B-Complex

Stock #1778-9 (100 capsules)

Nature's Sunshine Vitamin B-Complex is designed to provide larger amounts of B vitamins in easy-to-swallow, preservative-free capsules. B vitamins function interdependently, thus making it important to take a B-complex supplement. Single B vitamin supplements can be added if necessary. NSP's B-Complex capsules are yeast-free and contain no binders, fillers, starches or sugar.

B-Complex provides the body with B vitamins critical for maintaining healthy functioning of the nervous system and for reducing the effects of stress upon the body. B-complex vitamins convert carbohydrates into glucose which the body "burns" to produce energy. These vitamins are also essential for the metabolism of fats and protein, and for the maintenance of muscle tone in the gastrointestinal tract, as well as healthy digestive function. B-complex vitamins even play a role in the health of the eyes, hair, liver, mouth and skin.

Postoperative reactions to anesthesia such as nausea and vomiting, have been relieved with B-complex vitamins, as have anemia, beriberi, burning feet, burning and dry eyes, constipation, cracks at the corner of the mouth, fatigue, lack of appetite, menstrual difficulties, skin disorders, and tender gums. High enough doses of B-complex vitamins have been known to control migraine headaches and have relieved some heart abnormalities, as the nerves affecting the heart require sufficient levels of B-complex vitamins for healthy functioning. Therapeutic doses of B-complex vitamins have been used to treat polio, shingles, and hypersensitive children who fail to react favorably to drugs such as Ritalin. B-complex vitamins have even been used to treat alcoholic psychoses, barbituate overdose, and drug-induced delirium.

All B-complex vitamins are water-soluble; therefore, any excess is naturally excreted from the body, not stored, making continual replacement vital. B vitamins are easily destroyed by cooking and refining foods. Alcohol, coffee or tea consumption, and heavy perspiration also result in the loss of certain B vitamins. Estrogen, insecticides, sleeping pills, and sulfa drugs create an environment in the digestive tract which can destroy B vitamins. Nervous individuals and those working under stress or tension may benefit significantly from higher-than-normal doses of B-complex vitamins.

Vitamin B_1 (thiamine) helps protects nerve tissue from being damaged by the effects of alcohol, tobacco and the aging process itself. All foods contain some amount of vitamin B_1, but whole grains, brown rice, seafood and beef are the richest sources. Highly refined and milled foods, such as polished white rice, are devoid of B_1. Vitamin B_1 is an essential part of the conversion of blood sugar into energy and is a component of key metabolic reactions in the heart, in nerve tissues, and in the production of new cells. B_1 is crucial to the preservation of both smooth and skeletal muscles. Prolonged vitamin B_1 deficiency can lead to beriberi—a disease that causes confusion, difficulty walking, partial paralysis and visual complications. A different form of this same disease attacks the heart and circulatory system and can be fatal. Other characteristics of B_1 deficiency include chest and abdominal pain, kidney failure, low blood pressure, shortness of breath, uneven heartbeat, and eventually heart failure and death. More adults are deficient in B_1 than any other vitamin, due to the high rate of alcoholism. Alcohol is particularly damaging to B_1 because it prevents the vitamin, which is reserved in the tissue, from being transformed into its active form.

Vitamin B_2 (riboflavin) works with an enzyme to help create energy and to inhibit free radical damage to the body. It is a strong antioxidant; however, because it is water soluble and cannot be stored in the body, B_2 must be replaced continuously. Those most susceptible to B_2 deficiencies are active people, athletes, and in particular, women. Individuals who consume an unbalanced diet, especially alcoholics and the elderly, commonly show signs of insufficient vitamin B_2. Some of the best food sources of B_2 are milk, cheese and yogurt. Different types of drugs, including tranquilizers, destroy B_2. Signs of a B_2 deficiency are cracks around the mouth and lips, a reddened tongue, and eczema of the face and genitals. B_2 is believed to be necessary for iron absorption, thus a deficiency can result in anemia. Esophageal cancer has been connected with a vitamin B_2 deficiency—the proliferation of precancerous cells in the esophagus has been diminished with B_2 supplementation.

Vitamin B_3 (niacin) aids in the production of energy in the cells, promotes mental and physical health, assists in regulating blood sugar levels, and helps to reduce high cholesterol and prevent high blood pressure which can lead to heart attacks. For more information on niacin, refer to the page on NSP's Niacin supplement.

