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26 out of 54 People Who Avoided These Foods Got a Brain-Destroying Vitamin Deficiency

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The average non-vegetarian stores between 2,000 and 3,000 picograms of B-12 per day.

B-12 helps change homocysteine into methionine.

When this does not happen, homocysteine levels increase, which recent research has associated heart disease and deterioration of the arteries and nerves.

Although many vegan foods are said to have active B-12, few are proving to actually raise B-12 or prevent its loss.

There are a variety of symptoms of B-12 deficiency, which is a danger for vegans and live fooders.

The initial symptoms can include low energy, but it can eventually cause permanent nerve damage, depression, numbness and tingling in the hands and feet, nervousness, paranoia, hyperactive reflexes, impaired memory and behavioral changes.

According to Dr. Cousen's Blog:

"Consistent research over the last decade has shown that vegans and live food people of all ages and sexes have a much higher risk of becoming B-12 deficient ...

This deficiency is particularly true with newborn babies ...

The good news that one major study ... showed, in studying 37 vegan children was that there was normal growth and development in children who were breastfed for 6 months at a minimum, when there was B-12 supplementation ...



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It is my medical opinion, as a vegan since 1973 and live fooder since 1983, and as a person committed to supporting all those who choose to become healthy live food vegans, that it would be wise to incorporate some B-12 supplementation in your diet."

By Dr. Mercola

Some may disagree with me, but it is my observation and belief that a strict vegan diet, one that includes no sources of animal protein whatsoever, can be dangerous -- even deadly for certain individuals. I realize that many make this dietary choice based on ethical or spiritual convictions, and I have no disagreements with that.

However, there are very often health consequences to veganism, namely missing critical nutrients needed to optimize your health. As [Dr. Gabriel Cousens](#), who is a devoted live-food vegan himself, explains in the blog linked above, one such nutrient is vitamin B12 -- which would make a wise addition to the diets of virtually all vegans.

Why Vegans are Often Deficient in Vitamin B12

The few plant foods that are sources of B12 are actually B12 *analogs*. An analog is a substance that blocks the uptake of true B12, so your body's need for the nutrient actually increases. Vitamin B12 is found almost exclusively in animal tissues, which vegans and vegetarians do not typically eat, including foods like:



Beef and beef liver	Lamb
Snapper	Venison
Salmon	Shrimp
Scallops	Poultry and eggs

This is why vitamin B12 deficiency is extremely common in strict vegetarians and vegans, but many are unaware there's a problem until it's too late. Even though vitamin B12 is water-soluble, it doesn't exit your body quickly in your urine like other water-soluble vitamins. Instead, B12 is stored in your liver, kidneys and other body tissues, and as a result, a deficiency may not show itself for a number of years.

This is a serious concern, because after about seven years of B12 deficiency, irreversible brain damage and other problems can result. (The exception is infants and children, in which extensive B12 reserves have not yet been established, so deficiency signs and symptoms tend to become apparent more rapidly.)

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Why Vitamin B12 Deficiency is Serious

In the beginning, B12 deficiency may prompt changes in your mood, such as lack of motivation or feelings of apathy. It can lead to mental fogging, memory troubles, muscle weakness and -- one of the hallmark signs -- fatigue. Vitamin B12 is fittingly known as the energy vitamin, and your body requires it for a number of vital functions, including energy production, as well as:

Proper digestion, food absorption, iron use, carbohydrate and fat metabolism	Healthy nervous system function	Promotion of normal nerve growth and development
Help with regulation of the formation of red blood cells	Cell formation and longevity	Proper circulation
Adrenal hormone production	Healthy immune system function	Support of female reproductive health and pregnancy
Feelings of well-being and mood regulation	Mental clarity, concentration, memory function	Physical, emotional and mental energy



Over time, if long-term, chronic B12 deficiency develops it can lead to serious, irreversible conditions including:

Depression	Dementia and Alzheimer's	Anemia
Neurological and neuropsychiatric conditions	Dementia and Alzheimer's	Female fertility and childbearing problems

Among pregnant women, nursing women and infants, the effects of vitamin B12 deficiency can be particularly devastating. Pregnant women with B12 deficiency carry an increased risk of having a baby born with neural tube defects, a class of birth defects affecting the infant's brain and spinal cord. Spina bifida, which can cause paralysis, is a type of neural tube defect, as is anencephaly, which is fatal. A B12 deficiency has also been linked to infertility and repeated miscarriages

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If your diet doesn't include animal products and you're breastfeeding, your baby could also develop brain abnormalities due to a vitamin B12 deficiency. Earlier this year you may have seen the tragic story of 11-month-old Louise Le Moaligou, who died from complications associated with vitamin deficiencies, including B12, allegedly [caused by her mom's vegan diet](#). According to a [study on the Hallelujah Diet](#) -- a strict vegan diet -- by researcher Michael Donaldson, Ph.D. of Cornell University:

"Our study revealed early signs of vitamin B12 deficiency in 26 of the 54 people tested, after following the Hallelujah Diet for as little as two to four years."

