Management of Vitamin D in Adults

The quick guide adopted from NOS (for use in conjunction with full guideline www.nos.org.uk/professionals/publications)

WHO TO TEST

1. Patients with diseases with outcomes that may be improved with vitamin D treatment e.g. confirmed osteomalacia, osteoporosis
2. Patients with symptoms that could be attributed to vitamin D deficiency, e.g. suspected osteomalacia, chronic widespread pain
3. Before starting patients on a potent antiresorptive agent or oral therapy if not going to be co-prescribed vitamin D containing supplements

INTERPRET

25OH vitamin D (nmol/L)

>50 (Sufficient)

Maintain vitamin D through safe sun exposure and current diet/supplement use

30-50 (Inadequate)

If one or more of following applies:

- Fragility fracture/osteoporosis/ high fracture risk
- Drug treatment for bone disease
- Symptoms suggestive of vitamin D deficiency
- Increased risk of developing vitamin D deficiency e.g.
  - Reduced UV exposure
  - Raised PTH
  - Treatment with anticonvulsants or glucocorticoids
  - Malabsorption

Treat

<30 (Deficient)

Treat

TREAT

Ensure calcium replete

Routine treatment

Lifestyle advice on maintaining adequate vitamin D levels through safe sunlight exposure and diet.

Consider prescription **only** if concerns over compliance and patient has active bone disease.

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1. Invita D3 capsules 800IU daily.

Or

2. Invita D3 - 25,000IU a month if patient has poor compliance with daily regime (depending on level and risk factors*)

Or

3. InVita D3 oral solution 25,000IU every

Rapid treatment

Initiate high dose Vitamin D supplement treatment; the principle is to deliver approximately 300,000IU over the course of 6 - 10 weeks.

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1. Invita D3 - 25,000IU, two capsules (50,000IU) weekly for 6 weeks

Or

2. InVita D3 oral solution 50,000IU once a week for 6 weeks(for patients unable to swallow capsules)

Routine treatment may be considered after completion of rapid treatment.

FOLLOW UP

CAUTION

- Recheck vitamin D profile & bone chemistry at 4 months after start of treatment or 4 weeks if rapid treatment (high dose). If calcium is raised check PTH. If PTH is abnormal refer to endocrinologist. *Vitamin D repletion may unmask primary hyperparathyroidism*

- Routine repeat vitamin D testing is not required

Life style advice

- Safe exposure to sunlight is the main source of vitamin D. Aim to spend 20-30 minutes on the face and forearms at midday on safe summer days three times weekly without sunscreen.
- Dietary source of vitamin D includes oily fish, cod liver oils, dairy products, liver and egg yolk

Primary care guidance

- Primary care should always prescribe vitamin D preparations as the brand name '**InVita D3**' to ensure the correct licensed preparation is dispensed in line with local formulary choice.
- Vitamin D preparations are available as a health food supplement and can be purchased from community pharmacy, health stores or supermarket. In cases where patients pay for their prescription it may be more cost-effective for the patient to purchase.
- Patients with CKD 4 and 5 may require additional monitoring (IPTH, Calcium) as determined by clinical need. Monitoring will be requested by, and the results will be interpreted by the initiating Consultant.

Risk factors*

Population groups at higher risk of having a low vitamin D status include:

- All pregnant and breastfeeding women, particularly teenagers and young women
- Infants and children under 5 years
- People over 65
- People who have low or no exposure to the sun. For example, those who cover their skin for cultural reasons, who are housebound or confined indoors for long periods
- People who have darker skin, for example, people of African, African–Caribbean and South Asian origin

In Secondary Care

In frail over 75's with fragility fractures:

- All those not already on vitamin D supplementation (assuming compliance) should have 100,000IU stat dose of vitamin D followed by 800 IU daily.

- If already taking a form of vitamin D, but poor compliance suspected, then treat as if not on vitamin D (i.e. as above).
  If calcium is normal or low then this could be combined with calcium (e.g.Calci-D).

References

1. Evaluation, Treatment, and Prevention of Vitamin D Deficiency: an Endocrine Society of Clinical Practice. Journal Clinical Endocrinology Metabolism.2011
2. Pearce SHS, Cheetham TD. Diagnosis and management of Vitamin D deficiency. British Medical Journal 2010;340:b566
3. Vitamin D and Bone Health: A practical clinical guideline for patient management https://www.nos.org.uk/document.doc?id=1352
4. Sheffield Guidance of optimising Vitamin D for adult Bone Health Guidance document
5. Sheffield Guidance algorithm
6. Vitamin D: increasing supplement use in at-risk groups http://www.nice.org.uk/guidance/ph56

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