

Vitamin D deficiency/insufficiency – Summary Treatment Choices for Adults

- Refer to full guideline for further information on investigation and treatment of Vitamin D deficiency and insufficiency
- Refer to UKMi Medicines Q&A documents for further information for specific allergy and dietary requirements (see References page 3)
- Refer to East and South East England Specialist Pharmacy Services Vitamin D deficiency and insufficiency document, using appropriate available products (Aug 2014) for further information on available products [\[LINK\]](#)

Vitamin D level	Recommended treatment and choices	Dose:
<p><30nmol/L (deficiency)</p>	<p>High loading dose (LD) treatment course followed by long term maintenance + give lifestyle advice Prescribe loading dose product by BRAND and on ACUTE prescription only.</p> <p>Oral capsules <u>Unlicensed (nutritional/food supplement):</u></p> <ul style="list-style-type: none"> • 1st choice: Hux D3 20,000 IU capsule – approved by vegetarian society, halal and kosher certified, contain no peanut oil, no soya oil, no lactose and are gluten free. (Total cost of LD = £1.84) • Alternative: Osteocaps D3 20,000 IU capsule - suitable for vegetarian, halal and kosher compliant, contain no peanut oil, no soya oil, no lactose and are gluten free. (Total cost of LD = £2) <p><u>Licensed products:</u></p> <ul style="list-style-type: none"> • Fultium D3 20,000 IU capsule- not suitable for vegetarians, manufacturer states that gelatin is halal and kosher compliant. (Total cost of LD = £13.53) • Aviticol 20,000 IU capsule- not suitable for vegetarians. (Total cost of LD = £13.53) • Phenachol 20,000 IU capsule – vegetarian, halal and kosher certified, no gluten, peanut oil, gelatin or soya. (Total cost of LD = £19.25) <p>Liquid If swallowing difficulties <u>Licensed products:</u></p> <ul style="list-style-type: none"> • 1st choice: Invita 25,000IU/ml ampoules – contents of ampoule can be emptied onto a spoon and taken orally. Suitable for vegetarians, manufacturer states halal certification not sought. (Total cost of LD = £20.76) • Alternative: Thorens oral solution 25,000IU/ml (Total cost of LD = £21.70) Suitable for vegetarians, halal and kosher certified. Gluten-, lactose- and nut-free. Not suitable for pregnant and breastfeeding women. <p><u>Unlicensed (nutritional/food supplement):</u></p> <ul style="list-style-type: none"> • Hux D3 20,000 IU caps- caps can be squeezed open or chewed – approved by vegetarian society, halal and kosher certified, contains no peanut oil, no soya oil, no lactose and are gluten free. (Total cost of LD = £1.84) <p>If malabsorption/compliance issues with oral</p> <ul style="list-style-type: none"> • 1st choice Licensed: Ergocalciferol injection - suitable for vegetarians / vegans (Total cost of LD = £37.40) • Alternative Unlicensed: Cholecalciferol injection D3 - not suitable for vegetarians (Total cost of LD = £19.60- <u>although may vary as unlicensed generic</u>) <p>If vegan</p> <ul style="list-style-type: none"> • Unlicensed (nutritional/food supplement): Ergoral D2 50,000 IU capsules – designated suitable for vegan, vegetarian and halal (Total cost of LD = £11.97) 	<p>Oral capsules loading dose: 40,000 IU weekly for 7 weeks</p> <p>Liquid Loading dose: 50,000 IU weekly for 6 weeks</p> <p>Injection loading dose: 300,000 IU IM</p>

