Medicines Management

NHS Bassetlaw Clinical Commissioning Group

NHS Doncaster Clinical Commissioning Group

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. chronic widespread pain
3. Patient who will be commencing on a bisphosphonates oral or intravenous therapy if they are not going to be co-prescribed vitamin D containing supplements.

25OH vitamin D (nmol/L)

INTERPRET

>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

<30 (Deficient)

Treat

TREAT

Ensure calcium replete

Maintenance

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

Advise purchase of over the counter vitamin D supplement.

(10micrograms vitamin D = 400IU vitamin D)

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

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1. 800-2000IU daily.

Or

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

Or

3. Oral solution 25,000IU every 4 weeks (for patients unable to swallow capsules)

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. 50,000IU weekly for 6 weeks

Or

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

Maintenance dose should be considered after completion of rapid treatment.

Invita D3 is the formulary choice at the time of review available in capsule form at 800 and 25000IU and a 25000iu oral solution. Prescribe by brand.

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 if in the UK..
- Dietary source of vitamin D includes oily fish, cod liver oils, dairy products, liver and egg yolk

Primary care guidance

- If being prescribed on FP10 then vitamin D preparations should be prescribed using the brand name 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 supermarkets.
- 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 (as an over the counter purchase normally).

- 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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