

TOTAL VEGGIE

Ingredients: Each tablet supplies: Wheat Grass Sprouts* 75 mg, Cauliflower Sprouts* 50mg, Broccoli Sprouts* 100mg (7500ppm/gm Sulphoraphane), Cabbage Sprouts* 75mg, Cordyceps 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 LW et al), "Inhibition of polycyclic hydrocarbon induced neoplasia by naturally occurring indoles," (*Cancer Research* May 1978; 38(5): 1410-13; Graham S et al), "Diet in the epidemiology of cancer of the colon and rectum," (*J of the National Cancer Institute* Sept 1978; 61(3): 709-14; Colditz GA et al), "Increased green and Yellow vegetable intake in an elderly population," (*Am J of Clin Nutri* Jan 1985; 41(1): 32-6; Van Lieshout EM et al), "Effects of dietary anticarcinogens on rat gastrointestinal glutathione S-transferase theta 1-1 levels," (*Carcinogenesis* Nov 1998;19(11):2055-7; Zhang Y, Callaway EC), "High cellular accumulation of sulphoraphane, a dietary anticarcinogen, is followed by rapid transporter-mediated export as a glutathione conjugate," (*Biochem J* May 15 2002;364(Pt 1):301-7).

Cabbage Sprouts contains food enzymes, vitamins A, C, and U, chlorophyll, flavonoids, and the phytochemicals, indoles, dithiolthiones, 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 mucins 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 dithiolthiones 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; Wattenberg LW), "Inhibition of neoplasia by minor dietary constituents," (*Cancer Research* Suppl. May 1983; 43:2488s-2453s).

Cordyceps made headlines in 1993 when 9 Chinese runners, who used cordyceps as an important part of their training, broke 9 world records. Cordyceps helps relax bronchial passages, facilitate breathing, and increase blood flow to muscles (Stamets P & C Dusty Wu Yao, "Medicinal Mushrooms," *TLfD&P* June 1998:162). Yamaguchi et al, 1990), found that cordyceps was an immune stimulant "Augmentation of various immune activities of tumor-bearing hosts with an extract of *Cordyceps sinensis*," (*Biotherapy* 2(3): 199-205). Liu et al, 1992), showed that cordyceps enhanced Natural Killer Cell activity "Effects of *Cordyceps sinensis* (CS) on *in vitro* natural killer cells," (*Chung Kuo Chung Hsi I Cheih Ho Tsa Chih* 12(5): 267-9,259). Zhou & Lin, 1995), demonstrated that cordyceps could restore normal cellular immunological function

“Effect of Jinshubao capsule on the immunological function of 36 patients with advanced cancer,” (*Chung Kuo Chung Hsi I Ho Tsa Chih* Aug; 15(8): 476-8).

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 lentinan 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). Shiitake also promotes the production of interferon (Chihara G et al), “Experimental studies on growth inhibition and regression of cancer metastases,” (*Gan to Kagaku Ryoho* June 1985; 12(6): 1196-1209; Sugano N et al), “Anticarcinogenic actions of water soluble fractions from culture medium of lentinus edodes mycelia,” (*Cancer Letters* 1982; 17:109-14).

Resveratrol is a phytochemical extracted from Hu zhang (*Polygonum cuspidatum*). It has an antioxidant phenol and vasodilator that inhibits serum triglyceride synthesis, lipid peroxidation, and platelet aggregation. It promotes cell-protective actions (Levine PM, “Antioxidant Adaptation: Its Role in Free Radical Pathology,” *Biocurrents* 1986; Pub., 36(37): 164-167; Jang M et al), “Cancer chemopreventive activity of resveratrol, a natural product derived from grapes,” (*Science* 1997; 275:218-220).

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, isoimperatorin, 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 free-radical damage to cells, a precursor to many diseases (Balch & Balch, 1997:13-4; Carper, 1989:220-1; McLennan R et al), “Dietary factors for lung cancer in Singapore Chinese, a population with high female incidence rates,” (*Int J Cancer* 1997; 20:854-860).

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).

Green Tea Extract (Catechin 40%) helps stimulate the production of immune cells and has been demonstrated to have antibacterial properties (Stoner GD, Mukhtar H), “Polyphenols as cancer therapeutic agents,” (*J Cell Biochem* 1995; 22: 169-80; Hamilton-Miller JM), “Antimicrobial properties of tea (*Camellia sinensis* L),” (*Antimicrob Ag Chemo* 1995; 39(11): 2375-77). Green tea

contains volatile oils, vitamins, minerals, and caffeine, but the active ingredients are polyphenols, especially the catechin, epigallocatechin gallate. Polyphenols are believed to be responsible for green tea's role in promoting good health. Green tea helps protect cardiovascular health by improving the cholesterol profile, reducing platelet aggregation, and lowering blood pressure (Graham HN), "Green tea composition, consumption, and polyphenol chemistry," (*Prev Med* 1992; 21:334-50; Stensvold I et al), "Tea consumption. Relationship to cholesterol, blood pressure, and coronary and total mortality," (*Prev Med* 1992; 21:546-53).

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 Lett* 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 A is essential to a healthy immune system. Without adequate vitamin A, microorganisms can penetrate the body's first line of defense, the skin, lungs, and mucous membranes (Lininger, 1998:73). Vitamin A has helped vitamin A deficient children in coping with measles and other infectious diseases (Glasziou PP, Mackerras DEM), "Vitamin A supplementation in infectious diseases: A meta-analysis," (*BMJ* 1993; 306:366-70). Vitamin A protects against colds, influenza, and infections of the kidneys, bladder, lungs, and mucous membranes. Vitamin A acts as an antioxidant helping to protect cells against the formation of many diseases (Balch & Balch, 1998:13-14).

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).

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 beta carotene foods, especially carrots, help promote lung and pancreatic health (Colditz GA et al), "Diet and lung cancer—a review of the epidemiological evidence in humans," (*Arch of Intern Med* Jan 1987; 147:157-60; Menkes MS et al), "Serum beta-carotene, vitamins A and E, Selenium, and the risk of lung cancer," (*New England J of Med* Nov 13, 1986; 315 (20): 1250-4; Norell SE et al), "Diet and pancreatic cancer: a case-control study," (*Am J of Epidemiol* 1986; 124(6): 894-902).

Oat Sprouts contain vitamins, food enzymes, B1, B2, D, and E, and the phytochemicals, carotenes, 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

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.