

be well with vitamin B

By Jack Challem

B-complex vitamins are essential for myriad physical and mental functions. Find out just how much you need

HOW THEY WORK: The B vitamins work in many different ways. Some function at the most basic level of our biology by influencing the activity of our genes. Other B vitamins work at a nongenetic biochemical level, such as by helping to make neurotransmitters, which modulate our moods, or by regulating blood sugar levels or specific risk factors for heart disease.

HEALTH BENEFITS: The B vitamins play essential and profound roles in health. Here's a look:
Gene regulation. We need only about 1/70,000 of an ounce of folic acid each day to maintain health. Yet the body uses this tiny amount of folic acid to synthesize new genes and cells, such as during periods of growth and healing. Folic acid also helps repair damaged genes, which slows the aging process, and is needed to make chemical compounds called methyl groups (CH₃), which regulate gene activity, such as by suppressing cancer-promoting genes.

THE BASICS: The B-complex vitamins consist of 11 related nutrients. They may not have a lot of flash, but they do play fundamental and far-reaching roles in terms of our health. For example, you need vitamin B1 to break down carbohydrates, B3 to maintain normal cholesterol levels, B6 for calm moods, and B12 to stay mentally sharp. And that's just for starters. Folic acid helps to maintain healthy gene activity, and it also reduces the risk of cardiovascular diseases.

ALIAS: The B-complex vitamins include thiamine (B1), riboflavin (B2), niacin and niacinamide (B3), pyridoxine (B6), cyanocobalamin and hydroxocobalamin (B12), biotin, choline, folic acid, pantothenic acid, and para-aminobenzoic acid (PABA). In addition, inositol is often considered a B vitamin.

Cardiovascular disease. Low levels of folic acid (and sometimes low B6 and B12 levels) lead to increases in blood levels of homocysteine, a chemical that damages blood vessel walls and sets the stage for cholesterol deposits. Recently, researchers at the University of Southern California gave subjects high-dose B-complex vitamins or placebos daily for three years. Those taking the vitamins had significantly less thickening of their blood vessel walls, according to an article in *Stroke*.

Mood. B-complex vitamins have been known since the 1940s as antistress nutrients. Many of the vitamins have direct effects on mood and perception. For example, vitamin B1 supplements improve overall mood; high doses of vitamin B3 (in combination with vitamin C) have been used successfully to treat recent-onset schizophrenia. Vitamin B6 is needed to make serotonin, a neurotransmitter with antidepressant benefits.

Blood sugar. Biotin and vitamin B1 stand out for their roles in maintaining normal blood sugar levels. Your body needs biotin to make insulin,

DID YOU KNOW?

The only food sources of vitamin B12 are meat, dairy products, and eggs. Vegans especially may be at risk for deficiencies, and may need to add supplements to their diets.

product examples

(clockwise from left)



Country Life **COENZYME B-COMPLEX CAPS** are vegetarian and highly bioavailable.

MegaFood **BALANCED B COMPLEX DAILY FOODS** supplies a balanced ratio of B vitamins found in 171 fruits, vegetables, and whole grains.

Garden of Life **VITAMIN CODE RAW B-12** is a raw, vegan formula. Also look for **VITAMIN CODE RAW B-COMPLEX**.

Lane Labs new **HEALTH DROPZ ENERGY** (liquid, tasteless drops that can be added to water) has more than 6,000 percent of the recommended daily value of B12—and no sugar.

a hormone that controls blood sugar levels. In addition, biotin regulates genes involved in the metabolism of glucose, amino acids, and fatty acids. Large amounts of biotin can lower triglyceride levels, and a combination of biotin and chromium picolinate has been shown to lower blood sugar levels. Vitamin B1 (100 mg, three times daily) has been shown to lower levels of microalbuminuria (protein in urine) in people with type 2 diabetes.

BACKGROUND CHECK:

Approximately one-third of seniors suffer from atrophic gastritis, a condition that interferes with vitamin B12 absorption. Studies have found that vitamin B12 deficiency can mimic Alzheimer's disease and other types of dementia. In these cases, taking vitamin B12 can restore cognitive function. Other B-complex vitamins, including niacin and folic acid, may be helpful in combination with vitamin B12.

B-complex vitamins relieve depression

Shannon, age 55, had suffered from chronic depression for years, for which her doctor prescribed various antidepressant drugs. Most had mild benefits, but did not completely resolve her depression, and one of the drugs led to unwanted weight gain. Frustrated, she consulted a clinical nutritionist for advice.

The nutritionist made dietary recommendations, but also suggested that Shannon start taking a high-potency B-complex supplement with at least 50 mg of the major B vitamins (i.e., B1, B2, B3, and B6). Within a couple of weeks, Shannon's depression completely lifted, leading to new creativity and new drive in the business she owned. After she told her physician of her improvement, Shannon was able to stop taking the prescribed medication. She continues taking a B-complex supplement.

CLEANINGS: Large amounts of vitamin B2 will turn urine a bright yellow color, but the effect is harmless. Large amounts of vitamin B6, especially if taken late at night, may stimulate vivid dream activity.

HEADS UP: Researchers reported in the February 2009 issue of *Archives of Internal Medicine* that large supplement

tal amounts of B-complex vitamins led to a 35 percent lower incidence risk of age-related macular degeneration in women over the course of seven years.

WHAT YOU SHOULD YOU TAKE:

Take a B-complex supplement with 20 to 50 mg of the major B vitamins, such as B1, B2, B3, B5, B6, and 500 mcg vitamin B12. ♦

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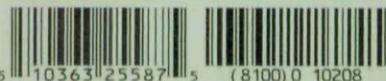
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