Brampton: 220 Wexford Road Unit 2 Brampton, ON L6Z-4N7
Ph: (905) 840-WELL Fax: (905) 840 -LIFE
www.drjustineblainey.com
www.blaineywellness.com

How Can You Benefit From Vitamin B12?

By Dr Mercola | November 4th, 2017

About 92 percent of the American population have some type of vitamin deficiency and unknowingly suffer the consequences. One of these is vitamin B12 deficiency, which affects more than 20 percent of the Americans over the age of 50. In developing countries, a higher number of patients with this deficiency has been recorded, namely in India, Mexico and some parts of Africa.

Although this deficiency affects a significant number of people, it is one of the most overlooked conditions. This is mainly due to the number of misdiagnosed or undetected cases because of inaccurate testing, the late onset of symptoms or the overall lack of knowledge about it.

But why is vitamin B12 necessary? Aside from being essential for cognition and brain health maintenance, it can also help you achieve peak health. Continue reading to learn more about this vitamin and why it's absolutely imperative that you get the recommended amount.

What Is Vitamin B12?

Vitamin B12, or cobalamin, is a B vitamin necessary for cardiovascular and cognitive health. It helps in the production of hemoglobin, improvement of nerve strength and regulation of homocysteine levels. Homocysteine is an amino acid produced by the body, which in large amounts can increase the risk of a person for heart attacks and strokes. Vitamin B12 works by making sure that the homocysteine in your blood is successfully expended by your body.

Unfortunately, the human body cannot produce this vitamin, and mainly depends on your diet to get ample supply. Vitamin B12 is naturally produced by anaerobic microorganisms commonly found in the gastrointestinal tract of animals. This means that the majority of B12 sources are either meat or poultry products, which is why many vegetarians and vegans are typically lacking this nutrient.

Vitamin B12 Sources: Where Can You Get It?

Animal products – whether dairy, poultry or meat – are excellent sources of vitamin B12. If you suspect that you're not getting enough vitamin B12 into your system, here are some food products that you should consider adding to your diet (just make sure that you're getting these from high-quality sources to keep yourself safe from chemicals and other harmful materials used in conventional farms):

- Sardines
- Herring
- Grass fed beef
- Wild Alaskan salmon
- Pasture raised organic eggs
- Organic free-range chicken
- Mussels
- Raw organic grass fed milk

Because the bulk of this vitamin's source is meat, people who do not eat meat products may have a higher susceptibility to B12 deficiency. Some of the options for vegans and vegetarians include B12 capsules, sprays and B12 shots. However, you should pay attention to the type of B12 used in these products to make sure that you're getting the form your body needs. Two types of vitamin B12 available in the market are:

• **Cyanocobalamin.** This is the most popular type of vitamin B12 available because it's cheaper and easier to produce.

Cyanocobalamin is normally synthesized in laboratories and does not naturally occur in the human body. Once it is introduced to your system, the body then converts it into methylcobalamin.

• **Methylcobalamin.** This type is said to be the active form of vitamin B12 and is able to remain in the body longer. I recommend looking for B12 supplements that use this type to make sure that your body absorbs the vitamin up front. It's the natural form of this vitamin, so the body isn't required to convert it to another form. It's more easily utilized and is more effective that cyanocobalamin.

What Is B12 Deficiency and Is It Serious?

Vitamin B12 deficiency is prevalent in the vegetarian population and the elderly. It's been linked to the onset of megaloblastic anemia, brain fog and heart disease. While there have been multiple proposed vegan alternative sources for vitamin B12, like tempeh, spirulina and green leafy vegetables, the amount in these foods are insignificant and do not provide the body with the levels that it requires.

For older age groups, vitamin B12 is often caused by the decreased ability of the digestive system to absorb nutrients. This means that even if you optimize your diet to contain high amounts of B12, most of it only passes the digestive system unabsorbed. The first thing that becomes noticeable once you have inadequate levels is the changes in brain function. Other vitamin B12 deficiency symptoms include the following:

• **Megaloblastic anemia.** This is a type of anemia caused by the body cells' inability to synthesize DNA during red blood cell production. It is often characterized by abnormally sized red blood cells and a lower cell count. Some of the telltale symptoms of megaloblastic anemia include shortness of breath, muscle weakness, nausea and paleness.

• **Jaundice.** This is often characterized by the abnormal yellowing of the eyes and skin, which is caused by the high amounts of the bilirubin pigment being released from the destruction of the fragile red blood cells brought on by low vitamin B12 levels.

• **Memory loss or cognitive difficulties.** Studies show that the presence of low to normal levels of B12 in the body can lead to white matter damage in the brain, which then causes major impairment in cognitive function.

• **Fatigue.** B12-deficient patients feel overwhelming fatigue and tiredness. Some patients even note that they are not able to do menial tasks that they do daily. This may be accompanied by numbness or tingling of the extremities as well.

Optimizing vitamin B12 levels should be one of the top priorities of pregnant women. This is to ensure that you and your child remain healthy, with researchers even noting that vitamin B12 is just as important as folic acid and iron during pregnancy for preventing neural tube defects. For women who have suffered miscarriages or have had difficulties in conceiving, low levels of B12 may also be a contributing factor.

Are You at Risk of Being B12 Deficient?

Diagnosis of vitamin B12 deficiency usually consists of multiple blood tests to determine whether you're in the optimal range. However, the problem with the current B12 blood test used to diagnose deficiency is that it measures both the inactive and active form of B12. This means that even though some patients have higher amounts of inactive B12, they still won't be diagnosed.

Other tests include a complete blood count and a serum B12 level. Testing homocysteine levels in the blood is another way doctors use to diagnose this deficiency. People who have a predisposition for B12 deficiency may be required to undergo additional screenings. Some of the risk factors for B12 deficiency you should look out for are:

• **Crohn's disease.** This chronic condition is characterized by the inflammation of the digestive system or the gastrointestinal tract. In cases where the inflammation is found in the terminal ileum, the risk for being B12 deficient

triples because this is the site for its absorption. One of the treatments for this condition is ileocaecal resection, which unfortunately heightens a patient's risk for vitamin B12 deficiency further.

• **Tapeworm infestation.** Fish tapeworms are the largest parasites in the human body. An infestation is usually caused by eating infected raw or undercooked fish. Once the tapeworms develop inside the intestine, it starts absorbing the nutrients ingested by the patient, one of which is vitamin B12.

• **Alcohol abuse.** Alcoholism makes it hard for the body to absorb vitamin B12 by damaging the gastrointestinal lining, which is responsible for the absorption and distribution of this vitamin.

• **Metformin, histamine blockers and proton pump inhibitor use.** Metformin is usually prescribed to diabetes patients to help lower their blood glucose levels. Unfortunately, studies show that it can lead to vitamin B12 deficiency.

Take note that folic acid deficiency and B12 deficiency almost have identical symptoms. If a B12 deficiency is erroneously diagnosed as folic acid deficiency, the symptom of anemia may be treated, but the eventual mental decline, which is only caused by low levels of B12, will still progress.

If you are affected by any of the conditions mentioned above, it is of utmost importance that you incorporate foods that are rich in B12 into your diet or consider taking B12 supplements. This will not only help you prevent deficiency, but can also keep you away from the serious repercussions that come with this deficiency.