemical carcinogens,” (Proc Natl Acad Sci U S A Sep 161997; 94(19): 10367-72).

Wheat Grass Sprouts are a potent source of the food enzymes, vitamins, minerals, and trace elements found in beneficial vegetables associated with good health. Dr. Ann Wigmore, Hippocrates Health Institute, Boston, found that 1 pound of wheatgrass is equivalent in nutritional value to 25 pounds of the best vegetables. Wigmore’s studies show that wheatgrass combined with other foods helped many health disorders. She theorized that the chlorophyll component of wheatgrass may account for much of its beneficial results. In animal experiments with anemia, chlorophyll was found to return abnormal blood counts to normal after five days of supplementation (Balch & Balch, 1997:61).

Cauliflower Sprouts: cauliflower is a member of the cruciferous family of vegetables, including cabbage, broccoli, radish, daikon, kale, mustard, turnip, cress, horseradish, rutabaga, kohlrabi, and Brussels sprouts. Epidemiological studies in Norway show that high consumption of cauliflower and other cruciferous vegetables are linked with low incidence of polyps of the colon. Cauliflower’s high indole component is believed to be responsible for strengthening the immune system, enhancing detoxification, and protecting the GI tract. Its sulphoraphane component is known to protect breast tissues (Carper, 1989:160-1; Fahey JW et al, Ibid).

Organic Broccoli Sprouts are rich in food enzymes, carotenoids, chlorophyll, indoles, glucosinolates, sulphoraphane, and dithiolthiones. Food enzymes protect against depletion of the body’s own enzymes and reduce stress on the body. The superoxide dismutase (SOD) enzyme in cauliflower protects against cell damage caused by one of the most dangerous free radicals, superoxide. Population studies link broccoli consumption with health of the esophagus, stomach, colon, lung, larynx, prostate, oral cavity, and pharynx. Biochemistry studies show sulphoraphane to be a chemoprotective agent for cells of the breast, GI tract, and liver. Sulphoraphan stimulates increased glutathione activities, which protect against cell damage, the tissues of the immune system, arteries, brain, heart, kidneys, eyes, and skin, and helps detoxify heavy metals and drugs. A Buffalo, New York, study found that broccoli’s protective effects rose in a dose dependent manner: greater consumption was associated with less risk. A 1983 population study suggested that women who ate more broccoli maintained health of the cervix. (Carper, 1989:146-7; Balch & Balch, 1997:45; 48; Watenberg L W et al), “Inhibition of

Cabbage Sprouts contains food enzymes, vitamins A, C, and U, chlorophyll, flavonoids, and the phytochemicals, indoles, diithiolthiones, isothiocyanates, phenols, and gefarnate. Ancient medical folklore credited cabbage as a panacea for maintaining health and treating disease. Animal tests show that gefarnate stimulates the stomach lining to produce a shield of mucus to protect against potentially injurious levels of acid and helps rejuvenate ulcerated cells. Large population studies in Japan showed that the greatest cabbage consumption was linked with the lowest death rates from all causes. Other population studies in the U.S., Greece, and Japan link high cabbage consumption with colon health. Cabbage indoles and diithiolthiones stimulate enzymes that enhance detoxification of toxic compounds. Isothiocyanates help protect normal cellular function (Carper, 1989:150-5; 56-63; Graham S et al), “Diet and colon cancer,” (American Journal of Epidemiology Jan 1979; 109(1): 1-20; Wattengen LW), “Inhibition of neoplasia by minor dietary constituents,” (Cancer Research Suppl. May 1983; 43:2488s-2453s).


Maitake Mushroom has been traditionally used to promote wellness, vitality, and prevent high blood pressure. It is also considered an adaptogen, helping the body adjust to stress and normalize body functions. Part of its healing properties has been attributed to the polysaccharide 1, 3 beta D-glucan. In vitro studies show beta glucan stimulates cytokine production from macrophages, enhancing immune responses (Kurashige et al, 1997; Okazaki et al, 1995; Adachi, 1994 in Stamets & Yao, Ibid: 155). Other studies show that maitake moderates and lowers glucose levels (Stamets & Yao, Ibid: 155). Ohno et al, 1995, demonstrated that maitake stimulated tumor necrosis factor (“Enhancement of LPS triggered TNF-alpha (tumor necrosis factor alpha) production by 1, 3)-beta-D-glucans in mice,” Biol Pharm Bull Jan; 18(1): 126-33).

Shiitake Mushroom contains 18 amino acids and is rich in B vitamins. It contains polysaccharides, including lamin and lignan. Shiitake has been used to promote vitality, build resistance to disease, help prevent heart disease, control and lower cholesterol, and to treat viral infections and fatigue. Lentinan has been shown to promote immune system function by stimulating T-cell function (Balch & Balch, 1997:60; Lininger et al, 1998: 310-1).


Parsley is a potent source of vitamins and minerals. It contains more vitamin C by weight than oranges. It is used by herbalists as an immune enhancer, diuretic, digestion stimulus, to help high blood pressure, and to protect normal cellular activity. It contains an abundance of phytochemicals, chlorophyll, apin, apiol, bergaptein, furanocoumarin, bergapten, isoumeratorin, mucilage, myristicene, petroselinic acid, and pinene. (Balch & Balch, 1997: 75; Rector-Page, 1991:176).