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<p>30-50 nmol/L (insufficiency)</p>	<p>• Licensed: Ergocalciferol injection - suitable for vegetarians /vegans (Total cost of LD = £37.40)</p> <p>Advise patient to buy vitamin D supplement OTC + give lifestyle advice</p> <ul style="list-style-type: none"> Vitamin D supplements are available to buy at most pharmacies, health food shops and supermarkets. A variety of preparations and strengths (including preparations containing 400IU, 800IU, 1000IU, 2000IU & 4000IU) are available to buy OTC Advise patient to raise allergies & dietary restrictions before purchasing to ensure the product content is safe & appropriate. Low dose vitamin D supplements should not routinely be prescribed. <p>Licensed prescription only products:</p> <ul style="list-style-type: none"> Adcal D3 chewable tablets - 2 daily (containing 400 IU colecalciferol and 1500mg calcium carbonate per tablet) consider for patients on treatment for osteoporosis or ≥65 years (frail, increased fall risk ± housebound). Not suitable for vegetarians / vegans, contains peanuts. Not halal / kosher (£3.65/56). Adcal D3 caplets - 2 caplets TWICE daily (containing 200 IU colecalciferol and 750mg calcium carbonate per tablet) consider for patients on treatment for osteoporosis or ≥65 years (frail, increased fall risk ± housebound). Suitable for vegetarians (not vegans), soya, nut and gelatin-free, halal and kosher certified. (£3.65/112) Desunin 800 IU tabs - suitable for vegetarian, contains no soya, no peanut oil, no gelatin, suitable for halal and kosher. (£3.60/30; £10.17/90) Fultium 800 IU caps - contains peanut oil, not suitable for vegetarians, manufacturer states that gelatin is halal and kosher compliant. (£3.60/30; £10.80/90) 	<p>Maintenance dose: 800 IU/day. Occasionally up to 4,000 IU/day may be required</p>
<p>>50nmol/L (sufficient)</p>	<p>Provide reassurance & give advice on diet, safe sun exposure and buying vitamin D supplement OTC</p> <ul style="list-style-type: none"> See below as per advice for general population including at risk groups Low dose vitamin D supplements should not routinely be prescribed. 	<p>See below</p>
<p>Unknown (advice for general population including pregnancy/breast feeding and at risk groups)</p>	<p>Provide reassurance & give advice on diet, safe sun exposure and buying vitamin D supplement OTC</p> <ul style="list-style-type: none"> Vitamin D supplements are available to buy at most pharmacies, health food shops and supermarkets. A variety of preparations and strengths (including preparations containing 400IU, 800IU, 1000IU, 2000IU & 4000IU) are available to buy OTC Healthy start vitamins are vitamin supplements that contain vitamin D (provides 400 IU/day). They are recommended and available free of charge from Hertfordshire Children’s Centres for pregnant women and women up to 1 year after delivery of baby. For further information www.healthystart.nhs.uk ; To find your nearest children’s centre go to: www.hertsdirect.org/childrenscentres Advise patient to raise allergies & dietary restrictions before purchasing to ensure the product content is safe & appropriate. Low dose vitamin D supplements should not routinely be prescribed. Adults (including pregnant and breastfeeding women) should consider taking a daily supplement containing 10 micrograms (400IU) of vitamin D particularly during the winter months (October until the end of March). From late March/early April to September most should be able to get enough vitamin D from sunlight, so they may choose not to take a vitamin D supplement during these months People who have low or no exposure to the sun e.g. those who are frail or housebound; are in an institution such as a care home; usually wear clothes that cover up most of their skin when outdoors; people who regularly use high-factor sunscreen should take a daily supplement containing 400 IU of vitamin D throughout the year. 	<p>Maintenance dose: 400 IU/day (throughout the year or winter months only depending on risk)</p>

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	<ul style="list-style-type: none"> ○ People from minority ethnic groups with dark skin, such as those of African, African-Caribbean or South Asian origin, might not get enough vitamin D from sunlight and should consider taking a daily supplement containing 400IU of vitamin D throughout the year. 	
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• **Disclaimer:** statements present in this guideline regarding halal or kosher certification are objective and fully reflective of information supplied by product manufacturers. The authors of this guideline cannot be held responsible for verifying this information according to individual's religious beliefs, which are known to vary considerably. Individuals can be supplied with manufacturers contact details to contact them directly to find out whether products comply with their individual belief systems.

