

Scoop Summer 2021

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Vitamin B12—Got questions? We've got answers

Most people have heard of vitamin B12, but did you know that it is naturally present only in animal foods like fish, meat, poultry, eggs, and milk? That's right—plant foods, such as fruits, vegetables, beans, and rice have no natural vitamin B12.

Our bodies need vitamin B12 to keep nerve and blood cells healthy and to make DNA, the genetic material in all cells. Most adults need 2.4 micrograms (mcg) per day, and if you are pregnant or breastfeeding, you need a little more.

It's not hard to get enough vitamin B12. A 3-ounce serving of ground beef, for example, has 2.4 mcg and 1 cup of milk has 1.3 mcg. But if you follow a vegan diet, you might fall short. Thankfully, some fortified foods—including some breakfast cereals and nutritional yeasts—have added vitamin B12. Many dietary supplements, including multivitamins and B-complex vitamins, also contain vitamin B12.

Keep reading to learn more about this important nutrient.

Q. What happens if I don't get enough vitamin B12?

A. A deficiency of vitamin B12 can cause a form of anemia called megaloblastic anemia. This can leave you feeling tired and weak. Vitamin B12 deficiency can also cause pale skin, heart palpitations, loss of appetite, weight loss, and infertility. In addition, you might have numbness or tingling in your hands and feet, soreness in your mouth and tongue, problems with balance, confusion, and depression.

Your healthcare provider can test the amount of vitamin B12 in your blood. If you have a deficiency, it is often treated with vitamin B12 supplements and sometimes vitamin B12 injections.



Q. I am 58 and my doctor recommended a vitamin B12 supplement because of my age. Why is that?

A. Your body needs stomach acid to digest and absorb the vitamin B12 that's naturally present in food. Many older adults have low levels of stomach acid and this can reduce vitamin B12 absorption from food. In addition, antacids such as Prilosec® and Tagamet® neutralize stomach acid which can interfere with vitamin B12 absorption.

It's easier for your body to absorb the vitamin B12 in fortified foods and dietary supplements, so people over 50 should get most of their

vitamin B12 from these sources. This might be why your doctor recommended a vitamin B12 supplement.

Q. Is there anything else besides age that affects how well people absorb vitamin B12?

A. Yes. In addition to stomach acid, your body needs a protein called intrinsic factor to absorb vitamin B12. People with conditions called pernicious anemia or atrophic gastritis have trouble absorbing vitamin B12 because they don't make enough stomach acid or intrinsic factor. In addition, people who have had some types of stomach or intestinal surgery, or those who have conditions such as celiac disease or Crohn's disease, might not absorb enough vitamin B12.

If you have one of these conditions, your healthcare provider might recommend vitamin B12 injections or very high doses of vitamin B12 supplements.



Q. I know that dairy products like milk, yogurt, and cheese contain vitamin B12, but why isn't it listed on the Nutrition Facts labels?

A. Food labels are not required to list vitamin B12 unless it has been added to the food. Therefore, you can't rely on product labels to learn if a food naturally contains vitamin B12 and if so, how much.

As noted above, one cup of milk contains 1.3 mcg of vitamin B12. That's a little over 50% of the Daily Value (DV). Six ounces of plain yogurt has 1.0 mcg and 1 ½ ounces of cheddar cheese has 0.5 mcg.

Our vitamin B12 fact sheet lists [other foods and the amounts of vitamin B12 they contain](#).

Q. My vitamin B12 supplement contains 41,667% of the DV. Is that much safe?

A. Yes, it's safe. The product you have contains 1,000 mcg of vitamin B12. The DV is only 2.4 mcg, so 1,000 mcg is 41,667% of the DV or over 400 times the amount you need. Because vitamin B12 is considered safe at any dose, taking 1,000 mcg shouldn't cause any health problems, but we always recommend talking with your healthcare provider.

For more information about vitamin B12, see our recently updated [vitamin B12 fact sheet](#) and talk with your healthcare provider for specific advice.



¿Habla español?

Consulte [nuestra información basada en la ciencia](#) para ayudarle a tomar las mejores decisiones para su salud con respecto al uso de suplementos dietéticos.

Have more questions about dietary supplements? Ask the Office of Dietary Supplements (ODS).

ODS provides general information about dietary supplement ingredients in response to questions from consumers, health professionals, students, and others. While ODS cannot answer specific medical questions, make referrals,



or give personal guidance on the use of dietary supplements, ODS's registered dietitians on staff reply to each inquiry and give useful, scientific, and evidence-based information. Send your questions about dietary supplements to ODS: ods.od.nih.gov/contact.



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