

# Vitamin D: testing & treatment for adult inpatients not already receiving supplements\*

Is the patient showing symptoms of possible Vitamin D deficiency? (e.g. bone, joint or muscle pain, muscle weakness, hyperalgesia, waddling gait)

YES

NO

Check serum levels of **25-hydroxyvitamin D** + bone profile & eGFR (if <30 ml/min, seek specialist advice)

<b>DEFICIENT</b> <25 nmol/L	<b>INSUFFICIENT</b> 25-50 nmol/L	<b>SUFFICIENT</b> >50 nmol/L
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- Do not check vitamin D levels.
- Discuss the current need & benefits of vitamin D supplementation – if the patient wants to receive, prescribe **COLECALCIFEROL 400 units daily** for duration of inpatient admission
- Do not supply on discharge, advise patient to self-care with OTC supplements & safe sun exposure – see [BDA information sheet](#)

Prescribe loading dose of: **COLECALCIFEROL 20,000 units twice a week for 7 weeks\*\***. Supply remainder of course on discharge and inform GP

Treatment is advised for patients with:

- fractility fracture;
- documented osteoporosis or high fracture risk;
- treatment with antiresorptive medication for bone disease;
- symptoms suggestive of vitamin D deficiency;
- increased risk of developing vitamin D deficiency in the future because of reduced exposure to sunlight, religious/cultural dress code, dark skin, etc.
- raised PTH;
- prescribed antiepileptic drugs or oral glucocorticoids;
- conditions associated with malabsorption.

Prescribe **COLECALCIFEROL 800 units daily** & give advice re. lifestyle, diet and safe sun exposure

Prescribe **COLECALCIFEROL 400 units daily** & give advice re. lifestyle, diet and safe sun exposure

**General Advice**

Do not prescribe supplements on discharge, advise self-care - see [BDA information sheet](#):

**Lifestyle:** self-care to maintain adequate Vitamin D levels

**Diet:** good food sources of vitamin D include cod liver oil, fish, egg yolk, mushroom, fortified cereals, milk, margarine and yoghurts

**OTC supplements:** encourage patient to obtain a product containing at least 400 units per tablet/capsule; available from supermarkets, health shops and pharmacies.

**Safe Sun exposure:** 2-3 sunlight exposures per week between April-September

- Groups at increased risk of Vitamin D deficiency**
- Aged 65 years and over
  - People who have low or no exposure to the sun, for example those who cover their skin for cultural reasons, who are housebound or who are confined indoors for long periods such as long term rehab patients.
  - Darker skin, for example people of African, African-Caribbean or South Asian origin, because their bodies are not able to make as much vitamin D.
  - Pregnant and breastfeeding women

Daily Vitamin D supplements containing at least 400 units (10 micrograms) are recommended. Advise patient to buy OTC products if practical otherwise consider prescribing.  
**Note:** Most pregnancy vitamins already contain the required amount of Vitamin D.

**Formulation suitability:** Vitamin D supplements are available as tablets or capsules. Some capsules may not be suitable for vegan or vegetarian diets. Kosher and Halal certified brands are available. Check with your ward pharmacist.

**Adopted with kind permission from Lancashire & South Cumbria NHS Foundation Trust, with reference to:**  
Royal Osteoporosis Society. [Vitamin D and Bone Health. A practical Clinical Guideline for patient management.](#) [Accessed 30 April 2020]  
NICE. [Vitamin D deficiency in adults - treatment and prevention 2018.](#) [Accessed 30 April 2020].  
Pennine Care NHS Foundation Trust. Vitamin D Guidelines

Check serum **calcium** levels 4 weeks after loading to detect primary hyperparathyroidism.

Prescribe maintenance dose of **COLECALCIFEROL equivalent to 800-2,000 units daily** taken either daily or intermittently at higher equivalent dose (e.g. 10,000 units weekly). Do not supply on discharge (exc. to care homes), advise patient to self-care with OTC product

Re-check **25-hydroxyvitamin D** levels **6 months** after starting loading regimen

Has patient responded to treatment?

Check compliance and consider referral to specialist

\*in the form of vitamin D +/- calcium, or multivitamins containing vitamin D  
\*\*Or equivalent, but must be max. 300,000 units in divided doses over 6-10 weeks. Maintenance therapy can be started without loading dose when correction of Vitamin D deficiency is less urgent and when co-prescribing oral Vitamin D with oral antiresorptive medication (e.a. bisphosphonate)

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