Kale Sprouts: kale is a member of the cruciferous family of vegetables. It contains twice as much beta-carotene and other carotenoids, lutein and zeaxanthin, as spinach. Carotenes and SOD enzymes in kale protect against

**Red Clover Sprouts** are a rich source of food enzymes, vitamins, and minerals. Herbalists have traditionally used red clover for its blood purifying, mild antibiotic, immune enhancing, and cell-protective properties. Its phytochemicals include coumarins, isoflavones, flavonoids, glycosides, and resins. (Yanagihara K et al), “Antiproliferative effects of isoflavones on human cancer cell lines established from the gastrointestinal tract,” (Cancer Res 53:5915-21).


**Lignan (from Flax Seed)** is a fiber-like substance and a phytoestrogen. Flax seed lignan content is 100 times greater than the lignan content of wheat germ. High-fiber diets with phytoestrogen activity of soy and whole grains in Mexican and Asian studies suggest lignan may be one of the dietary factors associated with protecting the health of the breast and prostate. Lignan helps improve colon health, blood sugar and cholesterol profiles, and helps balance normal hormone levels (Lininger et al, 1998:159; Strauss L et al), “Dietary phytoestrogens and their role in hormonally dependent disease,” (Toxicol Let Dec 28 1998; 102-103:349-54; Makela S), “Phytoestrogens are partial estrogen agonists in the adult male mouse,” (Environ Health Perspect Oct 1995; 103 Suppl 7:123-7).


**Vitamin C** helps stimulate the immune system by elevating interferon activity, which may account for its antiviral activity (Gerber et al), “Effect of ascorbic acid, sodium salicylate, and caffeine on serum interferon level in response to viral infection,” (Pharmacology 1975; 13:228). Deficiency symptoms include poor healing time, increased susceptibility to infection, and poor digestion. Vitamin C is essential to tissue growth and repair. Vitamin C helps enhance immunity and helps protect against infection (Balch & Balch, 1998: 18-19). Vitamin C enhances the activities of vitamin E, protects against cell damage, and protects against potential damaging effects of nitrosamines (Mindell, 1991:43).

**Vitamin E** is necessary for tissue repair and helps reduce blood pressure. Vitamin E’s antioxidant properties inhibit the oxidation of lipids, the formation of free radicals, and protects against cell damage. It protects other fat soluble vitamins from oxidative damage and aids in the utilization of vitamin A. Population studies suggest that low vitamin E intake is linked with higher incidence of heart disease and bowel and breast disorders (Balch & Balch, 1997: 19-20).


**Oat Sprouts** contain vitamins, food enzymes, B1, B2, D, and E, and the phytochemicals, carotenoids, alkaloids, gluten, flavonoids, saponins, and steroidal compounds. Oat fiber helps lower cholesterol, improve regularity, and helps keep the colon healthy. Oat compounds help inhibit the biosynthesis of prostaglandins, which lead to
inflammation, and contain protease inhibitors that help protect against viral replication and promote the health of the cell (Carper, 1989: 239-41).

**Alfalfa Sprouts** contain food enzymes, protein, all known vitamins, chlorophyll, copper, calcium, magnesium, potassium, iron, phosphorus, sulfur, sodium, and zinc. Alfalfa alkalizes and helps detoxify the body. Alfalfa’s sulfur, chlorophyll, copper, and zinc help remove cadmium from the body, a known cause of emphysema, a weakened immune system, and decreased production of T-cells. The phytochemical saponins in alfalfa help block absorption of cholesterol and help prevent formation of atherosclerotic plaque. Alfalfa also contains flavones, isoflavones, sterols, and coumarin. Traditional medicine used alfalfa to treat indigestion, anemia, loss of appetite, and poor assimilation of nutrients. Alfalfa has been found helpful in balancing hormones, treating infections, ulcers, athlete’s foot, intestinal, skin, and liver disorders, and high blood pressure. **Caution:** People with a history of systemic lupus erythematosus should avoid use of alfalfa.  (Lininger et al, 1998: 230-1; Balch & Balch, 1997:49; 64; 175-6).

**Asparagus** is a member of the allium, lily family, which includes asparagus, garlic, and onions. The allium family contains sulfur compounds that have been reported to help eliminate arsenic, cadmium, excess copper, lead, mercury, nickel, and radiation products from the body (Balch & Balch, 1997:135, 176, 215, 364, 387, 404, 456). Heavy metals are known risk factors in many disease processes. Asparagus has been traditionally used as a diuretic that enhances eliminative organ activity and helps in heavy metal detoxification. Asparagus has been reported to help balance female hormone levels. In China, asparagus therapy has been traditionally prescribed for “kidney deficiency” and severe “adrenal deficiency,” syndromes associated with chronic exhaustion and fatigue. By strengthening the kidney, elimination of heavy metals through the urine may be enhanced. Asparagus contains steroidal and bitter glycosides and asparagine, an amino acid, which functions to help detoxify the brain of excess ammonia. It has been traditionally used as a nutritive tonic and to strengthen the lungs (Tierra, 1990:110-111).

**Okra** contains fiber, vitamins A, C, and folic acid, and calcium, potassium, and magnesium. Okra also contains sticky vegetable compounds that bind with buildups of heavy mucous that prevent small intestinal villi from absorbing nutrients. When digestive enzymes are present with this sticky compound, the mucous barrier gradually breaks down. Okra is listed as a protective vegetable by the National Cancer Institute (Kelly, WD, *One Answer to Cancer*, Mineral Wells, TX: Cancer Coalition, 1997).

**Betaine HCL** helps digest proteins in the stomach, reduce bacterial colonization of the stomach, and enhance the absorption of minerals and other nutrients.

