

Healthful TIPS

Health and Fitness Tips for the Entire Family

Vitamin B 12 Essential for Good Health

The right level of vitamin B 12 helps your body to function at its peak. Weight loss surgery puts you at risk for a Vitamin B 12 deficiency, causing sluggishness and even irreversible nerve damage if not treated. The good news is that it's easy to keep your Vitamin B 12 within a healthy range with a couple of simple steps.

What Does Vitamin B 12 Do?

Vitamin B 12 is important. It helps your body **1)** turn food into energy, **2)** make red blood cells, **3)** protect nerve endings, **4)** make neurotransmitters, and **5)** replicate the genetic code within each cell.

Where Do We Get Vitamin B 12?

We need 2.4 mcg daily of Vitamin B 12. Vitamin B 12 is naturally found in animal products—meat, fish, poultry, eggs, milk, and yogurt. It is generally not found in plant foods, but some foods, like breakfast cereal, are fortified with it.

Why Does WLS Increase the Risk of Deficiency?

The body has a very specific process for the absorption of Vitamin B 12. This process is less efficient after gastric bypass or gastric sleeve surgery, increasing the likelihood of a deficiency.

Here are the kinks in the process:

- **Less Stomach Acid.** Stomach acid frees Vitamin B 12 from foods and the post-bariatric surgery stomach has less stomach acid. That means more Vitamin B 12 remains bound to food where it is unavailable for absorption.
- **Less Intrinsic Factor.** Once separated from food, Vitamin B 12 binds to a compound produced in the lower stomach called intrinsic factor. It is the intrinsic factor-Vitamin B 12 compound that the body absorbs in the small intestine. Because the lower stomach is bypassed with gastric bypass surgery and mostly removed with gastric sleeve surgery, there is less intrinsic factor available to bind with Vitamin B 12.
- **Less Food.** Portions are smaller after surgery and in many cases less Vitamin B12 is consumed.

Signs of Low Vitamin B 12

Symptoms of a low Vitamin B 12 may be vague or even non-existent, but can include weakness; fatigue; lightheadedness;

heart palpitations; shortness of breath; pale skin; a smooth tongue; constipation; diarrhea; loss of appetite; gas; vision loss; nerve problems like numbness or tingling, muscle weakness, and problems walking; or mental problems like depression, memory loss, or behavioral changes. A deficiency of Vitamin B 12, if not treated, can lead to irreversible nerve damage—best to take steps to keep it within a healthy range.

Keep Your Vitamin B 12 in a Healthy Range

Just a few easy steps and you can be assured that your Vitamin B 12 stays within that healthy range—not too low or too high.

Step 1. Get regular lab testing to monitor your Vitamin B 12 level. Most labs set 190 and 950 pg/mL as the reference or normal range, but these numbers vary some from lab to lab. Your Barix Clinics nutritionist will look for a minimal lab value of 400 pg/ml to insure that deficiency symptoms do not occur. Test Vitamin B 12 every 3 months for the first year and then at least once a year after that.

Step 2. Supplement as needed or as a preventative step. If your lab value dips below 400 pg/ml, supplement as recommended by your surgeon or nutritionist. Typically 500 mcg of sublingual Vitamin B 12 daily will restore levels within the reference range. This dosage can also be used to maintain levels within the reference range- a preventative approach.

Step 3. After starting or changing a supplement dosage, recheck levels and adjust as needed. If lab values exceed the high end of the reference range after starting a supplement, reduce the frequency of supplementation to once a week. Then recheck in 3 months. There is no advantage to exceeding the high end of the reference range and some negative effects of excessive Vitamin B 12 supplementation have been reported.

Choose the Right Supplement

An oral (pill) supplement of Vitamin B 12 has limited absorption following gastric bypass or gastric sleeve surgery. If supplementation is recommended, choose one of the following forms:

- Sublingual (under the tongue) supplements are a cost efficient and effective solution. They are available over-the-counter in both liquid and dissolvable tablet forms.
- Vitamin B 12 injections are available at your doctor's office or by prescription.
- A vitamin B 12 nasal spray is available by prescription.

Vitamin B 12 has many important roles in the body. Having weight loss surgery increases the risk of having a deficiency, but with a few simple steps, it's easy to maintain a healthy range of Vitamin B 12.