



FAST FACTS ABOUT B-VITAMINS

Water-soluble and always present in foods in a group, B-complex vitamins perform interrelated functions that are crucial to helping the body transform the food we eat into the energy we need to live. GNLD's B-vitamin supplements provide 10 members of the B-vitamin "family" in balanced ratios as they occur naturally in whole foods.

WHY A B-VITAMIN SUPPLEMENT?

- An essential group of interrelated nutrients, B-vitamins are involved in all energy production.
- B-vitamins are water-soluble and must be supplied daily in the diet. B-vitamins are not synthesized or stored in the body in sufficient quantities to meet daily nutritional needs.
- Most people consume an inadequate amount of B-vitamins, especially folic acid and vitamin B₆. Because the entire family of B-vitamins is usually found in the same foodstuffs, a deficiency of several factors is more common than a deficiency of a single factor.
- B-vitamin requirements may be increased by stress, infection, or other physical conditions which elevate metabolism or interfere with absorption. Larger amounts are needed during growth, pregnancy, and nursing. Medications, alcohol, caffeine, and oral contraceptives can destroy B-vitamins.
- B-vitamins play an important role in helping reduce the risk of heart disease and birth defects. In addition, B-vitamins are crucial to immune response and mental acuity.

WHY GNLD B-VITAMIN SUPPLEMENTS?

- **Exclusive biologically-bound yeast.** Unique whole-food source provides B-vitamins in naturally-occurring ratios.
- **Complete.** Contains 10 members of the dietarily essential B-vitamin family.
- **High-potency formula** provides maximum metabolic support to help meet high nutrient demands during exercise and periods of stress.
- **Two exclusive formulas:**
B-Complex for immediate availability of B-vitamins.
Super B Threshold Control for sustained release of B-complex nutrients.
- **Natural protein glaze** protects nutrient potency.

NUTRITIONALS
 Nature • Science

**THRESHOLD
CONTROLLED
SUPER-B**

*A Balanced B-Complex
Vitamin Formula*

**DIETARY SUPPLEMENT
180 TABLETS**

NUTRITIONALS
 Nature • Science

B-COMPLEX

A balanced B vitamin formula

**DIETARY SUPPLEMENT
150 TABLETS**



THRESHOLD CONTROLLED SUPER-B ▼

Supplement Facts

Serving Size 1 Tablet

Amount Per Tablet	% Daily Value
Thiamine (as thiamine mononitrate and from yeast)	15 mg 1000%
Riboflavin (as riboflavin and from yeast)	15 mg 882%
Niacin (as niacinamide and from yeast)	100 mg 500%
Vitamin B6 (as pyridoxine hydrochloride and from yeast)	15 mg 750%
Folic Acid	0.4 mg 100%
Vitamin B12 (as cyanocobalamin)	15 mcg 250%
Biotin	0.2 mg 66%
Pantothenic Acid (as calcium pantothenate and from yeast)	30 mg 300%
Inositol (as inositol and from soy lecithin)	100 mg †
Desiccated Liver	100 mg †
Choline (as choline bitartrate and from yeast)	50 mg †
Rutin	20 mg †

† Daily Value not established

Other ingredients: Stearic acid, hydroxypropyl methylcellulose, microcrystalline cellulose, silicon dioxide, food glaze and magnesium silicate.



Lot #
Best If
Used By
904

SUGGESTED USE: 1 tablet daily.

B vitamins promote the active conversion of all food into energy and assist in synthesis and reenergizing of cells and tissues throughout the body. B vitamins support healthy neuronal functioning and assist with healthy mood and mental clarity.*

* **These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.**

GNLD begins with nutritional yeast (*Saccharomyces cerevisiae*), and through unique processes of growth, harvest and drying, B vitamins are "biologically bound" to create a natural hi-potency B-complex raw material. Ingredients blended with liver and soy lecithin provide the entire family of B vitamins in balanced whole food ratios.

GNLD's Threshold Controlled formula helps maintain elevated blood levels of B vitamins with a slow release over six hours.

Store in a cool, dry place, away from direct sunlight. Packaged with safety seal.

NOT SOLD IN RETAIL STORES
Available Exclusively From GNLD Distributors



GNLD International
Fremont, CA 94538 U.S.A.
Leading edge nutrition since 1958.

B-COMPLEX ▼

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Rutin	20 mg †

† Daily Value not established

Other Ingredients: Dicalcium Phosphate, microcrystalline cellulose, natural color, stearic acid, hydroxypropyl methylcellulose, magnesium stearate, silicon dioxide, rice polishing powder and triacetin.



