Vitamin B12 deficiency
GP Update, 2026

A summary of current evidence to support GPs managing vitamin B12 deficiency.

Key takeaways for GPs

- **Neurological symptoms can occur before anaemia develops.** Don't rely on FBC changes alone.
- **Treat neurological symptoms early.** Delayed treatment may lead to irreversible neurological damage.
- **Borderline B12 doesn't exclude deficiency.** MMA and homocysteine can help confirm functional deficiency.
- **Metformin and PPIs are common contributors.** Review medications in any patient with unexplained deficiency.
- **Oral therapy is often sufficient.** High-dose oral or sublingual B12 is effective for most dietary deficiencies.

When to suspect B12 deficiency

Consider testing in patients with:

- Fatigue or weakness
- Cognitive decline or mood changes
- Peripheral neuropathy or paraesthesia
- Macrocytosis or macrocytic anaemia
- Vegan or vegetarian diets
- Long-term metformin or PPI use
- Previous bariatric or GI surgery
- Older age

Investigation essentials

First-line → Serum B12 and full blood count
If B12 is borderline → MMA and/or homocysteine

Elevated MMA or homocysteine supports B12 deficiency, even when serum B12 is only borderline low.

Consider the underlying cause

- Dietary deficiency
- Pernicious anaemia
- Medication-related malabsorption
- Coeliac disease or IBD
- Previous GI surgery

> Think B12 deficiency in patients with unexplained fatigue, neuropathy, cognitive change, or macrocytosis. Early diagnosis and treatment can prevent permanent neurological complications.

Treatment

Intramuscular B12
Consider when:

- Neurological symptoms are present
- Deficiency is severe
- Malabsorption is suspected

Oral or Sublingual B12
Appropriate when:

- Deficiency is dietary
- Symptoms are mild
- Absorption is intact

Follow-up

Assess:

- Symptom improvement
- FBC recovery
- B12 levels if clinically indicated

Avoid checking B12 immediately after supplementation. Consider repeat testing around 6–8 weeks after treatment initiation.

Practice tip

Don't treat the number; treat the patient.
A normal or borderline B12 level does not always exclude deficiency. If symptoms and risk factors fit, use MMA/homocysteine, investigate the cause, and don't delay treatment when neurological symptoms are present.

Where to next

For further learning, explore:

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