



## VITAMIN D DEFICIENCY

### Testing, treatment and screening

#### Should asymptomatic patients be screened for Vitamin D deficiency? <sup>1</sup>

There is currently insufficient evidence to assess the balance of benefits and harms of screening for vitamin D deficiency in asymptomatic adults.

#### Who should be tested? <sup>2</sup>

People at an increased risk of Vitamin D deficiency should be tested. The following are indications for initial testing of vitamin D status in adults:

- Signs, symptoms and/or planned treatment of osteoporosis or osteomalacia
- Increased alkaline phosphate with otherwise normal liver function tests
- Hyperparathyroidism, hypo- or hypercalcaemia or hypophosphatemia
- Malabsorption (e.g. cystic fibrosis, short bowel syndrome, coeliac disease, inflammatory bowel disease, bariatric surgery)
- Deeply pigmented skin, or chronic and severe lack of sun exposure for cultural, medical, occupational or residential reasons.
- Medications known to decrease 25-OH-D levels (e.g. anticonvulsants)
- Chronic renal failure and renal transplant recipients

#### What is the cut-off for Vitamin D deficiency? <sup>3,4</sup>

Severity of vitamin D deficiency	Serum 25-hydroxyvitamin D concentration
Mild	30 to 49 nanomol/L
Moderate	12.5 to 29 nanomol/L
Severe	Lower than 12.5 nanomol/L

#### How should Vitamin D deficiency be treated?<sup>4</sup>

**Mild:** Lifestyle changes to increase sun exposure should be considered first. If supplementation is preferred use cholecalciferol 25 to 50mcg daily.

**Moderate to severe:** Supplementation with cholecalciferol 75 to 125mcg, daily for 6 to 12 weeks followed by 25 to 50mcg daily.

#### How much sun exposure is required?<sup>5</sup>

Recommended exposure of 5-10 minutes of sunlight 4-6 times a week outside the hours of 10am – 2pm. Suggested exposure times based on location and season in Australia can be found [here](#).

#### How much do Vitamin D supplements cost and where can I get them?

Vitamin D supplements are available over the counter at most chemists. The price ranges from approximately \$10 to \$20 for 100 to 400 tablets depending on the brand.

## References

1. Royal College of General Practitioners. Guidelines for preventative activities in general practice. 9<sup>th</sup> edition. Page 150. Available from <https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/red-book>
2. Royal College of Pathologists Australia (RACP). Position Statement: Use and Interpretation of Vitamin D testing (May 2019).
3. NPS Medicine Wise: Vitamin D supplementation in musculoskeletal health: what's new? (July 2019). Available from <https://www.nps.org.au/news/vitamin-d-supplementation>
4. Therapeutic Guidelines Australia. Vitamin D deficiency (June 2019). Available from [https://tgldcdp-tg-org-au.ezproxy2.library.usyd.edu.au/viewTopic?topicfile=vitamin-d-deficiency&sectionId=bmg2-c17-s1#toc\\_d1e47](https://tgldcdp-tg-org-au.ezproxy2.library.usyd.edu.au/viewTopic?topicfile=vitamin-d-deficiency&sectionId=bmg2-c17-s1#toc_d1e47)
5. NPS Medicine Wise: Vitamin D deficiency in adults (August 2010) Available from <https://www.nps.org.au/australian-prescriber/articles/vitamin-d-deficiency-in-adults-1>