Agreed by South Tyneside and Sunderland APC: 08/2021 (for review: 08/2024)

South Tyneside and Sunderland Area Prescribing Committee

# Management of Vitamin D Deficiency and Insufficiency in Adults

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Approved by South Tyneside and Sunderland Area Prescribing

Committee and relevant groups / committees within

stakeholder organisations

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This guideline is intended for use in primary care



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# **Treatment options**

Serum 25-OHD concentrations	Recommended treatment and duration for colecalciferol (vitamin D <sub>3</sub> )  the following is a guide, other treatment regimens may be used	Rx
Vitamin D deficiency < 25 nmol/L	Total loading dose approx. 300,000 IU (units) vitamin D3 orally in divided doses over 6weeks:  1st line: Invita D3 50,000 IU caps: ONE capsule ONCE A WEEK for 6 weeks (£9.90 treatment cost)  2nd line: Invita D3 drops SF (50,000 IU/ml): 1ml ONCE A WEEK for 6 weeks (£12.50 treatment cost) Suitable for vegetarians  OR: Stexerol D3 25,000 IU tabs: TWO tablets ONCE A WEEK for 6 weeks (£17 total treatment cost) Suitable for vegetarians  3rd line: Pro D3 Vegan capsules (20,000 IU): THREE capsules ONCE A WEEK for 6 weeks (£21 treatment cost) Suitable for vegans  Maintenance: 800 - 2,000 IU daily, occasionally up to 4,000 IU daily:  Supplements of 400 - 1000 units (10 -25 micrograms) vitamin D can be bought from pharmacies/ supermarkets	GP or hospital  OTC
Vitamin D	For the treatment of vitamin D insufficiency, maintenance doses (800 - 2,000 IU daily) should be started without the use of loading doses in the patient groups considered "at risk" of vitamin d deficiency (see overleaf for list) as well as those with:  • fragility fracture, documented osteoporosis or high fracture risk  • raised PTH	
insufficiency 25 – 50 nmol/L	Higher doses of up to 2000 IU a day, occasionally up to 4000 IU a day, may be used for certain groups of people, for example those with malabsorption disorders	ОТС
	<ul> <li>Consider loading dose (as above regimes) in those with:</li> <li>treatment with antiresorptive medication for bone disease (zoledronate or denosumab or teriparatide)</li> <li>symptoms suggestive of vitamin D deficiency</li> </ul>	GP or hospital
Vitamin D replete >50 nmol/L	Follow advice overleaf for non-pharmacological self-care (sunlight and diet)	

Note: supplementary calcium should only be prescribed if <u>dietary calcium is insufficient</u> or osteomalacia is suspected



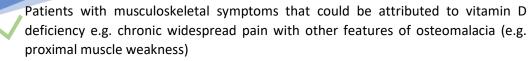
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#### Who to test (£11 per test!)

Patients who have conditions with outcomes that may be improved with vitamin D treatment e.g. confirmed osteomalacia, osteoporosis, and melanoma



Prior to starting on a potent antiresorptive agent (zoledronate or denosumab or teriparatide)

#### Do **not** test

Asymptomatic individuals at higher risk of vitamin D deficiency - listed overleaf: <u>Dept. of Health and Social Care Guidance</u> list of groups at higher risk of vitamin D deficiency

Universal population screening of asymptomatic healthy individuals

#### Monitoring and follow-up

Routine repeat vitamin D testing is generally unnecessary but may be appropriate in patients with symptomatic deficiency or malabsorption. Check serum adjusted calcium one month after treating with loading doses of vitamin D - repletion may unmask primary hyperparathyroidism. In patients with high serum calcium and normal/high parathyroid hormone, discuss with an endocrinologist before initiating treatment.

## At risk groups of vitamin D deficiency

In the following groups, do not test for vitamin D deficiency routinely (only if symptomatic). If asymptomatic, advise a daily supplement containing 10 micrograms (400 IU) of vitamin D, which can be bought from pharmacies, health food shops or supermarkets.

Dept. of Health and Social Care Guidance states that the following groups of people are at higher risk of vitamin D deficiency:

- All pregnant /breastfeeding women, especially teenagers and young women (check <u>SPC</u> for safety advice of preparations containing vitamin D during pregnancy and breastfeeding)
- Infants and young children under 5 years of age
- Older people aged 65 years or over
- People who have low or no exposure to the sun, e.g. those who cover their skin for cultural reasons, or who are housebound
- People who have darker skin (African, African-Caribbean and South Asian origin) as they are less able to make as much vitamin D

#### Furthermore,

- Some drug treatments can lower vitamin D levels such as: some anticonvulsants, corticosteroids, rifampicin and antiretrovirals
- Some malabsorption disorders such as Crohn's disease or chronic kidney disorder may increase risk of vitamin D deficiency
- Everyone is advised to take a supplement of vitamin D during winter months Statement from PHE and NICE Dec 2020



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## Non-pharmacological self-care methods

Unless contraindicated, regular but sensible exposure to sunlight (20-30 minutes) around midday on the face and forearms 2-3 times a week during the months of April – October. Longer exposure may be required in people with darker skin.

Dietary sources of vitamin D: oily fish/ fish oils advised 2-3 portions a week. Also egg yolk and some breakfast cereals contain vitamin D.

# References and useful reading

- The National Osteoporosis Society Vitamin D and Bone Health: A Practical Clinical Guideline for Patient Management (Dec 2018)
- Department of Health and Social Care Guidance: Vitamin D advice on supplements for at risk groups
- BNF Colecalciferol <a href="https://bnf.nice.org.uk/drug/colecalciferol.html">https://bnf.nice.org.uk/drug/colecalciferol.html</a>
- Drug costs correct as per <u>April 2021 drug tariff</u>
- NICE: Vitamin D deficiency in adults treatment and prevention (September 2018)
- Public Health England Statement from PHE and NICE on vitamin D supplementation during winter GOV.UK (Nov 2020)
- Nice Guidance NG 14 Melanoma: assessment and management <a href="https://www.nice.org.uk/guidance/ng14">https://www.nice.org.uk/guidance/ng14</a>
- Specialist Pharmacy Service Q&A: Which oral vitamin D products are suitable for people with vegetarian or vegan diets? https://www.sps.nhs.uk/articles/which-vitamin-d-preparations-are-suitable-for-a-vegetarian-or-vegan-diet/