

Vitamin B12 deficiency

Vitamin B12 deficiency anaemia occurs when a lack of either of these vitamins affects the body's ability to produce fully functioning red blood cells.

Red blood cells carry oxygen around the body. Most people with vitamin B12 deficiency anaemia have underdeveloped red blood cells that are larger than normal. The medical term for this is "megaloblastic anaemia".

Symptoms of B12 deficiency:

- Weakness, tiredness, or light-headedness.
- Nerve problems like numbness or tingling, muscle weakness, and problems walking.

A vitamin B12 deficiency can be the result of a variety of problems, such as:

Causes of vitamin B12 deficiency:

Pernicious anaemia

Pernicious anaemia is the most common cause of vitamin B12 deficiency in the UK.

Pernicious anaemia is an autoimmune condition that affects your stomach. An autoimmune condition means your immune system (the body's natural defence system that protects against illness and infection) attacks your body's healthy cells.

In your stomach, vitamin B12 is combined with a protein called intrinsic factor. This mix of vitamin B12 and intrinsic factor is then absorbed into the body in part of the gut called the distal ileum.

Pernicious anaemia causes your immune system to attack the cells in your stomach that produce the intrinsic factor, which means your body is unable to absorb vitamin B12.

The exact cause of pernicious anaemia is unknown, but the condition is more common in women around 60 years of age, people with a family history of the condition and those with another autoimmune condition, such as [Addison's disease](#) or [vitiligo](#).

Diet

Some people can develop a vitamin B12 deficiency as a result of not getting enough vitamin B12 from their diet.

A diet that includes meat, fish and dairy products usually provides enough vitamin B12, but people who don't regularly eat these foods – such as those following a [vegan diet](#) or who have a generally very poor diet – can become deficient.

Stores of vitamin B12 in the body can last around two to four years without being replenished, so it can take a long time for any problems to develop after a dietary change.

Conditions affecting the stomach

Some stomach conditions or stomach operations can prevent the absorption of enough vitamin B12.

For example, a [gastrectomy](#) (a surgical procedure where part of your stomach is removed) increases your risk of developing a vitamin B12 deficiency.

Conditions affecting the intestines

Some conditions that affect your intestines can also stop you from absorbing the necessary amount of vitamin B12.

For example, [Crohn's disease](#) (a long-term condition that causes inflammation of the lining of the digestive system) can sometimes mean your body doesn't get enough vitamin B12.

Medication

Some types of medicine can lead to a reduction in the amount of vitamin B12 in your body.

For example, proton pump inhibitors (PPIs) – a medication sometimes used to treat [indigestion](#) – can make a vitamin B12 deficiency worse. PPIs inhibit the production of stomach acid, which is needed to release vitamin B12 from the food you eat.

Your GP will be aware of medicines that can affect your vitamin B12 levels and will monitor you if necessary.

Functional vitamin B12 deficiency

Some people can experience problems related to a vitamin B12 deficiency, despite appearing to have normal levels of vitamin B12 in their blood.

This can occur due to a problem known as functional vitamin B12 deficiency – where there's a problem with the proteins that help transport vitamin B12 between cells. This results in neurological complications involving the spinal cord.

B12 injections

Evidence has come to light that in many cases B12 injections are given too early and too frequently and are inadvertently continued after the initial dose of six injections.

Only those people who cannot absorb across the stomach membrane will require to continue B12 injections.

People especially those not getting enough vitamin B12 from their diet should be able to absorb Vitamin B12, therefore from here on are requested to buy over the counter B12 supplements. Daily requirement are 50 to 100 micrograms. Usual brands come in strength of 50 micrograms (Cyanocobalamin 50 micrograms), please discuss with your pharmacist.

We are more than happy to repeat the blood tests in 6 months to check your levels. You need to request this test and reason for the request.