

Vitamin B12 deficiency

Carol Katté - IA Stoma Nurse

Vitamin B12 is one of the B group of vitamins, or cobalamins. It is required by the body in the production of DNA, thus affecting most bodily processes but particularly the production of red blood cells (which transport oxygen around the body) and maintaining a healthy nervous system (by contributing to the myelin sheath which surrounds and insulates nerves).

It is usually obtained from eating a diet containing animal products such as eggs, fish, meat, dairy products and poultry. People who eat a vegan diet (no animal products) or a vegetarian diet with insufficient amounts of these foods, have to ensure they obtain it either from artificially fortified foods or supplements.

It is absorbed by the last section of the small intestine, the terminal ileum, so people who have had surgery on this area (e.g. formation of ileostomy), have Crohns's disease (which can particularly affect this area of the bowel) or any disease which reduces the ability of the ileum to absorb food substances are at risk of having low vitamin B12 levels.

The body normally has enough reserves of B12 to last 2 - 4 years, so after this length of time following surgery B12 deficiency should be considered if you have any of the following

The next edition

IA Journal 253 (Autumn 2021) will be published on 1st September 2021. Final date for editorial contribution to be received is 9th July 2021.

symptoms (these are the most common symptoms, but this is not an exhaustive list):

- weakness, fatigue, lack of energy
- heart palpitations, shortness of breath, dizziness
- pale or 'yellowish' skin (jaundice)
- a sore tongue - smooth, red or swollen ('glossitis')
- mouth ulcers
- numbness, pins and needles, muscle pain
- changes to balance and co-ordination of movement
- blurred or disturbed vision
- problems with memory ('brain fog'), confusion
- mood changes, depression

Other risk factors for B12 deficiency include age (one's ability to absorb vitamins and minerals declines as you get older), some diabetes medication eg metformin, and some antacids taken for heartburn (known as 'PPIs' such as omeprazole). The autoimmune disease 'pernicious anaemia' prevents the body from making vitamin B12 and is routinely treated with three-monthly injections of vitamin B12, (cyanocobalamine).

The symptoms listed here may be present in conditions other than B12 deficiency, and the diagnosis can be difficult to confirm. There is no ideal test to define deficiency as blood tests to screen for it are notoriously unreliable. The most commonly performed tests can be affected by the length of time blood remains in the blood-tube before testing, and are not specific enough to separate 'inactive' from 'active' forms of the vitamin and thus may show a 'normal' level of B12 but the body can't make use of it. There are more specific tests (measurement of holotranscobalamin, methylmalonic acid and homocysteine etc) available in Endocrinology Centres, but even these are open to discussion and debate.

Therefore, it is important to look at the person's symptoms, any of the above, together with the possibility of a risk factor. If clinical features suggest a deficiency then replacement therapy is important to avoid neurological impairment even if 'blood tests' aren't definitive.

Intramuscular or sub-cutaneous (under the skin) injections of cyanocobalamine provide the quickest and most efficient way to increase B12

levels, and to assess whether symptoms improve, thus confirming the diagnosis.

Supplement tablets taken by mouth are not a reliable way to increase your B12 levels as absorption can be variable for the reasons listed above. It is also available as a spray to be taken under the tongue, which enables direct absorption into the bloodstream

bypassing the gastrointestinal tract altogether, and there is a nasal spray. It may be possible to maintain normal levels of B12 this way once the deficiency has been corrected with injections, but symptoms should be monitored carefully.

It may also be beneficial to eat foods known to contain vitamin B12, (dairy, eggs, meat, fish, liver, poultry, fortified cereals, yeast, etc) but be aware for the reasons already mentioned, absorption of these is not always optimum.

In summary, vitamin B12 deficiency should be considered if you have any of the above-mentioned symptoms and have a reason to suspect you might be deficient due to disease or surgery. Intramuscular injections of B12 are the optimum treatment.



*Made by an Ostomate
for Ostomates*

OSTOMY COVERS BY LINDA

Made to fit any stoma bag

- Most colours•
- Cotton or lace•

Phone 01205 723327

www.ostomycoversbylinda.co.uk