**Suggested Dosage:** 1 tablet 2-3 times daily or as directed

**Size:** 90 tablets

**Price:** € 53,50

**Vegetarian:** Yes

**Contraindications:** Use with caution when combining this product with blood-thinning drugs. There are no known reported interactions with drugs; however, this formula does contain compounds, which may favor anti-clotting environments.
TOTAL VIRX

**Ingredients:** Olive Leaf 100mg, L-Lysine 100mg, Vitamin C 25mg, Zinc Chelate 10mg, Elderberry Extract 100mg, Selenium Chelate 50mcg, Olive Leaf Extract 5mg, Vitamin A 3333.33i.u, Echinacea 100mg, Goldenseal 50mg, Astragalus 100mg, Natural Beta Carotene 3333.33i.u.

**Supportive Function:** Total Virx provides complete immune support for maintenance of defenses against attack from viral organisms. A uniquely orchestrated combination of powerful phytochemicals and nutrients make up this formula, which includes the highly active components in olive leaf (such as oleuropein).

**When are immune nutrients helpful?** Decreased immune function, infections

**Clinical Applications/Research:** Olive Leaf has been recently researched because of the discovery of the high quantity of active phytochemicals in this plant. The olive branch dates back to ancient times as a symbol of rebirth and growth. Now, an extract from the leaves of the olive branch has gained interest, due to a phytochemical called, "oleuropein." In addition to the oleuropein contained in olive leaf extract, other powerful bioflavonoids are present, including rutin, Hesperidin, and other flavones. These ingredients work synergistically together, and are responsible for the reputation that the extract is building for purported medicinal properties, including: antibacterial, antimicrobial, antiviral, antifungal, antioxidant, antiarrhythmic, hypoglycemic, hypolipidemic, hypouricemic, hypocholesterolemic, and hypotensive. Numerous scientific tests are now starting to confirm the potency of this plant’s actions.

**Lysine** is an amino acid with antiviral properties; it is especially effective against the herpes simplex virus. While lysine and lysine-rich foods are recommended for herpes and related viruses, large amounts of arginine and arginine-rich foods (including chocolate, nuts, dairy and meat) should be avoided.

**Vitamin C** is one of the most important vitamins, which builds the immune system. It creates strong, healthy tissues that line immune organs, and it is carried in the immune-fighting lymphocytes (white blood cells). Vitamin C helps mobilize the lymphocytes (immune-fighting cells) and increases the speed with which they can reach a site of infection. When there is an infection, vitamin C is carried to the site quickly, and it is used up quickly.

**Zinc** is another important immune vitamin. It has a vital role in regenerating epithelial tissue and so is highly important when viral infection calls for cellular repair. Zinc shortens colds and reduces symptoms, theoretically by inhibiting viral replication (Landis R. Herbal Defense. 1997 Warner Books, NY, NY).

**Elderberry Extract** is high in phytochemical content, especially proanthocyanidins, which have potent cell-protecting ability. Elderberry has been used traditionally for its antiviral effects.

**Selenium** is an antioxidant, it’s a cofactor in glutathione peroxidase and Selenium SOD antioxidant enzymes, and its ability to strengthen the immune system has been widely documented. Epidemiological studies suggest that many diseases are higher in areas where selenium is depleted in the soil. For instance, cultivating garlic and onion in selenium reduced total tumors up to 75% (Carcinogenesis 1994; 15(9): 1881-5).

**Vitamin A** is considered to be an essential immune vitamin. It is necessary to cellular growth, repair, and regeneration. Its role in regenerating epithelial tissue is vital to immune organs. It has been known for a long time that a lack of vitamin A in the diet will result in reduced resistance to infection.

**Beta-Carotene** is a precursor, which is made into vitamin A, as the body needs it. Beta-carotene has also been found to specifically enhance the immune system, and is a potent antioxidant (vitamin A is not an antioxidant form).

**Echinacea** is an herb that has been used for centuries because of its profound effect on the immune system. Supplementary treatment of echinacea has been reported to protect cells and enhance antibody (B lymphocytes) and cell-mediated immune response (T lymphocytes) (Vet Clin North Am Food Anim Pract. 1988).

**Goldenseal** is another powerful herb, acting as a detoxifier and antibiotic. One of the most popular herbs, Goldenseal is known in traditional Chinese medicine as a balancer and stimulator of internal organs. Goldenseal contains berberine, which is antibacterial, antipyretic and antimalarial (Merck Index, 11th ed. Merck & Co. Inc., Rahway, N.J.)
Berberine destroys microorganisms, and inhibits infectious organisms and toxic formation by the organisms. **Astragalus** has been traditionally used by the Chinese to fight viral infections. A clinical trial with 10 patients suffering from a coxsackie B viral infection showed improved natural killer cell activity in patients treated with astragalus (Chin Med J 1990; 103:304-307). Research has demonstrated an ability of astragalus to correct deficient T cell (immune-fighting cell) function in cancer patients (J Clin Lab Immunol 1988; 25:119-123).

**Testimonials/Nutrient Tidbits:** Many doctors report...I love this formula! It’s awesome. Another doctor reports... My son was so sick one day and was running a 103-degree fever. He tested for 18 Total Virx that day and by the next morning he was completely better! Another doctor reports... A female high school patient, singing the lead in a school play, came down with mono a week before the performance. She was told there was no way she could sing, and that the only solution was bed rest. Her mother came to me and asked if there was anything she could do, since her daughter was very disappointed. I gave her Total Virx and Throat Spray (Homeopathic) and told her to use them 4-5 times a day until the performance. The girl performed marvelously, and they were extremely grateful. (Joel Palmer, D.C., Vergennes, VT.)

