



SUPER B-COMPLEX

Other common name(s): B vitamins; vitamins B1, B2, B3, B5, B6, B7, B9, and B12

Scientific/medical name(s): thiamine (B1), riboflavin (B2), niacin (B3), pantothenic acid (B5), pyridoxine (B6), biotin (B7), folic acid or folate (B9), cobalamin (B12)

Description

B vitamins are essential for growth, development, and a variety of other bodily functions. They play a major role in the activities of enzymes, proteins that regulate chemical reactions in the body, which are important in turning food into energy and other needed substances. B vitamins are found in plant and animal food sources.

Overview

B vitamins are an important part of the diet and are needed to help avoid many health problems. But, with the exception of vitamin B9 (folic acid), there is not enough scientific evidence to know whether B vitamins can reduce the risk of cancer.

People with low intake of folic acid are at increased risk for certain types of cancer. A diet rich in vegetables containing this vitamin, and perhaps a daily multivitamin supplement containing the recommended daily value of folic acid is recommended by some experts in cancer prevention. (See our separate document, Folic Acid, for more information.)

Available scientific evidence does not support claims that any B vitamin is an effective treatment for people who already have cancer.

How is it promoted for use?

Scientists know that B vitamins are part of many important bodily functions:

- **Vitamin B1** (thiamin) and vitamin B2 (riboflavin) help the body produce energy and affect enzymes that influence the muscles, nerves, and heart.
- **Vitamin B3** (niacin) has a role in energy production in cells and helps keep the skin, nervous system, and digestive system healthy.
- **Vitamin B5** (pantothenic acid) influences normal growth and development.
- **Vitamin B6** (pyridoxine) helps the body break down protein and helps maintain the health of red blood cells, the nervous system, and parts of the immune system.
- **Vitamin B7** (biotin) helps break down protein and carbohydrates and helps the body make hormones.
- **Vitamin B9** (folic acid) helps the cells in the body make and maintain DNA and is important in the production of red blood cells.

- **Vitamin B12** (cobalamin) plays a role in the body's growth and development. It also has a part in producing blood cells, nervous system function, and how the body uses folic acid and carbohydrates.

Deficiency of certain B vitamins can cause anemia, tiredness, loss of appetite, abdominal pain, depression, numbness and tingling in the arms and legs, muscle cramps, respiratory infections, hair loss, eczema, poor growth in children, and birth defects.

Some alternative medical practitioners claim that deficiencies in B vitamins weaken the immune system and make the body vulnerable to cancer. They recommend high doses of B vitamins as treatments for people with cancer. Many researchers are studying the relationships between vitamin intake and risk of developing certain cancers. People are at higher risk for deficiency if they have poor nutritional sources of B vitamins, take medications or have conditions that impair absorption, or are affected by circumstances that increase the need for vitamin B components above the normal level. Since the B vitamins often work in harmony, a deficiency in one type may have broad implications. Poor intake of B vitamins is most often a problem in strict vegetarians and the elderly.

People who frequently fast or diet may also benefit from taking B vitamins. Vegans will need to use brewer's yeast or other sources of supplemental cobalamin, since the only natural sources are meats.

Risk factors that may decrease absorption of some B vitamins include smoking, excessive use of alcohol, surgical removal of portions of the digestive tract, and advanced age. Absorption is also impaired by some medications. Some of the drugs that may cause this are corticosteroids, colchicine, metformin, phenformin, omeprazol, colestipol, cholestyramine, methotrexate, tricyclic antidepressants, and slow-release potassium.

Need for vitamin B complex may be increased by conditions such as pregnancy, breastfeeding, emotional stress, and physical stress due to surgery or injury. People who are very physically active require extra riboflavin. Use of birth control pills also increases the need for certain B vitamins.

In Conclusion:

B complex vitamins are very important for the body and are required for the proper functioning of the cells giving energy boost, helping in unlocking the energy stored in carbohydrates, for the maintenance of healthy nerve and skin and in promoting normal appetite helping the digestive system. Vitamins such as vitamin B12 are very vital for the replication of DNA, cellular and tissue repair, activity of normal nerve cell and formation of red blood cells.

B complex vitamins that belong to the water-soluble group of vitamins have major vitamins that help in a large number of ways for the proper functioning of the cells and the tissues within the body. For control of high cholesterol levels, individuals are provided a supplement of vitamin B3 that helps in the reduction of the cholesterol levels.