

Vitamin B-12, Is It Right For You?

By Bill Caradonna, R.Ph., N.D.

A half-century ago, MDs commonly administered vitamin B12 shots to their patients. As prescription drug development and use increased, vitamin B12 use declined. As Naturopathic physicians have re-emerged in the health care picture, so has vitamin B12 use.

Why is vitamin B12 so important?

Vitamin B12 helps maintain healthy nerve cells and red blood cells, and is also needed to make DNA, the genetic material in all cells. While it is well known to prevent pernicious anemia, it can also play an important role in preventing fatigue, insomnia, depression, cardiovascular disease, nerve damage (including numbness or tingling in extremities, difficulty maintaining balance, diabetic neuropathies), loss of appetite, soreness of the mouth or tongue, poor memory, and senile dementia (confusion in the elderly population). It has also been helpful in certain types of arthritis, asthma, infertility, multiple sclerosis, shingles, and ringing in the ears.

Some of these symptoms can also result from a variety of medical conditions other than vitamin B12 deficiency. It is important to have a physician evaluate these symptoms so that appropriate medical care can be given.

Why do B12 deficiencies exist?

Vitamin B12 is naturally found in meat, poultry, fish, milk and other dairy products, eggs, and also is in fortified breakfast cereals. It can be difficult to absorb from animal products, especially in people with certain digestive imbalances. One problem is low hydrochloric acid in the stomach. This can be aggravated by chronic use of prescription and non-prescription acid blockers (like Prilosec). Low HCL is also common in elderly populations. The presence of H. Pylori (a bacterium associated with stomach ulcers) has also been associated with low B12. Another cause is certain intestinal conditions or diseases that cause or contribute to malabsorption. Vegetarians are also at risk due to the absence of animal foods in their diet, especially if dairy products and eggs are not consumed. Up to 42% of people over 65 years of age have been identified as B12 deficient. Surprisingly, another study

identified a 26-49 age group as having a similar deficiency percentage.

Why B12 shots have more impact than supplements

B12 shots deliver far more B12 into the system than oral supplements, and avoid any absorption issues. B12 is virtually non-toxic, and for most people, the shots are nearly painless.

B12 and Fatigue

There can be many reasons for fatigue. These include lack of sleep, inadequate nutrition, lack of stable blood sugar levels throughout the day, use of stimulants which then cause the body to “crash” a few hours later, and long term stress. In the absence of diagnosed anemia, many people find that B12 gives them an energy boost, both short and long term. Athletes have reported increased endurance as well.

B12 and Insomnia

People often report improved sleep with B12 shots. Melatonin is a chemical secreted from the pineal gland that tells the brain to go to sleep. Vitamin B12 influences melatonin secretion. While there can be many causes of insomnia, this may be one reason why B12 shots can help people sleep better. Also, wintertime depression has been linked to imbalanced melatonin levels.

B12 and Depression

Research shows that those who suffer from depression respond better to drug treatment if they have high levels of vitamin B12 in their blood. One theory of why vitamin B12 helps is that it plays a role in the manufacture of brain chemicals, a shortage of which is believed to be linked to depression. Another theory is that people diagnosed with depression had low plasma levels of cobalt, the mineral that forms the center of the B12 molecule.

B12 and Memory

Vitamin B12 is linked to the production of acetylcholine, a neurotransmitter that assists memory and learning.

B12 and Heart Disease

Homocystene, a nerve and blood vessel toxin, is produced by imbalanced biochemical processing in our body. It has been associated with higher incidence of death by heart disease and stroke. The cause of this production has been tied to deficiencies of several B vitamins, including B12. High levels of Homocystene have also been predictive of increased incidences of dementia and Alzheimers Disease.

B12 Deficiency and The Elderly.

Anemia from B12 deficiency is easy to identify from a blood test. But identifying low B12 levels that can result in nerve damage is more difficult because there is an inexact relationship between blood and tissue B12 levels. Identifying tissue B12 levels requires specialty testing. Also, blood B12 levels can be in the normal range, but clinical symptoms can be present, and are reversed with B12 administration.

It is especially important to diagnose B12 deficiency early in the elderly because if left untreated it can lead to permanent impairment of neurological and mental function. A recent study following 370 individuals aged 75 or older for three years found subjects with low levels of serum B12 or folate had twice the risk of developing Alzheimer's Disease.

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