

Eating well to prevent vitamin B12 deficiency

Te kainga pai e ārai ai i te korenga huaora B12

Vitamin B12 helps keep your body's nerve and blood cells healthy. It helps make DNA, the genetic material in your cells. It also helps prevent a type of anaemia that can make you feel tired and weak.

Causes of vitamin B12 deficiency

Normally, your stomach and intestines digest and absorb vitamin B12 from your food. Vitamin B12 deficiency happens when your stomach and intestines can't absorb the vitamin. This can happen if any of the following apply.

- You have pernicious anaemia. This is where your body destroys the cells in your stomach that help you absorb vitamin B12.
- You've had surgery to remove part of your stomach or the last part of your small bowel.
- You have a digestive disorder such as coeliac disease or Crohn's disease.
- You're on certain long-term medications that make it harder for your body to absorb vitamin B12. These medications include metformin, antacids and heartburn medicines such as omeprazole and pantoprazole.
- You're 65 or older.

Vitamin B12 deficiency can also happen if you don't eat enough foods with vitamin B12. Most people in New Zealand get plenty of vitamin B12 from food. But some people might not get enough.

These people include:

- vegans or strict vegetarians
- babies who are breastfed by mothers who are vegan or strict vegetarians
- people who eat little or no animal foods
- older people who have a poor appetite and eat very small meals.



Treating vitamin B12 deficiency

Vitamin B12 deficiency is diagnosed through a blood test. You can't treat vitamin B12 deficiency by diet alone. So, if you're low in vitamin B12, your general practice team will recommend vitamin B12 treatment. How you replace your stores of vitamin B12 depend on why your vitamin B12 level is low. If you're low in vitamin B12 because your body can't absorb it from food, you may need vitamin B12 injections. High-dose vitamin B12 tablets are an option for some people, although they aren't publicly funded. These tablets provide a much higher dose of vitamin B12 than the standard vitamin supplements you can buy from a pharmacy or health food store.

When your vitamin B12 level is back to normal, you may be able to stop the treatment. But some people need ongoing vitamin B12 treatment. Discuss this with your general practice team.



Foods that contain vitamin B12

- All animal foods such as meat, chicken, seafood and eggs. Also, cow's milk and milk products such as yoghurt, cheese and ice cream.
- Foods with vitamin B12 added, which are also called fortified foods. To see if vitamin B12 has been added, check the nutrition information panel and the ingredient list on the food packet. In New Zealand the following foods are fortified:
 - some yeast extracts such as Marmite
 - some soy milks and soy products such as vegetarian sausages
 - some almond, oat and rice milks
 - some powdered drinks such as Milo, Vitaplan and Complian.
- Mushrooms have vitamin B12, but only a very small amount. One serve of mushrooms (100 g) only has 5% of daily vitamin B12 needs.

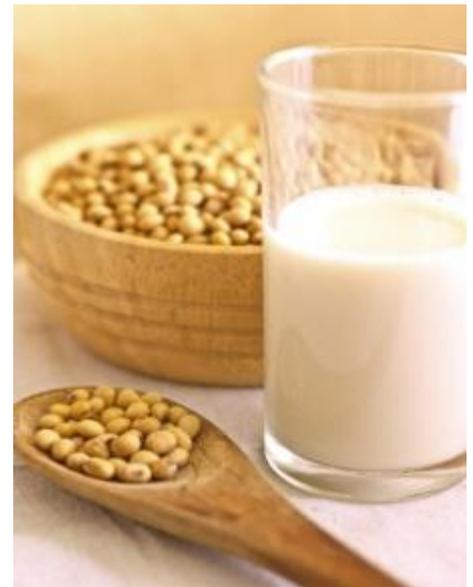
Other plant foods including grains, fruit and vegetables don't contain vitamin B12. Some people claim that seaweed, algae and fermented food such as tempeh contain vitamin B12. But these foods usually contain a form of vitamin B12 that our bodies can't absorb.

If you're 65 or older, your body will absorb the vitamin B12 added to fortified foods more easily than the vitamin B12 found in foods naturally.

How to get your daily vitamin B12 from food

Eat a variety of foods. Each day have:

- At least one serving of meat, chicken, fish or eggs. A serving is a piece of meat, chicken or fish the size and thickness of the palm of your hand, or two eggs.
- At least two to three servings of milk or milk products. A serving is 1 cup (250 ml) of milk, 1 pottle (150 g) of yoghurt or 2 slices (40 g) of cheese.
- Vegetables, fruit, breads and cereals don't contain vitamin B12. But you should still eat these foods every day as they provide a range of other important nutrients to keep you healthy.
- If you're vegetarian, cow's milk and milk products can provide enough vitamin B12. Each day have at least two to three servings of milk or milk products. If you eat eggs, include them regularly.
- If you're vegan, have vitamin B12 fortified soy, almond, oat or rice milk daily. One cup (250ml) provides almost 50% of your daily vitamin B12 needs. Include mushrooms and other plant-based fortified foods such as soy sausages and yeast extract. If you don't regularly eat vitamin B12 fortified foods, you may need a vitamin B12 dietary supplement.





Vitamin B12 dietary supplements

- Vitamin B12 is found in most multi-vitamins. There are supplements that only contain vitamin B12. Supplements with vitamin B12 and nutrients such as folic acid and other B vitamins are also available.
- Vitamin B12 supplements aren't made from animal products so they're suitable if you're on a vegan diet.

These supplements are only suitable for maintaining vitamin B12 levels in people who can't get enough vitamin B12 from food. They aren't suitable for treating vitamin B12 deficiency.

Some people claim that Spirulina is a good source of vitamin B12. But it's in a form that's inactive or your body can't absorb.

Your general practice team, dietitian or pharmacist can tell you what the most appropriate supplement is for you.

Written by HealthInfo clinical advisers. Last reviewed February 2023.