Unlicensed products: As with all unlicensed medicines, all clinical and legal responsibility lies with the prescriber rather than the manufacturer (unless it can be proven that the product was faulty). Informed consent should always be obtained from patients before prescribing in these circumstances.

Lifestyle Advice

Dietary Sources Advice	Egg yolk, cod liver oil, oily fish (2-3 portions a week), fortified cereals, margarine and infant formula. See full guideline for further information. Dietary Advice for patients available at: www.nhs.uk/Conditions/vitamins-minerals/Pages/Vitamin-D.aspx
Safe Sun Exposure Advice	<ul style="list-style-type: none"> • The body creates most vitamin D from modest exposure to direct UVB sunlight. • Our bodies make vitamin D when our skin is exposed to summer sunlight (late March/early April to end of September) so during the winter months it can be particularly difficult to get enough. • During the winter (October to early March), we get vitamin D from our body's stores and from food sources as sunlight doesn't contain enough UVB radiation for skin to be able to make vitamin D. • The amount of time you need in the sun to make enough vitamin D is different for everyone. Most people will make enough vitamin D if they have a short daily period of sun exposure with their forearms, hands or lower legs uncovered and without sunscreen during the summer months (late March/early April to October), mostly between 11am and 3pm. Exposing yourself for longer is unlikely to provide any additional benefits. • People with dark skin, such as those of African, African-Caribbean or south Asian origin, will need to spend longer in the sun to produce the same amount of vitamin D as someone with lighter skin. • The longer you stay in the sun, especially for long periods without sun protection, the greater the risk of skin cancer. You should always take care to cover up or apply sunscreen (SPF at least 15) before any exposed skin becomes red or begins to burn. <p>Sunshine advice for patients available at: http://www.nhs.uk/Livewell/Summerhealth/Pages/vitamin-D-sunlight.aspx</p>

References

UKMi Medicines Q&As (check [LINK](#) for more up to date versions):

- Dose of vitamin D to treat deficiency [\[LINK\]](#) (06/05/2015)
- Vitamin D supplements for vegetarians and vegans [\[LINK\]](#) (05/03/2015)
- Calcium and vitamin D supplements for vegetarians and vegans [\[LINK\]](#) (19/09/2014)
- Dose of oral vitamin D during pregnancy [\[LINK\]](#) (12/09/2014)
- Vitamin D products for patients with peanut or soya allergy [\[LINK\]](#) (21/06/2013)
- Information on Kosher and Halal medicines [\[LINK\]](#) (10/01/2014)

Others

1. National Osteoporosis Society: Vitamin D and Bone Health: A Practical Clinical Guideline for Patient Management (April 2013) <https://www.nos.org.uk/document.doc?id=1352>
2. NCL Osteoporosis Service Guidelines on Management of Vitamin D Deficiency in Adults with Low Bone Mineral Density http://ncl-jfc.org.uk/uploads/3/2/0/9/3209562/ncl_vitamin_d_guidelines_final.pdf
3. Barking and Dagenham, Havering and Redbridge CCG vitamin D formulary guidance, Sept 14
4. North of England CSU Management of vitamin D deficiency in Adults, June 15

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5. Derbyshire joint prescribing committee (JAPC) guidance on the prevention, diagnosis and management of vitamin D deficiency in primary care, Oct 15
6. Coventry & Warwickshire area prescribing committee clinical guideline CG019, vitamin D prescribing guidelines
7. East and South East England Specialist Pharmacy Services Vitamin D deficiency and insufficiency document, using appropriate available products (Aug 2014)
8. PrescQIPP Vitamin D: Deficiency and insufficiency practical information for GPs
9. Wandsworth CCG Vitamin D deficiency in adults: primary care guideline
10. DOH, Scottish Govt, Welsh Govt, Health and social services and public safety – Vitamin D advice on supplements for at risk groups
11. BNF 2014-15
12. Drug Tariff September 2015
13. MIMS September 2015
14. Public Health England (PHE) updated advice on vitamin D, July 2016. <https://www.gov.uk/government/news/phe-publishes-new-advice-on-vitamin-d>