Guidance for the Treatment of Vitamin D Deficiency and Insufficiency

ADULT PATHWAY

NHS Surrey Heartlands

Routine or opportunistic testing of people's Vitamin D Status is not recommended unless:

- The person has persistent symptoms suggestive of osteomalacia (e.g., bone discomfort or pain in lower back, pelvis and lower extremities, significant muscle aches and weakness, impaired physical function)
- The person will be starting a potent antiresorptive agent (e.g., zoledronic acid, denosumab or teriparatide)
- There is a clinical reason for monitoring (e.g., metabolic factors or on request from a specialist)

Test serum 25-hydroxyvitamin D (25(OH)D), Bone profile and PTH
Depending on clinical judgement consider testing Us+Es, FBC, LFTs to assess for underlying causes or alternative conditions

Serum25(OH)D < 25 nmol/L
Deficiency

Serum 25(OH)D 25-50nmol/L
Insufficiency

Serum 25(OH)D>50 nmol/L
Normal **range**

Does the person have:

- Fragility fracture, osteoporosis, or high fracture risk?
- Medication including antiresorptive medication for bone disease, with antiepileptic drugs or oral glucocorticoids?.
- Symptoms suggestive of osteomalacia,
- Increased risk of developing vitamin D deficiency in the future because of reduced exposure to sunlight (UV), religious/cultural dress code, dark skin, etc.?
- Raised parathyroid hormone (PTH)?
- Conditions associated with malabsorption?

No

No prescribed treatment required
Maintain vitamin D through safe sun exposure, diet and purchased supplements.

- Give lifestyle advice.
- Provide reassurance and give advice on maintaining adequate vitamin D levels via safe sun exposure and diet.
- Recommend self-care prophylaxis with a purchased supplement when appropriate, normal adult dosage 400unit (10 micrograms) vitamin D daily.
- Signpost pregnant and breastfeeding women to Healthy Start vitamins (eligibility criteria apply).

Yes

Does the person have a medical condition that predisposes to hypercalcaemia (e.g., sarcoidosis, active tuberculosis), eGFR < 30ml/min/1.73^2, renal stones, malabsorption, severe liver failure, is pregnant or has unexplained severe deficiency?

Yes → Seek specialist advice

No

Is the person symptomatic of vitamin D deficiency or about to start treatment with a potent antiresorptive agent (zoledronic acid, denosumab or teriparatide)?

Yes

Rapid correction dose:
Prescribe a loading regimen of approximately 300,000units colecalciferol orally in divided doses over 6-10 weeks
50,000unit capsule weekly for 6 weeks
Prescribe full 6-week course as acute
See guideline if individual cannot adhere to weekly dosing

Check serum calcium 3-4 weeks after completion of loading regime.
Vitamin D repletion may unmask primary hyperparathyroidism

Calcium in normal range
Start maintenance therapy

Hypercalcaemia
Stop Vitamin D, check PTH, and refer to appropriate specialist

No

Routine correction/maintenance
Is calcium intake sufficient (≥700mg per day)? Calcium calculator

Yes

Routine correction dose/maintenance therapy
Note: vitamin D maintenance may **only** be prescribed for people in line with national and local exceptions

- osteoporosis,
- a chronic condition resulting in deficiency or malabsorption
- post-surgery resulting in deficiency or malabsorption
- in exceptional circumstances.

Advise other people to purchase Vitamin D supplements providing colecalciferol 800-2,000units daily

Local preferred maintenance regimes
1000units colecalciferol tablet daily

Provide written information

No

Provide dietary advice to increase dietary calcium intake

If unwilling/unable to increase oral intake prescribe oral calcium and vitamin D supplement in line with local and national exceptions as for vitamin D

See local preferred products

Advise other people to purchase Combined calcium and Vitamin D supplement **p**roviding 1000-1200mg calcium and 800-1000units total per

Notes: Use licensed oral colecalciferol (vitamin D3) preparation 1st line. ***Vitamin D should be prescribed generically***
Prior to prescribing or recommending vitamin D purchase check with patients for existing sources of vitamin D e.g., multivitamins
Routine repeat vitamin D testing is not required, but concordance should be reinforced at routine reviews. People with malabsorptive conditions may require repeat testing. If patients remain symptomatic 3 months post loading regime retest vitamin D and review diagnosis. All patients receiving pharmacological doses of Vitamin D should have their plasma-calcium concentration checked at appropriate intervals.