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 or 120 tablets

**Price:** € 25,70 en € 44,15

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy. Echinacea contains sugars in its cell membrane, which the body can build resistance to. Some believe that the immune system should not be constantly stimulated, and recommend not taking continuously (i.e. 8 weeks on, 1 week off).
TOTAL YST REDUX

**Ingredients:** Lactobacillus 1 million units, Caprylic Acid 50mg, Grapefruit Seed Extract 100mg, Garlic 25mg, Berberis Aquifolium 100mg, Aloe Vera 25mg

**Supportive Function:** Total Yst-Redux is a special formulation of herbs, vitamins and minerals, which is nutritionally helpful against fungal infections, candida and yeast.

**When is yeast support helpful?** Candidiasis and related symptoms, including food allergies, PMS, lowered immune reactions, lethargy, headaches, and overall sick feeling; candidiasis causes a toxin overload that can be manifested in a lot of different diseases.

**Clinical Applications/Research:** Lactobacillus is good bacteria. They keep bad bacteria and fungal organisms like candida at bay.  
Caprylic Acid is listed in the Merck index as an antifungal. It is effective in the treatment of candida, and is described by a leading authority on candida as, “a short chain, saturated fatty acid found to have anti-fungal activity, whose efficacy approaches that of nystatin” (Crook, W. MD. The Yeast Connection. 1983. Professional Books, Jackson, Tenn. pp. 352-53).  
Grapefruit Seed Extract has been proven to be effective against intestinal pathogens, most notably candida. In one study of 15 patients, it exhibited strong efficacy against candida (without affecting the good bacteria), and patients experienced significant improvement (J Orthomol Med 1990; 5:155-157).  
Garlic fights a broad range of infectious organisms, including candida, viruses, bacteria, protozoa, and parasites. Garlic is so effective that, “Neither Nystatin, nor amphotericin B... displayed such a high activity as garlic juice (against Candida)” (Crook, W. MD. The Yeast Connection. Professional Books, Jackson, Tenn. pp. 355-356). Garlic’s antibacterial characteristics have been tested even against drug-resistant varieties, and shown to have therapeutic activity (Indian J Med Res 1991; 93:33-6).  
Berberis Aquifolium known also as Oregon grape root acts as a tonic on the liver and gallbladder, and can remedy systemic imbalances.  
Aloe Vera is a demulcent, an antifungal, and a helmintic (expels worms), and soothing to the gastrointestinal tract. It inhibits candida; it contains acemannan, which is the polysaccharide component thought to be antiviral and immune enhancing.

**Testimonials/Nutrient Tidbits:** Many doctors…Works great for yeast problems – great formula!

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 22.85

**Vegetarian:** Yes

**Contraindications:** Garlic and grape seed extract in large quantities are contraindicated with anticoagulant drugs (only small amounts of each are used in this synergistic formula). Do not use during pregnancy.
**URO-BAC**

**Ingredients:** Each Tablet Supplies: Kidney 400mg, Thymus 108mg, Parotid 1mg, Lymph 500mcg, Spleen 500mcg, Vitamin C (sago palm) 90mg, Vitamin D 50i.u, Rutin 18mg, Lemon Bioflavonoids 3mg, Hesperidin Complex 3mg, Propolis 500mcg, Zinc Gluconate 1mg, Calcium Lactate 59mg, Calcium Aspartate 14mg, Magnesium Aspartate 13.5mg, Magnesium Citrate 12.6mg, Ox Bile 30mg, Pancreatin 30mg, Papain 18mg, Trypsin 7mg, Pancrelipase 2.5mg, Amylase 3mg, Bromelaine 14mg.

**Supportive Function:** Uro Bac is the supreme answer to helping maintain a healthy, protective barrier against bacterial assault in the urinary tract, a major elimination pathway. Nutrients and glandulars unite to build immune support. Enzymes facilitate nutrient breakdown for rapid absorption.

**When is urinary tract support helpful?** Diuresis, detoxification, cystitis, incontinence, painful urination, diarrhea, dysentery and cholera.

**Clinical Applications/Research:**


**Propolis:** Research has shown propolis to have strong antimicrobial properties. Propolis builds the immune system and increases the body’s natural resistance to infection. Propolis aids in bacterial infections, reduces inflammation, and stimulates phagocytosis (bacteria-engulfing by immune cells). A major scientific journal reports that, “Propolis, a honey bee hive product, is thought to exhibit a broad spectrum of activities including antibiotic, antiviral, anti-inflammatory and tumor growth inhibition...” (Chemical and Biological Interactions, 1992, 84:277-90).

**Glandulars:** Provides the amino acid sequencing to support the organ during repair.

**Enzymes:** Provide inflammatory support.

**Testimonials/Nutrient Tidbits:** Many doctors report...I love this product for kidney/bladder problems. Sometimes combine it with KB Plus for an added boost!

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 29.45

**Vegetarian:** No

**Contraindications:** High dosages of vitamin C (>1000 mg.) should not be taken by gout patients or by kidney stone formers. Vitamin C is contraindicated in iron overload disease.
VANA-CHROM

**Ingredients:** Vanadyl Sulfate 3mg, Chromium (Picolinate) 200mcg, Vitamin B-1 10mg, Vitamin B-2 5mg, Vitamin B-6 5mg, Vitamin B-12 10mcg, Folic Acid 200mcg, Biotin 500mcg, Pantothenic Acid (D-Calcium Pantothenate) 20mg, Nicotinamide 20mg, Niacin 6mg, Magnesium Aspartate 100mg, Calcium Ascorbate 100mg, Manganese Aspartate 4mg, Zinc (Picolinate) 1mg, Selenium (Chelate) 30mcg

**Supportive Function:** A scientifically advanced formula takes advantage of a long list of nutrients that are reported to support normal glucose regulation. Those with concerns about high blood sugar often choose Vana-Chrom.