Vitamin B_5 (pantothenic acid) is found in every living cell and is crucial for healthy adrenal glands and hormone

production. Pantothenic acid is also needed for healthy digestion and metabolism, for the production of antibodies, and for proper growth. For more information on pantothenic acid, refer to the page on NSP's Pantothenic Acid supplement.

Vitamin B_6 (pyridoxine) is critical to the normal functioning of over 60 essential enzymes. B_6 is also necessary for the production of nucleic acids, protein, red blood cells, immune cells, and neurotransmitters, which keep the brain and nervous system functioning correctly. For more information on B_6, refer to the page on NSP's B_6 supplement.

Vitamin B_{12} (cyanocobalamin) is necessary for red blood cell formation and normal growth, for fertility and during pregnancy, and for building immunity and treating certain degenerative diseases—B_{12} therapy is often used for AIDS, cancer, multiple sclerosis and osteoarthritis. Vitamin B_{12} is also used therapeutically for various mental and nervous disorders and for improving learning abilities. Furthermore, in recent years, B_{12} shots have become a popular treatment for boosting energy and counteracting allergens. For more information on B_{12}, refer to the page on NSP's B_{12} supplement.

Biotin is a water-soluble member of the B-vitamin family. Biotin increases the body's immune system to fight a variety of diseases, including yeast infections. According to Dr. John Parks Trowbridge in his book, *The Yeast Syndrome*, biotin helps inhibit Candida yeast from changing into its fungal form. Biotin may also help increase strength and stamina, thus improving athletic performance. Of course, many claims have been made that biotin encourages healthy hair and helps prevent graying and baldness. Studies have confirmed that biotin does help "tame" unmanageable hair, especially in children. Good food sources of biotin include nuts, whole grains, milk, vegetables, organ meats, and brewer's yeast. Although biotin deficiency is uncommon, initial symptoms are baldness, dry and flaky skin, and rashes in the nose or mouth. Fortunately, the baldness resulting from a biotin deficiency is reversible with supplementation. Individuals most likely to develop a biotin deficiency are those taking long-term oral antibiotics, and those who consume a lot of raw eggs. Raw egg whites contain a protein called avidin, which adheres to biotin in the intestines and restricts its absorption. However, cooking eggs deactivates this protein and thus poses no real risk for deficiency.

A study printed in *The Journal of the American Medical Association* (*JAMA*) involved 4 healthy people placed on a diet lacking no nutrients except biotin. After 10 weeks, the participants had severe symptoms of anorexia, depression, exhaustion, muscle pain, and nausea. All symptoms disappeared after receiving biotin supplements. Furthermore, the *Journal of Pediatrics* published a study involving the use of biotin supplementation for 9 infants with seborrheic dermatitis and 2 infants suffering from Leiner's disease. The children received intramuscular injections of 5mg of biotin daily for 1-2 weeks. The biotin supplementation caused significant improvements in both conditions.

PABA (para-aminobenzoic acid) is an important part of the vitamin B-complex family, occurring in conjunction with folic acid. PABA is necessary for the breakdown and utilization of proteins, and for the formation of healthy blood cells. PABA is important to skin health and hair pigmentation, aids in preventing hair loss and nourishes the glands and intestines. PABA is produced by friendly colonic flora when conditions are favorable, and is stored in the tissues. A PABA deficiency may occur with the use of sulfa drugs, resulting in symptoms such as constipation, depression, digestive problems, fatigue, headache, irritability, and nervousness. Continued supplementation in doses higher than 30mg is not recommended, unless under the care of a health practitioner, as it can be toxic to the heart, kidneys and liver, causing nausea and vomiting. Dietary sources of PABA include liver, molasses, wheat germ and yeast.

Dr. Robert Atkins, author of *Dr. Atkin's Superenergy Diet*, points out that PABA is helpful for relieving fatigue and for achieving greater energy. Furthermore, PABA has been used to treat various skin problems, including vitiligo—a condition where areas of the skin lose their pigmentation. According to a study published in the *Annals of Internal Medicine*, large doses of PABA supplements given to patients diagnosed with chronic Discoid Lupus Erythematosus produced good to excellent results in 70% of those receiving treatment. Also, 100% of patients with scleroderma improved with PABA supplementation; the sclerodermatous areas slowly softened, becoming thinner and more pliable. PABA has even been used to treat certain parasitic ailments, including Rocky Mountain spotted fever.

Choline, another member of the B-complex vitamin, is derived from the chemical compound phosphatidylcholine (lecithin). Choline is helpful for dealing with major nerve, psychiatric, and infectious diseases, and may also prove beneficial for cardiovascular disease. Continued use of high doses of choline may cause a B_6 deficiency. Choline is found in all plants and meats, with brewer's yeast, cabbage, cauliflower, egg yolks, liver, soybeans, and wheat germ being especially good sources. Choline can also be used as a nutritional food additive.

