

VITAMIN B12

What you need to know about this important nutrient.

What is Vitamin B12?

Vitamin B12 is a water-soluble vitamin that keeps your nerves and red blood cells healthy.

Why is Vitamin B12 important?

- It is needed to convert carbohydrates into glucose. Vitamin B12 produces cellular energy, which prevents fatigue and lethargy in the body.
- It is required to help regulate the nervous system. Vitamin B12 reduces depression and stress, while improving cognitive function.
- Vitamin B12 protects against heart disease, stroke and high blood pressure because it improves cholesterol and homocystiene levels.
- Vitamin B12 also protects against cancers including breast, colon, lung, and prostate cancer.
- It is essential for healthy digestion, skin, hair, and nails.

Who is most at risk for a Vitamin B12 deficiency?

- Strict vegetarians and vegans (people who do not eat meat or animal products).
- Heavy drinkers and smokers.
- Pregnant and breast-feeding women, especially if vegetarian or vegan.
- The elderly. Aging reduces the body's ability to absorb B12 from food.

People who have medical conditions affecting B12 absorption in the small intestine are also at risk of deficiency.

- Chron's and Celiac's Disease.
- Intestinal parasitic infection.
- Pernicious Anemia: loss of stomach cells by an autoimmune process or genetic inheritance that results in low amounts of Intrinsic Factor important for B12 absorption in the small intestine.
- Individuals who have had gastrointestinal surgery - parts of their digestive tract removed.



- People who have taken over the counter or prescription anti-acids for many years.

Other medical conditions related to low Vitamin B12 include:

- Autoimmune Diseases such as: Grave's Disease and Lupus.

What are the symptoms of Vitamin B12 deficiency?

A deficiency in Vitamin B12 can result in:

- Weakness, fatigue and lethargy.
- Dizziness or light-headedness.
- Rapid heartbeat and breathing (anxiety).
- Sore mouth or tongue that is bright red.
- Easy bruising or bleeding, including bleeding gums.
- Stomach upset, loss of appetite and weight loss.
- Diarrhea or constipation.
- Depression.
- Poor memory, concentration and focus (B12 deficiency is a known cause of Dementia).
- Tingling or numbness of the arms and legs (Peripheral neuropathy).
- Vision Problems.
- Low sperm count.

NOTE: The liver stores enough Vitamin B12 reserves to last a couple of years.

Can you get a blood test for Vitamin B12?

- Yes. Vitamin B12 can be assessed through routine blood screening.
- It is regularly included as part of a patient's yearly physical exam with their Naturopathic Doctor (ND) and Medical Doctor (MD).
- This blood test requires 12 hours of fasting, which means that the patient should not consume any liquids (other than water) or food for 12 hours prior to the blood draw.

What are the best food sources of Vitamin B12?

- Make sure that your body is getting enough vitamin B12 by incorporating these foods in your diet: organic - free range, liver, red meat (including wild game such as Venison, Moose and Elk), eggs, milk, cheese and some varieties of fish.
- Spirulina is a type of algae high in Vitamin B12. It is often found in tablet or powder form as a component of "Greens Drinks". It can be purchased from most health food stores.

What about taking a B12 Supplement?

Oral Supplements

- A 1000 to 500-microgram dose of vitamin B12 given sublingually -- dissolved under the tongue -- is effective in treating most deficiencies.

However, some people require B12 injections.

Vitamin B12 Injections

- For example, people who have pernicious anemia, a condition in which you do not properly absorb vitamin B12 through the digestive tract, may not find improvement with oral supplementation alone.
- Similarly, older adults who fail to produce optimal amounts of stomach acid and people who have other malabsorption issues, have trouble absorbing oral vitamin B12 supplements.
- Vitamin B12 injections are often recommended because they bypass the digestive tract.

Can you get too much Vitamin B12?

- B12 is a water-soluble vitamin.
- Water-soluble vitamins are excreted in the urine.
- This prevents overdosing.
- There is no sufficient evidence of Vitamin B12 toxicity from taking oral supplements.

- When high doses of vitamin B12 are taken orally, only a small percentage can be absorbed, which may explain the low toxicity.

What are the Side Effects of Injectable Vitamin B12:

- Rare allergic reactions to vitamin B12 injections have been reported.
- It is unclear if the allergic response is to the vitamin or the preservatives and other substances in the solution.
- Note: ND's use preservative free injectable Vitamin B12.

Can overdose symptoms occur if someone takes too many B12 injections?

- Yes. However, the overdose symptoms are temporary – usually lasting 24 to 48 hours, as the body has ways to excrete the overload of Vitamin B12.

The overdose symptoms from too many B12 injections may include:

- **Excessive urination:** The kidney produces more urine to excrete the excess vitamin.
- **Diarrhea:** The gut tries to eliminate the excess vitamin B12 in the body leading to diarrhea.
- **Increased thirst:** From dehydration in the body brought about by excessive urination and diarrhea.
- **Skin flushing:** Vitamin B overdose leads to vasodilatation of the blood vessels.
- **Palpitations:** Because of rapid firing of nerve impulses in the heart.
- **Insomnia and panic attacks:** Over dose on B-vitamins can irritate the central nervous system.

If you experience these symptoms a few hours after a Vitamin B12 injection be sure to report this to your ND and MD. You may be getting too much Vitamin B12.

How can your Naturopathic Doctor help with Vitamin B12 problems?

- ND's are trained to do routine physical exams and blood work.
- ND's can help their patients determine if they are Vitamin B12 deficient.
- ND's will recommend adequate nutrition, oral supplementation or B12 injections to correct the deficiency.
- ND's also help to correct many different kinds of digestive disorders, thus improving Vitamin B12 digestion and absorption, while optimizing their patients over all health.
- ND's prevent and treat medical conditions related to Vitamin B12 deficiency and help their patients significantly improve their quality of life.

IF YOU ARE CONCERNED ABOUT YOUR VITAMIN B12 LEVELS, CONTACT YOUR LOCAL NATUROPATHIC DOCTOR TODAY.



Heidi McGill is a registered doctor of naturopathic medicine. She has owned and operated Healing Foundations since November 2006. She has helped dozens of families discover their best balance for overall wellness in body and mind, using the principles and practices of naturopathic medicine. Dr. Heidi regularly appears as "Guelph's Naturopathic Expert" on Inside Guelph a local Roger's T.V. program. She also writes articles on topics that matter to you. Dr. Heidi is focused on educating you about how your body functions in combination with the natural and cultural environment. She is genuinely passionate about guiding you towards optimal health, vitality and more joy in your life.

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