**When is blood sugar support helpful?** High blood sugar, blood sugar imbalances

**Clinical Applications/Research:** Chromium Picolinate: Chromium is known for its effects on blood sugar control mechanisms (Mertz, W. Chromium in human nutrition: a review. J Nutr 1993; 123:626-633). It most likely exerts these effects because of its important role in making up the GTF (glucose tolerance factor) of the body.

Vanadyl Sulfate: The functions of vanadium are still being researched. It appears that vanadium is very important for its role in glucose metabolism (mimics insulin), and its role in lipid metabolism. Recent research indicates that vanadium was able to partially preserve pancreatic beta-cells in rats, and that this preservation was, “both critical and sufficient for a long-term reversal of the diabetic state” (Cam MC et al. Partial preservation of pancreatic beta-cells by vanadium: evidence for long-term amelioration of diabetes (Metabolism 1997; 46:769-778).

The B Vitamins are involved in all aspects of glucose (blood sugar) metabolism. Vitamin B-1 has a Co-enzyme form as thiamine pyrophosphate (TPP). Vitamin B-2 is the component of two major energy enzymes - flavin mononucleotide (FMN) and flavin adenine dinucleotide (FAD), and vitamin B-3 functions in over fifty metabolic reactions. Vitamin B-6 is also important in glucose metabolism. Vitamin B-12 is an integral vitamin for the metabolism of carbohydrate, protein and fat. Proper DNA replication is dependent on the function of Co-enzyme B-12. Biotin is involved in reactions specific for release of energy from carbohydrates.

**Testimonials/Nutrient Tidbits:** Many doctors report…awesome formula for blood sugar concerns!
Another doctor reports…I was having problems with high blood sugar concerns. I started on Vana-Chrom and within a month my blood sugar levels were back to normal!

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 25,70

**Vegetarian:** Yes

**Contraindications:** Do not use in cases of extremely low blood sugar.
VITAMIN A EMULSION

Ingredients: Emulsified Vitamin A and E Each Drop Supplies: Emulsified Vitamin A (Palmitate) 5,000i.u, Natural Vitamin E (Acetate) 10i.u.in a base of Wheat Germ Oil.

Supportive Function: Vitamin A acts as a regulator of the growth of epithelium tissues and is a vital ingredient necessary for a healthy immune system. Vitamin A is specifically beneficial in viral infections. Vitamin A prompts secretion of gastric juices necessary for proper digestion of proteins, builds strong bones and teeth, maintains good eyesight (the vitamin A in rhodopsin, located in the rods of the cell, transmits light signals by changing its configuration), and aids in the manufacturing of red blood cells.

Vitamin E: Vitamin A Emulsion is emulsified with small amounts of vitamin E, which has many functions. Vitamin E is the main lipid antioxidant in the body.

Wheat Germ Oil: This formula is in a base of wheat germ oil, which is naturally high in octacosanol content. Octacosanol is a waxy alcohol that has been shown to increase endurance, energy and strength.

When is Vitamin A effective? Eye problems (especially night blindness), frequent infections, immune enhancer, skin disorders, inhibited healing processes, nerve deterioration, acne, weak tooth enamel, sinus trouble, metaplasia (precancerous condition), pre and post surgery, allergies, kidney and bladder problems

Clinical Applications/Research: Infections: Supports the mucous lining. It also appears to improve antibody response and white blood cell functions. Vitamin A is specifically beneficial in upper respiratory conditions.

Skin problems: Has many beneficial effects on the skin and is helpful in wound healing. It may be helpful in acne.

Antioxidant function: The precursor of vitamin A, beta-carotene, is a powerful antioxidant. It protects against pollutants, stress, smoke and chemical exposure. Vitamin A itself is not technically an antioxidant.

Menorrhagia (heavy menstrual flow): Vitamin A deficiency has been noted in menorrhagia.

Intestinal problems: Vitamin A is needed to repair the intestinal cells.


Dysplasia: In one clinical trial, 300 women who had developed precancerous cells in the cervix entered a study where half of them received treatment consisting of vaginal sponges, which released a synthetic relative of vitamin A. In the moderate cases, the precancerous spots disappeared in the treated women (Science News. 1994; 143(22): 341).

Measles: Vitamin A has been shown to reduce infant mortality in measles patients by at least 50 percent (high dosing was used once or twice).

Testimonials/Nutrient Tidbits: Difficult menstrual cycles: A doctor reports…Vitamin A Emulsion helped balance and stabilize women’s irregular and difficult menstrual cycles. He would therapy localize the organ reflex point and put a couple of drops in the patient’s mouth to see if that strengthened the weak reflex point. Several other doctors have reported excellent results with this procedure.

Eye problems: Several doctors have reported…Vitamin A Emulsion was helpful for eyes that were going “fuzzy” after surgery.

Wound healing: A father of a doctor had cut his leg with a chain saw. Because of how deep the cut was, the medical doctor who stitched him up said it would heal slow and leave a deep scar. The chiropractor used Vitamin A Emulsion on it directly and it not only left almost no scar, but it healed twice as quickly as the medical doctor thought it would. Another experience was a dog that had been bitten by an alligator. The dog could not be stitched up so the doctor poured a bottle of Vitamin A Emulsion directly onto the wound. Within five days, the dog was healing from the inside out. The vet was amazed.

