

Vitamin B12 on a Plant-Based Diet: FAQs



1. What is vitamin B12?

Vitamin B12 is an essential nutrient that everybody needs. It is important that people on plant-based diets are aware of how to obtain it as it is not naturally or reliably found in plant foods.

2. Why do we need vitamin B12?

Not getting enough vitamin B12 can have serious health consequences including anaemia, nerve damage (which can cause paralysis, blindness, etc.), mental health problems, gastrointestinal problems, memory loss, and many other health issues. There is more to vitamin B12 than simply avoiding deficiency, as having suboptimal B12 status could increase the risk of cardiovascular disease and dementia.

A deficiency of vitamin B12 in infants can result in developmental delay, growth failure, intellectual disability, seizures and even death. It appears that infants can become deficient even when their mother is not. For this reason, is it vital for pregnant and lactating women to ensure they have an adequate daily intake of vitamin B12 and it is recommended that infants are supplemented directly by age 4-6 months.

3. How do I know if I'm getting enough vitamin B12?

Blood tests are available to test for vitamin B12 deficiency, but the serum B12 test is not reliable and irreversible damage to your health could have occurred by the time a deficiency is detected. Prevention of deficiency is a far better option than waiting for a deficiency to occur.

4. How can I make sure I get an adequate amount of vitamin B12?

Some foods (check label) are fortified with vitamin B12, but the amounts that can legally be added are low and two to three serves per day are needed to meet requirements. It is much safer and cheaper to take a vitamin supplement. Spirulina, mushrooms, chlorella, seaweed, unwashed vegetables are NOT reliable forms of vitamin B12. It is recommended that ALL people on plant-based diets supplement with vitamin B12 and it is also often recommended that everyone over 50 years of age supplement too, as the ability to absorb B12 from food decreases with age. Some people on certain medications (e.g. Metformin) or with certain health problems (such as gut issues and autoimmune disorders) may also need to supplement (or have regular injections) to avoid deficiency.

5. How long after I start a plant-based diet should I start supplementing with vitamin B12?

Vitamin B12 is stored in the liver, but it is NOT correct to assume that stores from prior intake will necessarily last for years or even months, as stored levels and daily losses vary between individuals. It is safest to start supplementing immediately after adopting a plant-based diet.

6. How much vitamin B12 should I take? And which form?

Only a small amount of vitamin B12 can be absorbed at one time, and much higher doses than the recommended intake from food are required from supplements. For healthy adults under 50 years of age on plant-based diets the minimum recommended dose is 50mcg per day but many factors can contribute to increased requirements, so higher doses may be recommended. For people over 50, 500-2000 mcg per day may be required. Another option is to take 2000mcg at least once per week, but regular daily supplementation is more effective. It is recommended that infants being weaned onto a plant-based diet be supplemented with vitamin B12 when solids are introduced (5 mcg daily) and daily throughout childhood (25-50 mcg).

There are several forms of vitamin B12. The recommended form for most people to supplement with is cyanocobalamin, as it is the most widely studied, stable in supplement form and is readily converted to the two active forms that our bodies use. Supplementing with only one of the active forms (such as methylcobalamin or adenosylcobalamin alone) may not be adequate. It is recommended that people who smoke, have kidney disease or Leber's optic atrophy take the hydroxocobalamin form of B12.

7. Can I rely on my multivitamin supplement for vitamin B12?

It is generally best to take vitamin B12 as a single nutrient supplement rather than rely on any multivitamin or prenatal. This is because other nutrients in those supplements can convert vitamin B12 into inactive analogue forms which are not useful to us and could even contribute to a deficiency.

Risking B12 deficiency by not supplementing appropriately is extremely unwise. It could not only ruin your own health or that of your infant, but can also deter others from adopting a plant-based diet. Everyone on a plant-based diet should ensure they have a regular, reliable, adequate intake of vitamin B12.