

# BNSSG Adult Guidelines for Vitamin D Deficiency

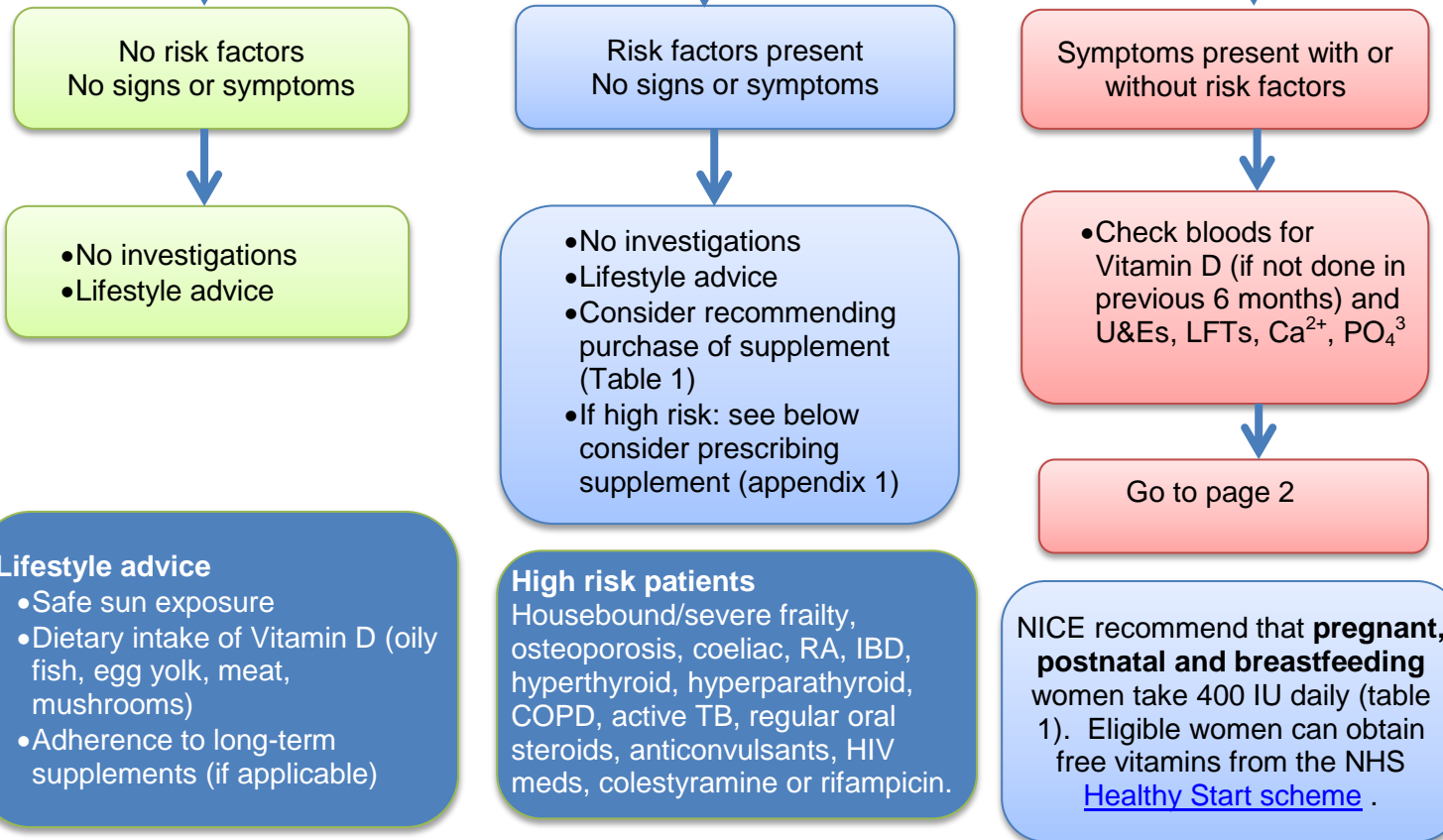
## Signs and Symptoms

- Widespread bone discomfort or pain in lower back/pelvis and lower extremities
- Impaired physical function
- Muscle aches and weakness

## Predisposing factors

- Dark skin (those of African, African-Caribbean, Asian or Middle-Eastern origin)
- Elderly (65 years and older)
- Lack of sun exposure (housebound, covering skin)
- Malabsorption syndrome or dietary factors (vegan, lactose free diet, coeliac disease, post bariatric surgery)
- Drugs - anticonvulsants, cholestyramine, rifampicin, glucocorticoids or anti-retrovirals
- Endocrine conditions such as hyperthyroidism, hyperparathyroidism, BMI > 30
- Fragility fracture, osteoporosis or high fracture risk
- Pregnant or breastfeeding

Assessing the patient  
**DO NOT ROUTINELY MONITOR SERUM VITAMIN D LEVELS**



**Table 1 – Standard Prevention Doses available to purchase**

Dose	Preparations
400 to 1000 units daily	A range of products are available from community pharmacies and health food stores.

