

VITAMIN B12

Also known as cobalamin

Basics

- The "energy vitamin," essential for blood formation, DNA synthesis, energy production, and myelin formation (insulating sheath around nerve cells)
- Essential nutrient, must come from food or supplementation

Deficiency

- Anemia - presents as fatigue, weakness, pallor, shortness of breath
- Peripheral neuropathy - tingling, numbness or burning sensations in the hands/feet. Mimics diabetic neuropathy
- Cognitive decline/slowing, difficulty concentrating, impaired memory, dementia, irritability
- Spinal cord degeneration, symmetric tingling or numbness in the legs, restless leg syndrome, gait problems
- Smooth, sore tongue, yellowed skin



Prevention strategies

- Incorporate B12-rich foods. Avoid a strict vegan diet, as B12 is found only in animal products - poultry, meat, eggs, and dairy products. Avoid excessive alcohol use.
- Drugs such as metformin (for type 2 diabetes), antacids, proton pump inhibitors (PPIs) such as omeprazole, and H2 blockers (e.g., cimetidine), which reduce stomach acid secretion, can interfere with B12 absorption since a low stomach pH is necessary to release B12 from food proteins.
- Pancreatic insufficiency, gastritis, stomach (gastric) bypass surgery, inflammatory bowel disease, or intestinal tapeworm from raw fish consumption can also cause B12 deficiency. Consider oral (or intramuscular) vitamin B12 supplements. Recommended daily intake: 2.4 mcg for men and women, 2.8 mcg for pregnant and lactating women. B12 supplements are best absorbed on an empty stomach unless using a sublingual form.