Immune problems: Many doctors use Vitamin A Emulsion for immune problems including colds, flus, infections and skin problems. The patient is instructed to place 10 drops on the back of the hand and lick it off 1
time per day. If real acute, the doctor may have them do it 2 times per day for a short time (one week at most).
One drop three times per day is great for lymphatic drainage, especially those with antro and retrograde problems (Lou Obersteadt, D.C.).

**Occiput fixations:** Occiput fixations that are found with bilateral weakness of the psoas muscles will strengthen because the octacosanol (WGO) helps fixation and vitamin A is one of the nutrients used for the psoas muscle. The Pec Major Sternal muscle that relates to the liver will respond to Vitamin A Emulsion.

**Warts:** Some doctors have used Vitamin A Emulsion directly on warts with great success. Black Walnut applied directly is another suggestion.

**Hypothyroid or diabetic patients:** Dr. Robert Thiel reports . . . I have used this product for hypothyroid or diabetic patients who cannot convert beta-carotene to vitamin A. The emulsification process also helps your gallbladder patients more readily digest and absorb the vitamin A.

**Suggested Dosage:** 1 DROP (squeezed from the dropper, NOT on dropperful) 1-2 times daily. Each drop contains 5,000 IU vitamin A. During an acute viral infection, 50,000 IU of vitamin A (10 drops) can be used for one or two day’s maximum. No longer.

**Size:** 30cc

**Price:** €17,40

**Vegetarian:** Yes

**Contraindications:** Vitamin A is fat-soluble and can become toxic in acute or chronic doses. Acute toxicity can occur in doses > 200 mg or 660,000 IU (adults) or chronic toxicity can occur in doses > 100 mg or 333,000 IU (children). Symptoms can include nausea, vomiting and headache. Doses greater than 10,000 IU during pregnancy can be teratogenic (causing birth defects). Some people may be allergic to wheat-based products. (Contains Vitamin E).

**Drug/Nutrient Interactions:** The acne medicine Accutane is related to vitamin A and should not be taken together. Laxatives and cholesterol medicines (i.e. bile acid sequestrants, such as Questran) can interfere with the absorption of vitamin A and the other fat-soluble vitamins.
WHOLE SYSTEM D-TX

**Ingredients:** Each Tablet Supplies: Illeoduodenal 59mg, Stomach 58mg, Uterus 58mg, Prostate 38mg, Ox Bile 73mg, Spleen 59mg, Vitamin C (Sago) 2mg, Niacin 17mg, Vitamin E ( Succinate) 10i.u, Vitamin A (Acetate) 1000i.u. Choline Bitartrate 61mg, Calcium (Chelate) 4.6mg, Selenium Chelate 250mcg, Montmorillonite 188mg, Lecithin 68mg, Red Clover Tops 61mg, Kelp 73mg, Apple Pectin 8mg, Garlic 23mg, Chlorella 10mg, Red Beet Root 18mg, Collinsonia 58mg, Echinacea Purpurea 140mg.

**Supportive Function:** Supporting a whole system approach to detoxification, this formula provides essential nutrients for the detox pathways, herbal red clover to support the blood and lymph pathways, protective antioxidants, digestive support, and overall support to help the body in its natural process of toxin removal.

**When is detoxification helpful?** Numerous conditions including hay fever, allergies, digestive problems, skin problems, asthma, autoimmune diseases, chronic diseases, overall ill health, fatigue, constipation, and liver problems.

**Clinical Applications/Research:**
- **Selenium:** Excellent binder of heavy metals.
- **Montmorillonite:** Indigestible adsorbent which adheres to toxins in the GI tract and carries them out of the body; Montmorillonite is a clay and the principal constituent of bentonite. Bentonite is a colloidal hydrated aluminum silicate clay native to the Midwest and Canada, which contains some magnesium, iron and calcium and is able to carry vitamin B-12-active substances and catalysts (Merck Index, 11th ed. Merck & Co. Inc., Rahway, N.J. 1989). It has the property of forming highly viscous suspensions or gels with not less than 10 times its weight of water. The property of forming gels is very much increased by the addition of small amounts of alkaline substances such as magnesium derivatives.
- **Lecithin** acts as a surfactant to coat and protect, an emulsifier to digest fats and a lipotropic agent to metabolize fat (Merck Index, 11th ed. Merck & Co. Inc., Rahway, N.J. 1989).
- **Red Clover Tops:** Potent blood purifier.
- **Kelp** helps to regulate function of the thyroid and pituitary glands as well as enhance sensory nerve function, especially the membranes surrounding the brain, spinal cord and brain tissue. The iodine it contains stimulates thyroid hormones that regulate basal metabolic rate. It benefits the pancreas and adrenal glands and male and female organs and assists the endocrine system. It also has antibiotic properties and is reported to help in obesity (Heinerman, John. Heinerman’s Encyclopedia of Fruits, Vegetables and Herbs. Parker Publ., West Nyack, NY. 1988 p. 199).
- **Apple Pectin:** It helps bind unwanted metals and toxins, and lowers cholesterol levels by binding the cholesterol and bile acids in the gut, which aids in excretion. Apples are high in malic acid content, which is used therapeutically for treating the symptoms of chronic fatigue syndrome.
- **Garlic** has been used for cholesterol/triglyceride reduction, candida, sinusitis, diabetes, antihypertensive, anticarcinogenic, antibacterial, antimicrobial, antifungal, anthelmintic (expels worms), antiviral, anti-inflammatory, immune-enhancing (esp. colds/flu), asthma, fever, flatulence, nausea, vomiting, colic, indigestion. Allicin is the molecule responsible for the odor of garlic, and also for many of the purported benefits it offers as an herb. There are many documented effects of garlic in the literature.
- **Chlorella** is known as a potent detoxifier and promoter of beneficial bacteria growth in the intestinal tract. Chlorella is also very effective in removing heavy metals from the body and provides relief for intestinal gas and chronic constipation. Chlorella has unique health-promoting characteristics, including antitumor resistance, bacterial resistance and viral resistance. It has demonstrated the ability to restore leukocyte, natural killer cell and interferon activity (Nat Immun Cell Growth Regul 1990; 9(2): 121-8; and Int J Immunopharmacol 1990; 12(8): 883-91). Chlorella demonstrated metal-removing properties when used as a treatment for polluted stream samples (Biomed Environ Sci 1992; 5(2): 99-108).
- **Red Beet Root:** Beets aid in gallbladder function, lymphatic function, and digestion (Balch JF, Prescription for Nutritional Healing, p. 39).
- **Collinsonia Root:** Collinsonia stimulates tones and cleanses the mucous membranes of the gastrointestinal tract. It is referred to in herbal literature as a “vascular astringent.” In most patients with hemorrhoids or varicose vein