Choline appears to influence memory loss and other nervous system disorders. *Science Magazine* published an article in 1980 which stated that laboratory animals had improved memory with choline-rich diets and memory loss

with choline-poor diets. It is a known fact that drugs destroy choline (including antihistamines and some anti-depressants) which leads to the loss of short-term memory. Thus, initial experiments have shown choline may actually help improve both the memory and mood of some Alzheimer's patients. Mood problems, including manic depression, have been helped with choline, which is a safer and less expensive alternative to lithium. Furthermore, ailments which lead to unnatural muscular movements and which are a result of irregularities of the neurotransmitter structure, such as Parkinson's and Huntington's diseases, have been successfully treated with choline.

Several recent reports have been published in medical journals establishing the use of choline to help viral hepatitis Types A and B. Choline helped terminate symptoms quicker and helped re-establish normal liver cell functioning sooner, with fewer relapses. Scientists believe choline acts by restoring the membranes of liver cells. Research conducted at King's College Hospital and Medical School in Great Britain affirms the usefulness of choline-rich substances against active hepatitis caused by the hepatitis C virus—formerly known as non-A non-B virus. Corresponding data was reported from similar studies performed in Italy and Nigeria. New findings show choline may increase HDL cholesterol in the body.

Inositol, part of the B-complex vitamin and found in high concentrations in lecithin (along with choline), is a complex form of fatty acid. Inositol is associated with neurotransmitters within the nervous system and is essential for managing numerous cells within this system. Dietary sources of inositol include citrus fruits, nuts, beans, unprocessed whole grains, brewer's yeast, fresh vegetables and liver. Multiple reports promote inositol as a natural tranquilizer which alleviates anxiety and encourages sleep. Science has confirmed the level of inositol can affect the levels of specific principal compounds within brain cells. Dr. Carl Pfeiffer, of the Brain Bio Center, has found inositol produces anti-anxiety effects comparable to the pharmaceutical drug Librium, and proposes that individuals taking Valium or Librium may be able to discontinue their use by increasing daily intake of inositol. Furthermore, experimental studies have shown inositol helps increase nerve operations. This is especially important to diabetics who suffer from the deterioration of peripheral nerves caused by chronic high blood sugar.

Following are additional studies conducted on the B-complex vitamin:

Patients in convalescent homes and mental hospitals suffering from senile dementia have shown amazing improvement in their mental functions within 24-48 hours following administration of high doses of B-complex vitamins.

Dr. Julian Whitaker, author of *Medical Memory Boosters and Brain Enhancers*, recommends vitamins B-complex, C and E, and lecithin/choline to improve memory and mental functions. Research conducted by Dr. Whitaker showed B_{12} deficiencies can result in mental illness. A study of mentally retarded children concluded that large doses of B-complex vitamins raised their I.Q. levels by 10.2%.

Prevention magazine published an article on the use of Dr. Mills Atkinson's therapy of high doses of B-complex vitamins, 4 times daily, for the treatment of Meniere's syndrome. Following 2 months of this therapy, symptoms of dizziness, double vision, inability to concentrate, and nausea were relieved.

A study financed by the USDA showed B_6, B_{12}, and folic acid levels decrease as people grow older. Lower levels of these vitamins have been shown to cause a reduction in alertness and memory capacity.

An article in *Heart Alert* asserted that B_6, choline, and folic acid—all part of the B-complex vitamin—can reduce homocysteine (HCY) levels in 3 weeks. Homocysteine, commonly referred to as HCY, is a toxic amino acid obtained from pasteurized cow's milk and red meat. According to an article in *Atherosclerosis Review*, HCY is a principal cause of arterial lesions, a blood vessel disease.

Each three capsules of B-Complex provide:

Vitamin B_1 (thiamine)	100mg	Pantothenic acid (B_5)	100mg
Vitamin B_2 (riboflavin)	100mg	Choline (bitartrate)	100mg
Vitamin B_6 (pyridoxine)	100mg	Folic Acid	400mcg
Vitamin B_{12}	100mcg		
Biotin	300mcg		
Niacinamide (B_3)	100mg		

In a base of Acerola (100mg), Inositol (100mg), Lemon bioflavonoids (100mg), PABA (100mg), Rose hips (100mg), Rutin (100mg) and Wheat germ (100mg).