

Quick Guide for General Practice

Vitamin B12 & Folate Testing

Clinical Situation	Recommendation
Signs/symptoms of vitamin B12 or folate deficiency	<ul style="list-style-type: none"> Haematological e.g. macrocytosis +/- anaemia or pancytopenia Neurological/psychiatric e.g. peripheral neuropathy, cognitive change including dementia Other e.g. angular cheilosis, glossitis or persistent mouth ulcers
Indications for testing	<ul style="list-style-type: none"> Macrocytosis (MCV >100 fl) with or without anaemia, normocytic anaemia, neutropenia, thrombocytopenia or pancytopenia (see https://www.leicestershospitals.nhs.uk/aboutus/departments-services/pathology/laboratory-haematology/uhl-haematology-referral-guidelines/) Iron deficiency anaemia not responding to replacement therapy Neuropsychiatric symptoms of unknown cause Concerns about malabsorption e.g. coeliac disease, inflammatory bowel disease Routine following gastric bypass / sleeve gastrectomy at 6 and 12 months then annually (not B12 if having routine injectable B12 replacement)
Repeat testing	<ul style="list-style-type: none"> In patients with borderline low Vitamin B12 levels (150-220 ng/ml) consider repeat vitamin B12 testing after 1-2 months. Otherwise repeat testing should not be done for 6 months. <p>See NICE GUIDANCE: https://cks.nice.org.uk/anaemia-b12-and-folate-deficiency#!scenarioRecommendation:3</p> <p><u>What monitoring is required after treatment for vitamin B12 or folate deficiency has started?</u></p> <p>Repeat testing of vitamin B12 & folate is not required to monitor response. Response is made by clinical assessment of symptoms or testing of FBC and reticulocytes.</p> <ul style="list-style-type: none"> Perform a full blood count and reticulocyte count:

	<ul style="list-style-type: none"> ○ Within 7–10 days of starting treatment. <ul style="list-style-type: none"> ▪ A rise in the haemoglobin level and an increase in the reticulocyte count to above the normal range indicates that treatment is having a positive effect. ▪ If there is no improvement, check serum folate level (if this has not been done already). ○ After 8 weeks of treatment, and also measure iron and folate levels. <ul style="list-style-type: none"> ▪ The mean cell volume (MCV) should have normalised. ○ On completion of folic acid treatment to confirm a response. <ul style="list-style-type: none"> ● Measuring cobalamin levels is unhelpful as levels increase with treatment regardless of how effective it is, and retesting is not usually required. <ul style="list-style-type: none"> ○ However, cobalamin can be measured 1–2 months after starting treatment if there is no response. ● Neurological recovery may take some time — improvement begins within one week and complete resolution usually occurs between six weeks and three months ● Ongoing monitoring is unnecessary unless a lack of compliance with treatment is suspected, anaemia recurs, or neurological symptoms do not improve or progress <p>Patients receiving injectable vitamin B12 replacement therapy <u>do not need routine repeat Vit B12 testing</u></p>
<p>Interpreting results and Management</p>	<p>See NICE, CKS & BSH guidelines:</p> <ul style="list-style-type: none"> ● Diagnosis: https://cks.nice.org.uk/anaemia-b12-and-folate-deficiency#!diagnosisSub:3 ● Management: https://cks.nice.org.uk/anaemia-b12-and-folate-deficiency#!scenario ● British Journal of Haematology: https://onlinelibrary.wiley.com/doi/full/10.1111/bjh.12959
<p>References</p>	<p>O’Kane M, Pinkney J, Aasheim ET et al. BOMSS Guidelines on perioperative and postoperative biochemical monitoring and micronutrient replacement for patients undergoing bariatric surgery. September 2014.</p> <p>Pelloso M, Basso D, Padoan M et al. Computer-based-limited and personalised education management maximise appropriateness of vitamin D, vitamin B12 and folate retesting. J Clin Pathol 2016;69:777-783</p>

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