195
problems, the patient has a congested liver. Bile salts can be combined with collinsonia because bile salts alone may be irritating.

**Testimonials/Nutrient Tidbits:** Many doctors report...excellent detox formula – Love it!
**Allergies . . .** The combination of Whole System D-Tox and Whole System Histo-zyme works great in allergies!

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:**

**Vegetarian:** No

**Contraindications:** Female/male glandulars are contraindicated in cancers of the reproductive organs. Echinacea contains sugars in its cell membrane, which the body can build resistance to. Some believe that the immune system should not be constantly stimulated, and recommend not taking continuously (i.e. 8 weeks on, 1 week off). Garlic in large quantities is contraindicated with anticoagulant drugs (only a small amount is used in this synergistic formula).
WHOLE SYSTEM THYMUS COMPLEX

**Ingredients:** Each Tablet Supplies: Thymus 400mg, Parotid 175mg, Whole Pituitary 25mg, Ox Bile 23mg, Vitamin E (Succinate) 8i.u, Calcium Lactate 1mg, Propolis 8mg, Echinacea 45mg, Eleuthero 37mg, Goldenseal 18mg, Methyl Cellulose 970mcg.

**Supportive Function:** Whole System Thymus Complex is designed to provide necessary nutrients to aid in natural immune processes and production of immune-fighting cells (T-cells are made in the thymus) and to provide optimal nutritional support for dealing with challenges to immune homeostasis.

**When is thymus support helpful?** Immune conditions, colds, flu, fever, infection, and malaise due to lowered immune defenses

**Clinical Applications/Research: Glandulars** are thought to provide precursor substances that the body can use to support and enhance the function of a specific gland. They may provide the potential “life force” the body needs to enhance function of a specific organ or gland. Glandulars are tissue concentrates, usually of a bovine source, which stimulate the glands of the immune system, such as thymus, spleen, and adrenal. Glandular therapy began in the late 19th century when doctors suggested to their patients that eating the glandular parts from a cow that corresponds to the weaknesses in their own bodies might help them to heal. The Egyptians and Greeks used glandular therapy many years ago because they believed in the concept that “like heals like” (Haas, E. MD. Staying Healthy with Nutrition. 1992; Celestial Arts, Berkeley, Ca. p. 283).

Currently, there is not much research accumulated in this field. One example of work done in this field was by Dr. Bates at Minnesota Metropolitan Medical Center, in which he showed that beef-derived thymus gland, when fed orally to animals, was capable of enhancing the T-lymphocyte function. In another study, thymus extract was shown to normalize altered T-cell ratios in Ebstein Barr Virus (EBV) patients. Spleen extracts have been shown to increase white blood cell (WBC) counts in extreme leucopenia and helped patients with typhoid fever or malaria (Murray M. Enc. Nat. Med Prima Publ. Rocklin, Ca. 1991 p. 217). Dr. A. Kemet investigated whether or not oral glandulars were organ specific. Using radioactive isotope tracings, he found that glandular tissues were absorbed in the blood and deposited in the corresponding organs. He documented his findings in German medical publications of 1958 and 1972 (Balch, Presc. for Nut. Heal., Avery Publ., Garden City Park, NY 1990 p. 326).

More research needs to be actively pursued in order to better understand glandular therapy.

The best sources of glandular supplements are organic, freeze-dried, defatted, fresh glands because any use of heat or chemicals will destroy enzyme activity. Fat needs to be removed because fat usually contains the most toxic substances and can be oxidized and go rancid. Many different glandulars have been used in clinical practice. Glandular therapy has been used widely in Europe since the turn of the century.

**Propolis:** Research has shown propolis to have strong antimicrobial properties. Propolis builds the immune system and increases the body’s natural resistance to infection. Propolis aids in bacterial infections, reduces inflammation, and stimulates phagocytosis (bacteria-engulfing by immune cells). The antibacterial property has been found to be effective against several Streptococcus infections and may be important in the actual defense of the hive (Caries Research, 25:347-51). A major scientific journal reports that, “Propolis, a honey bee hive product, is thought to exhibit a broad spectrum of activities including antibiotic, antiviral, anti-inflammatory and tumor growth inhibition...” (Chemical and Biological Interactions, 1992, 84:277-90).