812

Lot #
Best If
Used By

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THE B-VITAMINS STORY

B-VITAMINS ARE ALWAYS FOUND TOGETHER IN NATURE

The story of B-vitamins begins with the study of the age-old ailment, beriberi, a deficiency disease marked by degeneration of the heart, nerves, and digestive system. In 1873, the Dutch scientist Van Lent was apparently the first to conclude that diet had something to do with the development of beriberi in sailors. In 1926, Dutch researchers isolated a concentrate that cured beriberi which was later named *water-soluble B*, to distinguish it from the anti-nightblindness factor called vitamin A.

At that time, the anti-beriberi substance was thought to be one factor only. As research continued, it was found that vitamin B was not a single substance, but actually several factors. Collectively, they came to be known as the **vitamin B complex**, but each factor was given a separate name, including **thiamin (B₁)**, **riboflavin (B₂)**, **niacin**, **pantothenic acid**, **pyridoxine (B₆)**, **folic acid**, **cobalamin (B₁₂)**, **choline**, **inositol**, and **biotin**.

These vitamins differ in both chemical structures and specific functions, yet the actions of many of them are interrelated. **All of the B-vitamins are water-soluble, occur together in food, and must be supplied in the diet each day.**

MANY AMERICANS ARE DEFICIENT IN ONE OR MORE B-VITAMINS

A lack of B-complex vitamins is one of the most common forms of malnutrition throughout the world. Processed foods are a major factor in this widespread deficiency. Refining, canning, and overcooking remove or destroy many B-vitamins. For example, 72% of the vitamin B₆ content of wheat is lost in milling white flour.

The average daily intake of folic acid by adults is substantially below the Daily Value. More than half of all Americans get less than the recommended amount of B₆. Deficiencies of vitamins B₁, B₂, B₆, and B₁₂ have been found in numerous studies of the elderly. Because the entire family of B-vitamins is usually found in the same foodstuffs, a deficiency of several factors is more common than a deficiency of a single factor.

In addition, B-vitamin requirements may be increased by stress, infections, or other physical conditions which elevate metabolism or interfere with absorption. Larger amounts are needed during growth, pregnancy, and nursing. Medications, alcohol, caffeine, and oral contraceptives can destroy B-vitamins.

B-VITAMINS ARE CRUCIAL TO HEALTH

Most of the B-vitamins are involved in carbohydrate, protein, and fat metabolism. Not only do they help in the

metabolic processes that release energy from the foods we eat, they also assist in the synthesis of new cells and tissues.

Research shows that individually and as a group, B-vitamins may have far-reaching health benefits:

■ Helping prevent birth defects.

Studies have shown that adequate intake of folic acid can sharply reduce a woman's risk of giving birth to a child with either spina bifida or anencephaly, devastating defects of the spinal cord and brain.

■ Supporting heart health.

Vitamins B₆, B₁₂, and folic acid have been linked to the homocysteine cycle, a process in which B-vitamin deficiencies contribute to the buildup of a toxic substance linked to an increased risk of cardiovascular disease. Studies have directly linked higher B-vitamin intake with reduced cardiovascular risk. *(For more information about B-vitamins and heart health, see Lipotropic Adjunct.)*

■ Regulating mind and mood.

The body needs folic acid, B₆, and B₁₂ to manufacture neurotransmitters, chemicals that control alertness and mood. Even a mild lack of B-vitamins may cloud the mind. In a study of 260 older people who showed no signs of illness or vitamin deficiency, those with the lowest blood levels of B₁₂ and folic acid scored significantly worse on tests of mental acuity than the rest of the group did. Another study showed that memory deteriorated rapidly as B₆ levels fell, and returned to normal when adequate levels of the vitamin were restored.

■ Supporting immune function.

A sufficient supply of vitamin B₆ and folic acid is essential for keeping the immune system strong. Even people with only marginally low levels of these vitamins can show signs of weakened immune function, mainly reductions in the number and activity of certain disease-fighting white blood cells.

FUNCTIONS OF THE B-COMPLEX VITAMINS

To better understand the significance of the vitamin B-complex as a whole, the following descriptions briefly outline the functions and deficiency symptoms of the members of the B-vitamin family.

GNLD B-VITAMINS: NATURALLY BALANCED AND COMPLETE

In nature, the vitamin B-complex occurs in balanced ratios. This does *not* mean equal amounts of each vitamin. Some of the B-vitamins are always present in relatively large amounts, while others never exceed minute quantities. However, this "balance" helps maintain the highly interrelated functions of the entire complex in our bodies. In fact, this balance is so important that an excess of one B-vitamin may cause excessive elimination of the others.

