

DO NOT ROUTINELY TEST FOR VITAMIN D DEFICIENCY

ONLY TEST IF:

- Confirmed osteomalacia, osteoporosis, symptomatic hypocalcaemia
- High risk patient group with suggestive symptoms e.g. suspected osteomalacia or rickets, severe widespread muscle ache, proximal muscle weakness
- All patients prior to starting parenteral anti-resorptive treatment
- Isolated raised ALP (with normal liver function, including gGT)
- Malabsorption e.g. post-gastric bypass surgery

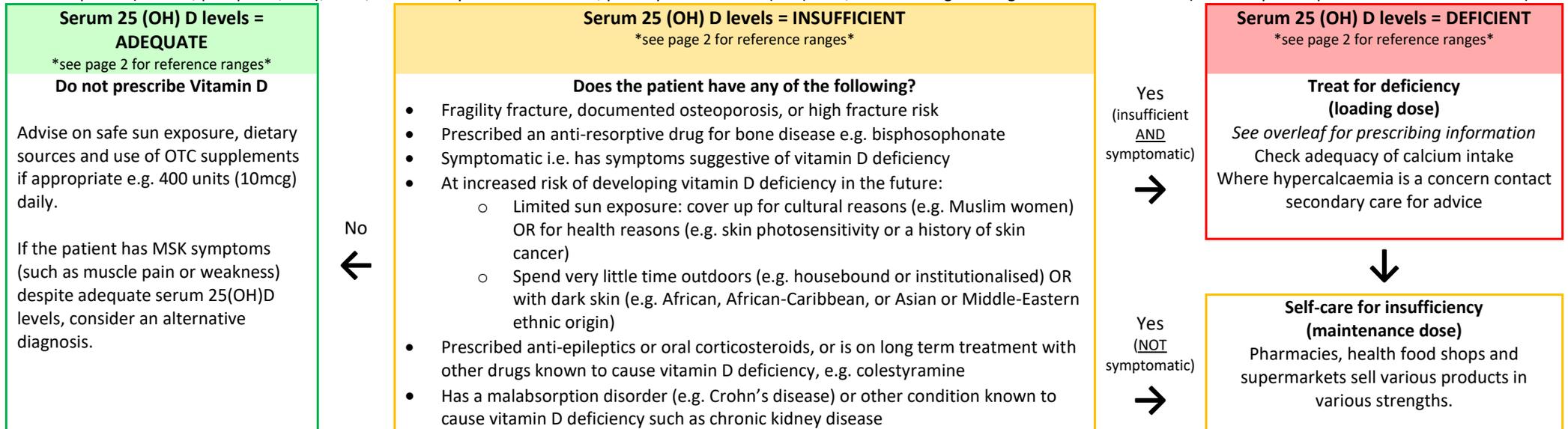
DO NOT TEST:

- Asymptomatic patients
- Fibromyalgia
- Non-specific aches and pains (with normal bone chemistry)

Test for vitamin D deficiency by measuring serum 25-hydroxyvitamin D (nmol/L)

To aid diagnosis and rule out other concerns consider arranging:

Bone profile (calcium, phosphate, ALP), renal, liver and thyroid function tests, parathyroid hormone (PTH) level, FBC including haemoglobin and ferritin levels (to identify other possible vitamin deficiencies)



Referrals: eGFR <30ml/min, failure to respond to treatment, doubt about diagnosis, atypical biochemistry, persistent focal bone pain; concurrent hypercalcaemia, investigation of unclear underlying cause.

Secondary care requests to test/ treat outside of this guidance – discuss rationale with requesting clinician.

Repeat vitamin D₃ testing is generally NOT required, but additional tests may be requested by specialists for patients receiving anti-resorptive drug.

N.B. treatment for hypoparathyroidism is life-long. Discontinuation for other patient groups should only be considered if significant changes made to lifestyle e.g. regular exposure to sunlight, consumption of oily fish or bariatric surgery reversal. If answer is NO continue.

County Durham and Tees Valley Primary Care Management of Vitamin D Deficiency	Status: APPROVED
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Vitamin D Reference Ranges and Treatment Information

Please note: reference ranges for deficiency and insufficiency vary for the different hospital trusts:

	County Durham & Darlington	North Tees & Hartlepool	South Tees
Deficient	<30nmol/L	≤30nmol/L	<25nmol/L
Insufficient	30 – 50nmol/L	31 – 50nmol/L	25 – 50nmol/L
Adequate	>50nmol/L	>50nmol/L	50 – 75nmol/L

	Dose and regimen	Considerations
Deficient	<p>Adults (including pregnancy): Prescribe 300,000 units colecalciferol (vitamin D₃) orally, divided over 6-7 weeks</p> <ul style="list-style-type: none"> Colecalciferol 20,000 units/ capsules <ul style="list-style-type: none"> 2 capsules weekly for 7 weeks 14 capsules total course <p>If patient is unable to tolerate capsules:</p> <ul style="list-style-type: none"> Colecalciferol 25,000 units/ml oral solution <ul style="list-style-type: none"> 2ml weekly for 6 weeks 12ml total course 	<p>Do not use loading dose if patient is hypercalcaemic or asymptomatic – start with regular maintenance dose (N.B. investigate cause of hypercalcaemia)</p> <p>If about to start treatment with potent antiresorptive agent e.g. zoledronate, denosumab, higher vitamin D₃ doses will be required and managed in secondary care.</p> <p>Check adjusted serum calcium after completing the loading regimen in case primary hypoparathyroidism has been unmasked.</p>
	<p>Children: (N.B. these doses are unlicensed)</p> <p>0-1 month: 2,000 units daily for 12 weeks 1-6 months: 3,000 units daily for 8 weeks 6 months – 12 years: 6,000 units daily for 8 weeks 12 – 18 years: 10,000 units daily for 8 weeks</p>	
Insufficient AND symptomatic (maintenance)	Treat as detailed above for deficiency.	
Insufficient NOT symptomatic (maintenance)	<p>SELF-CARE, RECOMMEND PATIENT TO PURCHASE LONG-TERM UNLESS RISK FACTORS IMPROVE</p> <p>Maintenance dose of 800units (20mcg) colecalciferol daily; for average Caucasian with intact fat soluble vitamin absorption; other groups may require higher dose e.g. up to 2000 units (50mcg) for some patients.</p>	Medicines containing supplementary calcium should ONLY be prescribed if dietary calcium intake insufficient or unwilling to increase intake; do not initiate calcium or if taking supplement DEPRESCRIBE if sufficient calcium in diet.
Adequate	Provide reassurance and lifestyle advice (see below).	

Lifestyle advice

In the UK, during spring and summer, the majority of the population will get enough vitamin D through sunlight on the skin and a healthy balanced diet, however during autumn and winter everyone will need to rely on dietary sources of vitamin D. Since it is difficult for people to meet the recommendation of 400units (10mcg) from consuming foods naturally containing or fortified with vitamin D, Public Health England advises that everyone should consider taking a daily supplement containing 400units (10mcg) of vitamin D during the autumn and winter months, from October to March. NHS Choices provides [information on vitamin D](#) for patients.

Groups at high risk of vitamin D deficiency should consider taking a daily supplement containing 400units (10mcg) of vitamin D throughout the year.

People should buy vitamin D supplements*. Vitamin D supplements are widely available from pharmacies, health food shops and supermarkets. Eligible patients can obtain vitamin D supplements through the [Healthy Start scheme](#).

**Exceptions: maintenance vitamin D₃ for patients with osteoporosis, chronic hypoparathyroidism or prescribed cinacalcet.*