**Echinacea** is a natural herb that has been used for centuries as a medicinal agent, and in many scientific studies for its ability to enhance the immune system. It is known to stimulate macrophages and antibodies. By increasing the number and enhancing the activity of bacteria scavenging cells, echinacea, “mediates protection against systemic infections” (Int. J. Immunophar. 13:27-37).

**Eleuthero** has been reported to have a favorable effect on the immune system. In a double-blind study, the 36 subjects receiving Eleuthero demonstrated significant improvements in a variety of immune system parameters, such as increased helper T-cells, and increased natural killer cell activity (Arzneimittel-Forsch 1987; 37:1193-1196). This effect on the immune system, plus the fact that Eleuthero nourishes the adrenal glands and boosts energy, could be helpful for use with chronic fatigue syndrome.
Goldenseal is a powerful herb, acting as a detoxifier and antibiotic.

**Testimonials/Nutrient Tidbits:** Many doctors report...Best thymus product! Another doctor reports...When a patient gets those boils (staph infection!) nothing is better! Helps with the aches and pains.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:**

**Vegetarian:** No

**Contraindications:** Contraindicated in pregnancy. Pituitary glandular is contraindicated in cancer. Echinacea contains sugars in its cell membrane, which the body can build resistance to. Some believe that the immune system should not be constantly stimulated, and recommend not taking continuously (i.e. 8 weeks on, 1 week off). Eleuthero in high amounts may cause hypertension (it has a reputation as an adaptogen at lower levels, and only small amounts are included in this synergistic formula).
**YST-DYSBIO CLEANZ**

**Ingredients:** Each Capsule Supplies: Grapefruit Seed Extract 150mg, Berberis Aquifolium 100mg, Goldenseal 100mg, Aloe Vera Concentrate 199:1 25mg.

**Supportive Function:** The detrimental effect of harmful microorganisms such as yeast and their toxic excretions should be avoided whenever possible. This formula supports an environment of intestinal health.

**When is yeast support helpful?** Candidiasis and related symptoms, including food allergies, PMS, lowered immune reactions, lethargy, headaches, and overall sick feeling; candidiasis causes a toxin overload that can be manifested in a lot of different diseases.

**Clinical Applications/Research:** *Grapefruit Seed Extract* has been proven to be effective against intestinal pathogens, most notably candida. In one study of 15 patients, it exhibited strong efficacy against candida (without affecting the good bacteria). All patients experienced improvement from constipation, flatulence, and abdominal discomfort (J Orthomol Med 1990; 5:155-157).

*Berberis Aquifollum* known also as Oregon grape root, "acts as a tonic on the liver and gallbladder, and can remedy systemic imbalances" (Scalzo R. Naturopathic Handbook of Herbal Formulas, 3rd ed. 1994, Kivaki Press, Durango, Co. p. 96).


*Aloe Vera Concentrate:* Aloe vera is a demulcent, an antifungal, and an antehelmintic (expels worms). Its effectiveness as an antifungal has been demonstrated by its ability to inhibit candida (Heinerman, J. Heinerman’s Encyclopedia of Fruits, Vegetables and Herbs. 1988; Parker Publishing, West Nyack, NY. p. 4). Aloe vera contains acemannan, which is the polysaccharide component of aloe thought to have antiviral and immune-enhancing activity. Aloe is very soothing to the gastrointestinal tract.

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 tablets

**Price:** € 28,00

**Vegetarian:** Yes

**Contraindications:** Contraindicated in pregnancy. Large amounts of grapefruit seed extract should not be combined with anticoagulants (150 mg is not a large amount).
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# BIOTICS TO NUTRI-WEST CROSSOVER

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<tr>
<td>Cytozyme-F</td>
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<td>Cytozyme-KD</td>
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<td>Cytozyme-M</td>
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<td>Cytozyme-O</td>
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<td>S.O.D. Lozenge</td>
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<tr>
<td>Equi-Fem</td>
<td>Core Level Ovary or Glan-Plus-F or Core Level Uterus</td>
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<td>Parazyme-A or Total Para</td>
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<td>Description</td>
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<tr>
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<td>St. John’s-DEP or Total 5-HTP</td>
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<tr>
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<td>Con-Lyph</td>
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<td>Porphyra-Zyme</td>
<td>Hemo-Lyph</td>
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<td>Purified Chondroitin Sulfates</td>
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<td>Rehab Support Pack</td>
<td>Complete Glutathione + Core Level Health Reserve</td>
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<td>Renal Plus</td>
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<tr>
<td>Retenzyme Forte</td>
<td>Core Level Thymus + Enzyme Forte</td>
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<td>Selenium Chelate</td>
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<td>Selenium Chelate</td>
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<tr>
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<td>St. John’s-Dep</td>
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<td>Super Phosphozyme</td>
<td>Phos-Drops + RNA-DNA-Plus</td>
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<td>UltraVir-X</td>
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<td>Zn-Zyme</td>
<td>Zinc-S or Zinc Lozenge</td>
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<tr>
<td>Zn-Zyme Forte</td>
<td>Zinc-S or Zinc Lozenge</td>
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</table>

Legend:

- T. = Total
- C. = Complete
- WS = Whole System
- CL = Core Level
- H = Herbal
- HO = Homeopathic
- T = Tincture
- SH = Single Herb

All nutritional formula crossovers will have varying degrees of similarity; the efficacy and intentional purpose of the formulas were considered in construction of these crossovers.