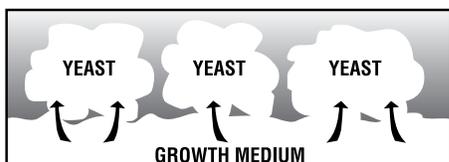


Thiamin (B₁)	Critical to the health of the nervous system and heart. Aids the appetite, carbohydrate metabolism, digestion, energy, and growth. Deficiency may result in neuromuscular dysfunction, memory loss, numbness or tingling of extremities, severe decrease in appetite, and decreased growth.
Riboflavin (B₂)	Critical for metabolism, resistance to infection, and function of muscles and nerves. Deficiency may result in dermatitis, impaired enzymatic activity and protein synthesis, tissue swelling, anemia and other blood disorders, decreased appetite and growth, muscle weakness, gastrointestinal inflammation and ulcer, liver disorders, paralysis, decreased fertility in both sexes, and changed sensitivity to touch, pain, temperature, etc.
Pyridoxine (B₆)	Critical for healthy cardiovascular and nervous systems. Aids in antibody formation, DNA and RNA synthesis, hydrochloric acid production, and utilization of key nutrients (niacin, magnesium, linoleic acid, carbohydrates, etc.). Deficiency may result in anemia, appetite loss, nervous system disorders, muscle weakness, poor growth, dental cavities, enzyme deficiencies, cardiovascular disease, reduced female fertility, susceptibility to infection, and acne.
Cobalamin (B₁₂)	Important for nerves and red blood cells. Also plays key roles in energy production and metabolism of carbohydrates, fats, and proteins. Essential for cell longevity. Deficiency may result in anemia, muscle weakness, fatigue, and impaired memory.
Biotin	Important for healthy skin. Biotin plays a role in the metabolism of lipids, glucose, and some amino acids, and is necessary for growth, vitamin B utilization, and energy production. Deficiency can result in depression, skin problems (dryness, discoloration, rash), fatigue, insomnia, muscular pain, poor appetite, nausea, decreased growth, and high cholesterol levels.
Choline	A component of phosphatidylcholine, found in all cell membranes, and acetylcholine, a major brain neurotransmitter involved with memory, thought, and muscle control. Fundamental to the health of the cardiovascular system, liver, metabolism, and lipid transport. Choline deficiency can result in memory impairment, liver and kidney disorders, infertility, poor growth, and high blood pressure.
Folic Acid	Helps prevent heart attacks, strokes, and some birth defects (spina bifida, neural tube defects). It also plays roles in cell growth and reproduction, DNA and RNA production, liver performance, protein metabolism, and red blood cell formation. Deficiency may result in anemia, skin lesions, poor growth, weakness, depression, impaired memory, birth defects, spontaneous abortion, cardiovascular disease, cancer, etc.
Inositol	A major component of cell membranes, affecting their structure and function. Important for the production of brain neurotransmitters and nerve cells. Plays critical roles in growth and metabolism, fat metabolism, and may help reduce blood cholesterol levels. Deficiency may result in fatty liver, impaired growth, and cancer.
Niacin	Important for circulation, growth, and metabolism. Niacin helps reduce cholesterol levels and is a constituent of enzymes involved in the synthesis of fatty acids, protein, and DNA. It is needed to release energy from fats, carbohydrates, and proteins. Deficiency can result in dermatitis, diarrhea, delirium, anxiety, depression, fatigue, anemia, and death.
Pantothenic Acid	Required for the health of the skin, liver, adrenals, and nervous system. Required for the metabolism of carbohydrates and fats and the production of energy and antibodies. Deficiency may result in decreased appetite and growth, dermatitis, muscle weakness, ulcers, dysfunction of the liver, kidneys, and adrenal glands, depression, and fatigue.

GNLD's B-Complex supplements supply 10 members of the B-vitamin family in the balanced ratios that nature intended.

BIOLOGICALLY-BOUND YEAST FOR NATURALLY HIGH POTENCY

GNLD uses a unique whole-food source, the nutritional yeast *Saccharomyces cerevisiae*. Called "biologically-bound yeast," this special strain is highly concentrated in B-vitamins and other natural nutritional cofactors. Through a unique process of growing, harvesting and drying yeast, B-vitamins are "biologically-bound" to create a natural, high-potency B-complex source. This natural raw material is the basis of GNLD's B-Complex and Super B Threshold Control formulas.



SUPER B FOR SUSTAINED RELEASE B-VITAMINS

When our bodies receive more B-vitamins than can be utilized, the excess is rapidly and wastefully excreted. This results in lost nutrients and lost dollars spent on nutritional products. To meet this challenge, GNLD developed its exclusive Threshold Control process, a nutritional technology which creates a slow release of nutrients over a period of hours. This regulated delivery minimizes nutrient waste and increases B-vitamin utilization.

