

Summary Management Algorithm – Vitamin D in Adults

Refer to "Sheffield Guidance on Optimising Vitamin D for Adult Bone Health" for background and details. Also see Sheffield Formulary for preferred preparations. Date Approved – December 2019

Any symptoms or risk factors for

Lifestyle advice No

Recommend 400 units (10mcg) Vitamin D particularly during autumn/winter

Vitamin D deficiency?

Risk factors only

Lifestyle advice Yes

Daily supplement – Over the Counter (OTC) standard supplementation – 400 units (10mcg) Vitamin D. Consider whether calcium is indicated

Risk factors and symptoms:

Measure Vitamin D profile

Vitamin D 25-50 nmol/L (insufficient)

- Lifestyle advice
- **Enhanced dose supplement** - 800 to 1000 units / day (20 - 25mcg)
- **OTC** recommended consider prescription only if concern over compliance and patient has active bone disease
- Consider monthly supplementation 20,000 - 25,000 units/month if poor compliance with daily / OTC and clinical need
- Re-check of Vitamin D profile is not required

Advise patients on good dietary calcium (RNI >700mg/day) and consider calcium supplement if this cannot be achieved

Vitamin D <25 nmol/L (deficient)

- Consider cause of deficiency, offer lifestyle advice
- Prescribe a full course of high dose Vitamin D
 - Treatment should deliver a total dose of approximately 300,000 units over 6-12 weeks unless low BMI (<20kg/m²see below)

Examples of suggested dosage regimes are:

 50,000 units weekly for 6 weeks - (*InVita D₃® 50,000 unit soft capsules or InVita D3 50,000 units oral solution)

Low BMI: For those with a BMI < 20kg/m², a lower total treatment dose of Vitamin D is recommended. Treatment should deliver a total dose of approximately 150,000 units over 6 – 12 weeks e.g. 25,000 units weekly for 6 weeks (*InVita D₃® 25,000 unit soft capsules or *InVita D 25*,000 unit oral solution)

- **Consider calcium requirement**
 - Patients with poor dietary calcium intake (<700 mg/day) will need additional calcium (see calcium calculator) Calcium & Vitamin D supplement must also be prescribed alongside the high dose preparation if the patient has overt osteomalacia for at least 6m to aid re-mineralisation, even if dietary intake is good (Calcium 1000-1200 mg and Vitamin D 800 units daily)

Re-check Vitamin D profile at 4 months

- If Vitamin D >50 nmol/L continue enhanced dose 800- 1000 units (20 – 25mcg) Vitamin D indefinitely (+/- calcium depending on diet) unless there is a significant lifestyle change to improve Vitamin D status
 - OTC Vitamin D preferred for maintenance

NB: An annual bolus of high dose Vitamin D is not recommended for insufficient or deficient levels **Pregnancy and Lactation –** refer to <u>separate guideline</u>

^{*}As per Sheffield Formulary