He noted not only that vegan food sources of vitamin B12 are sparse, but that deficiency is especially dangerous for pregnant and nursing moms and infants:

"Based on the published studies and our results, adequate vitamin B12 status of vegans cannot be taken for granted. Pregnant women, nursing mothers, infants, and small children are particularly vulnerable to B12 shortages. Ensuring adequate B12 is critical for normal neurological development and maintenance, with shortages resulting in permanent damage."

Why Can't You Get B12 from Plant Foods?

If you're a vegan, you may be thinking you can just eat a selection of plant foods that contain B12 -- such as sea vegetables, fermented foods like tempeh and algae like spirulina -- and be just fine. But this is not the case because these foods contain B12 analogs along with active B12. The result is that eating these foods may ultimately make your B12 levels worse.



As [Dr. Cousens explained](#):

"Up until this time, many of us have felt that additional supplementation for live fooders with sea vegetables or probiotic formulas was sufficient for protection against B-12 deficiency. This does not seem to be the case. In macrobiotics, who primarily cook their food, we see a very high percentage of children actually having growth retardation due to low B-12 intake. Many of us have felt that spirulina, Klamath Lake Algae, all the sea vegetables had enough active B-12 to avoid a B-12 deficiency."

*Although the research is not fully in, we do know that ... these substances do have human active B-12. The problem is they also have a significant amount of analog B-12 that competes with the human active B-12 ... Using the methyl malonic acid reduction approach, which is now the gold standard, research showed that when people used dry and raw nori from Japan, the dried nori actually made the methyl malonic acid (MMA) status worse, **which means it actually reduced the B-12 status.***

Therefore it could possibly worsen a B-12 deficiency. Raw nori seemed to keep the methyl malonic acid at the same level, meaning it did not harm the B-12 status, but the

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research showed it did not particularly help it either. No food in Europe or the U.S. has been tested for lowering methyl malonic acid."

The other argument often used by vegans is that your body produces vitamin B12 from bacteria in the large intestine, so additional sources are not necessary. While it's true that your body does produce B12 in this way, your body will not be able to absorb it. As [Dr. Cousens stated](#):

"There is one exception to this lack of vegetarian B-12 active food, which is that we do produce B-12 from bacteria in our large intestine, but since this B-12 is produced in the area below where B-12 is reabsorbed, it is really not available for absorption."

What Options do Vegans Have?

If you are open to it, I would first suggest adding some animal foods into your diet, as B12 is available in its natural form only in animal food sources. This doesn't necessarily have to be meat -- eggs and dairy are options also. Top foods to include are:

- Grass-fed beef and beef liver
- Organic, free-range chicken
- Raw milk
- Organic free-range eggs



Seafood is another option, but one I don't recommend eating unless you can be certain it is not contaminated with mercury and other pollutants. If you don't consume enough of these animal products to get an adequate supply of B12, I recommend a vitamin B12 supplement.

Even if you *do* eat animal foods, a supplement can be beneficial if your body's ability to absorb the vitamin from food is compromised, which is especially prevalent as you age. When you get older, the lining of your stomach gradually loses its ability to produce hydrochloric acid, which releases vitamin B12 from your food. If you're over 50, it's safe to assume you are not absorbing vitamin B12 at an optimal level.

But, truth be told, most multi-vitamins sold today are a complete waste of money when it comes to their B12 quality and absorption potential.

Part of the reason vitamin B12 is so difficult to absorb and requires an additional protein -- intrinsic factor -- that binds to vitamin B12 and allows your body to absorb it into your bloodstream is because it is a massively large molecule when compared with other vitamins.

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Because it is far larger than any other vitamin, it requires extraordinary measures to actually push this molecule into your blood. But if your body doesn't produce enough stomach acid, which can occur as you age and also with other conditions like indigestion, heartburn and gastric reflux disease (GERD), then you're not producing enough intrinsic factor either.

Fortunately, a technology has been developed that can reduce the effective size of the vitamin B12 molecule and help you absorb it into the fine capillaries under your tongue. The delivery system for these microscopic droplets of vitamin B12 is a fine mist you spray into your mouth, which bypasses the intrinsic factor problem and is much easier, safer and less painful than having your doctor inject you with a vitamin B12 shot.

Whichever option you choose -- animal foods or a high-quality spray mist supplement -- I recommend you begin consuming it immediately if you're a vegan, as doing so could help you circumvent serious health problems looming in your future.



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