### References

Public Health Guideline 56. Vitamin D: Supplement use in specific population groups 2017  
 NICE CKS. Vitamin D deficiency in adults – treatment and prevention 2017  
 Version 2 BNSSG Medicines Optimisation Team. Thanks to East Berkshire CCG from which this document was based  
 Royal College of Obstetricians and Gynaecologists. Vitamin D in pregnancy: Scientific Impact Paper No43 (2014)

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Vitamin D (25-hydroxyvitamin D) levels (nmol/litre)

<25  
(Deficiency)

25 – 50  
(Insufficiency)

>50  
(Adequate)

- Treat with high strength Vitamin D loading dose.
- Aim for cumulative dose of 300,000 units per treatment course (Table 2) (except in pregnancy\*).

- Recommend purchase of supplement (Table 1)
- If high risk consider prescribing supplement (appendix 1)
- Lifestyle advice

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- If high risk consider prescribing supplement

**Table 2– High strength doses available to prescribe**

Prescribe generically unless specific brand required due to contraindications, diet, cultural or religious beliefs

Total dose & cost	Product	Duration	Dietary considerations
300,000IU = £9.90	Colecalciferol 50,000 IU <b>capsules</b> (Invita D3 <sup>®</sup> )	50,000 IU (one cap) <b>weekly</b> for six weeks	Suitable in soy or peanut allergy Gelatin is Halal and Kosher certified. Other excipients not sourced from slaughtered animals
280,000IU =£10.50	Colecalciferol 40,000 IU <b>capsules</b> (Plenachol <sup>®</sup> )	40,000 IU (one cap) <b>weekly</b> for seven weeks	Halal and Kosher certified. Does not contain nuts or soya but cannot guarantee manufacture in nut and soya free environment
300,000IU = £12.50	Colecalciferol 50,000 IU/ 1ml <b>oral solution</b> SF (Invita D3 <sup>®</sup> )	50,000 IU (one oral amp) <b>weekly</b> for six weeks	Suitable for vegetarians and in soy or peanut allergy
280,000IU = £15.90	Colecalciferol 20,000 IU <b>capsules</b> (Fultium D <sub>3</sub> <sup>®**</sup> )	40,000 IU (two caps) <b>weekly</b> for seven weeks	Suitable in soy or peanut allergy. Halal and Kosher certified
300,000IU =£17.00	Colecalciferol 25,000 IU <b>tablets</b> (Stexerol-D3 <sup>®</sup> )	50,000 IU (two tabs) <b>weekly</b> for six weeks	Suitable for vegetarians. Halal and kosher certified. Does not contain nuts or soya but cannot guarantee manufacture in nut and soya free environment

**\*Pregnancy:** The high dose treatment regime described above is contraindicated. The RCOG suggest that treatment for 4-6 week with colecalciferol 20 000 units a week followed by standard supplementation is appropriate. Where appropriate discuss with specialist.

Colecalciferol is contraindicated in severe renal impairment as it is ineffective. Alfacalcidol may be prescribed in severe renal impairment for patients under specialist care

**\*\*Fultium D3** was relaunched in January 2015 as peanut and soy free but previous batches may still be in circulation. If patient is allergic to peanuts or soy pharmacist should check specific pack prior to dispensing. Colecalciferol is animal derived (from sheep’s wool in most instances) and therefore unlikely to be acceptable for most vegans. Ergocalciferol (in a gelatin free product) could be used at equivalent doses for vegans but there are no current MHRA licensed pharmaceutical strength products.

**Follow up monitoring**

There is **no need to re-test vitamin D levels** unless the patient remains symptomatic and has been compliant with treatment for 6 months or longer. Consider discussing with specialist if patient is resistant to treatment, particularly if high risk factors, renal stones or chronic liver disease.

Recommend purchased maintenance dose of 800IU a day (table 1). If high risk consider prescribing maintenance dose. (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.). Reinforce lifestyle advice to prevent recurrence. Patients at risk of fragility fracture with inadequate calcium intake should be prescribed a suitable calcium and vitamin D supplement.

## Appendix 1 – Standard prevention/maintenance dose preparations that may be prescribed in high risk patients

Standard prevention/maintenance dose preparations available to prescribe		
Prescribe generically unless specific brand required due to contraindications, diet, cultural or religious beliefs		
Product	Cost for quantity 28 (£)	Dietary considerations
Colecalciferol 1000 IU tablets (Stexerol D3 <sup>®</sup> )	2.95	Suitable for vegetarians. Halal and kosher certified. Does not contain nuts or soya but cannot guarantee manufacture in nut and soya free environment
Colecalciferol 1000 IU capsules	2.95	
Colecalciferol 800 IU capsules (Fultium D3 <sup>®*</sup> )	3.36	Suitable in soy or peanut allergy. Halal and Kosher certified
Colecalciferol 800 IU tablets	3.70	
Colecalciferol 400 IU capsules** (Invita D3 <sup>®</sup> )	1.85	Suitable in soy or peanut allergy Gelatin is Halal and Kosher certified. Other excipients not sourced from slaughtered animals

\*Fultium D3 was relaunched in January 2015 as peanut and soy free but previous batches may still be in circulation. If patient is allergic to peanuts or soy pharmacist should check specific pack prior to dispensing.

\*\* Please note that 400 IU tablets are not included in the drug tariff and an alternative preparation should be prescribed.