



# Get the Best of B-12

by Margy Squires

**How well do you know B-12?** Unlike multiples which are taken for overall health, most people take an individual vitamin or mineral for its specific health perks. In the case of B-12, those perks add up to better energy, red blood cell buildup to fight anemia and even help for mental and nervous system disorders. You may take sublingual B-12 since you know it's absorbed faster but are you aware that one form is preferred by researchers for clinical trials because it's more active? If you're plunking down a few extra vitamin dollars, go all the way and get the best.

Vitamin B-12 belongs to a class of compounds known as cobalamins, a classification that describes its chemical structure and subsequently its name. Cyanocobalmin is the common B-12 used in supplements and works quite nicely for multiples and B-complex products. However, your body needs to break down cyanocobalmin to the more active form, methylcobalmin, through a process of chemical reactions. Even if you've never taken chemistry, the more steps in a reaction process, the more likely something can go wrong. Plus, add the human factor to the equation since diet plays an important role. Remember vitamins are essential to life but must be supplied by diet since they are not produced in the body.

B-12 is unlike other water soluble vitamins, though, in that 70% of it is stored, in liver, kidneys, brain and other body tissues. You'd think that would help your body keep a better supply. Unfortunately, as you can see by the facts box, foods that are high in B-12 (liver and kidneys) are foods not high on the standard grocery list. And only 50% of the B-12 in foods is absorbable

Another reason B-12 is problematic to absorb is that it requires optimum GI health. Digestive enzymes and two chemicals in the stomach (intrinsic factor, hydrochloric acid) are required for B-12's breakdown and transport through the intestines and into the bloodstream. However, sublingual B-12 is absorbed directly by a vast network of blood vessels under the tongue. So you see, supplementing – especially the active form – may be the easiest way to get this B!

It is essential that B-12 be taken with an appropriate balance of folic acid to assure absorption. This balance must exist for normal functioning of the nervous system (See dosages.)

**B-12 & The Nervous System.** According to naturopathic Michael Murray, it can take five to six years for low level symptoms to show up and "a deficiency in B-12 actually affects brain and nervous system first". As a precursor to acetyl choline, cell genetic material (DNA) and the material

that surrounds nerve fibers (myelin sheath), B-12 influences nerve health, signal transmission and related muscle function. For example, acetyl choline is a brain neurotransmitter that facilitates faster nerve signaling for clear thinking, memory and learning. Damage to myelin is associated with many neuromuscular disorders, including multiple sclerosis, Alzheimer's and Lou Gehrig's. Whether deficiencies cause or contribute to fiber damage is unclear. Low levels of B-12 are found in peripheral neuropathies with symptoms of pins and needles, numbness and burning of hands and feet. Even restless leg syndrome is calmed down by B-12 when

taken with folic acid. While most studies show that supplemental B-12 alleviates and even reverses cognitive and parestheses symptoms, once motor function is lost, the damage may be irreversible.

**B-12 Testing.** A serum blood or urine test will help determine your B-12 levels.

In multiple sclerosis, B-12 levels are commonly low, although blood tests may come back as "normal". Urine tests are considered more accurate, per Dr. Murray.

**Dosages.** Contrary to popular belief, injections are not the only way to boost blood levels. Dr. Murray suggests 2000 mcg daily for one month and then 1000 mcg daily as a maintenance. Age, GI, kidney and

liver health and disorders, diet and neurological disposition affect B-12 status. There has never been any report of B-12 toxicity. Remember that B vitamins work together so take a B complex (or multiple with a B complex) which includes 400 mcg of folic acid, to balance your Bs.

**Summary.** The benefits of B-12 are many. To get the best of this B, look for methylcobalmin in a sublingual form for the highest absorption and activity – and skip the chicken livers. For more in-depth information on B-12, including its role with folic acid, read *To B-12 or Not to B-12* online in TyH's Health Library.

©TyH Publications (M. Squires)

