

Treatment of pernicious anaemia is lifelong and should never be stopped.¹

B12 tested and normal/high

Testing B12 during treatment gives no information as to the efficacy of treatment and should not be used to base treatment on.

- Measuring cobalamin levels is unhelpful as levels increase with treatment regardless of how effective it is, and retesting is not usually required.¹
- No further testing for cobalamin levels is required.²

IF antibodies tested and negative

The Intrinsic Factor Antibody Test is notoriously insensitive as it only comes back positive in around 50% of patients with PA. If the test comes back positive for the IF antibodies then the patient will have Pernicious Anaemia. However, if the patient tests negative for the antibodies he or she can still have Pernicious Anaemia. A negative test-result can not rule out PA.

- Patients found to be positive for IFAB should have lifelong therapy with cobalamin.¹
- Patients negative for IFAB, with no other causes of deficiency, may still have pernicious anaemia and should be treated as anti-IFAB-negative pernicious anaemia. Lifelong therapy should be continued in the presence of an objective clinical response.¹

Tablets vs injections

Injections are the preferred method of treatment.¹

Some patients may be able to absorb some B12 from high or very high doses of oral tablets but there has been no full-scale research on this and we are aware that even extremely high doses of oral B12 do not work for everyone.

Guidelines state that if a patient has been switched to high-dose oral tablets and he or she develops any neurological symptoms (pins and needles, numbness, brain fogs etc) then injections must be reinstated immediately to prevent any further nerve damage.⁸

- There is no proof in large prospective, double-blind studies that oral supplementation is as effective in reducing symptoms associated with vitamin B12 deficiency as parenteral treatment.³
- No trial reported on clinical signs and symptoms of vitamin B12 deficiency, health - related quality of life, or acceptability of the treatment scheme.⁴

Other alternative delivery methods for B12 such as sub-lingual sprays, sub-lingual tablets, ointments, skin patches have not been evaluated to determine how effective they are in treating Pernicious Anaemia and they may contain 'analogues' of B12 rather than 'true' B12 which means the patients serum B12 will show adequate amounts of the vitamin but will not be biologically active.

B12 is stored in the liver for a long time

There is the erroneous belief that patients with Pernicious Anaemia can 'store' B12 in the liver for up to two years and consequently stopping injections for a longer period of time could be possible. However, although the liver will have levels of B12 this is not biologically available to PA patients.

- Patients with true pernicious anaemia, lacking intrinsic factor, are unable to reabsorb the B12 lost in bile, which varies from 3 to 9 μg daily. To maintain tissue stores, between 100 and 300 μg of B12 should therefore be retained monthly.⁵
- About 10% of the injected dose (100 of 1000 μg) is retained. Treatment of pernicious anemia is lifelong. In patients in whom vitamin B12 supplementation is discontinued after clinical recovery, neurologic symptoms recur within as short a period as 6 months.⁶
- Vitamin B12 excreted in the bile is effectively reabsorbed through enterohepatic circulation. The amount of B12 excreted in bile varies from 1 to 10 $\mu\text{g}/\text{d}$. Biliary B12 is reabsorbed across the ileal enterocytes and requires IF, in the absence of which nearly all cobalamin is excreted.⁷
- Vitamin B12 is not stored in the liver for a year or more. Indeed, many Patients experience symptoms even before the end of their normal treatment intervals and are therefore being under-treated. Livers of patients treated for Pernicious Anaemia contained substantially less B12 than those of healthy individuals.⁹ Moreover, the amount of B12 in the liver reflects its metabolic requirements, not storage.¹⁰

References

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