

Vitamin D

Why is it important?

Vitamin D is needed to keep our bones healthy by helping to control the amount of calcium and phosphate in our bodies and also appears to play a role in muscle function. Along with several other nutrients, Vitamin D supports the normal functioning of the immune system, but there is no evidence that vitamin D alone can protect or treat infection.

Some people say that Vitamin D is not really a vitamin because our bodies can make it when our skin is exposed to sunlight, which is why it is known as the sunshine vitamin. However, in the UK, there are concerns that we do not make enough to keep our bones and muscles healthy.

How can you get enough?

As our main source of Vitamin D comes from direct sunlight, even if you are eating a varied and balanced diet, including foods fortified with Vitamin D, you could still be at risk of a Vitamin D deficiency. Public health authorities in the UK recommend that everyone takes a supplement containing Vitamin D from October to March as a minimum to maintain sufficient Vitamin D levels for bone and muscle health. ^{1,2,3,4} Taking a Vitamin D supplement throughout the year is a more important consideration for the following groups:

- Under-fives (apart from babies having 500 ml or more of formula per day)
- People who do not go outside regularly
- People who cover most of their skin when outside
- People with dark skin – for example someone who has an African, African-Caribbean or South Asian background may not make enough Vitamin D from sunlight.

It may also be prudent for other groups to consider year-round supplementation because they are at greater risk of low Vitamin D:

- Pregnancy and breastfeeding
- People over 65 years old – their skin is not as good at making Vitamin D.

UK Vitamin D Recommendations⁵:

Group	Vitamin D recommendation
Infants less than 1 year old	Safe intake of 8.5–10mcg (micrograms) per day
Children 1–3 years old	Safe intake of 10mcg per day
People aged 4+ years	Reference nutrient intake of 10mcg per day

*apart from infants consuming 500 ml or more of infant formula daily, which has added vitamin D.

What does this mean?

- A **Reference Nutrient Intake (RNI)** represents the amount of a nutrient that is likely to meet the needs of 97.5% of the population.
- A **Safe Intake** is a level or range of intakes considered to pose no risk of deficiency and below a level where there is a risk of undesirable effects.

If you choose to boost your level of Vitamin D by exposing your skin to sunlight during spring and summer, make sure that it does not burn. Aim to spend short periods exposing your skin to sunlight daily, particularly between 11am and 3pm.

What type is suitable for vegans?

When choosing a supplement, be aware that some types of Vitamin D are not suitable for vegans. Vitamin D2 is not animal-derived. Vegan Vitamin D3 can be derived from lichen but many supplements contain Vitamin D3 derived from an animal source found in sheep's wool called lanolin.

Vitamin D absorption

Vitamin D is fat-soluble. This means that consuming your supplement with a meal or snack containing fat will help your body to absorb this nutrient. Healthy sources of fat include peanuts, nuts, seeds, avocado and small amounts of vegetable (rapeseed) oil, sunflower seed oil, olive oil and spreads.

Vitamin D tips to take away

- If you choose to boost your level of Vitamin D by exposing your skin to sunlight from April to September, aim to spend short periods exposing your skin to sunlight daily, particularly between 11am and 3pm.
- In the UK, Vitamin D supplementation is recommended from October to March as a minimum.

Further information

You might be interested to check out the following webpages at www.vegansociety.com:

- [Bone health](#)
- [Nutrition overview](#)
- [Life stages](#) including pregnancy, breastfeeding and different age groups.

References

1. NHS. *Vitamin D*; 2020 <https://www.nhs.uk/conditions/vitamins-and-minerals/vitamin-d/> (accessed 21 May 2024)
2. Public Health Agency. *Vitamin D and you*; 2020 <https://www.publichealth.hscni.net/publications/vitamin-d-and-you-0> (accessed 21 May 2024)
3. Public Health Scotland. *Vitamin D and you*; 2020 <https://www.publichealthscotland.scot/publications/vitamin-d-and-you/> (accessed 21 May 2024)
4. Welsh Government. *Vitamin D intake: revised guidelines* (WHC/2016/043); 2016 <https://www.gov.wales/vitamin-d-intake-revised-guidelines-whc2016043> (accessed 21 May 2024)
5. Scientific Advisory Committee on Nutrition. *Vitamin D and Health*; 2016 <https://www.gov.uk/government/publications/sacn-vitamin-d-and-health-report> (accessed 21 May 2024)
6. European Food Safety Authority and Scientific Advisory Committee on Nutrition. *Joint explanatory note by the European Food Safety Authority and the UK Scientific Advisory Committee on Nutrition regarding dietary reference values for vitamin D*; 2016 https://www.efsa.europa.eu/sites/default/files/documents/news/explanatory_note_EFSA_SACN_vitaminD.pdf (accessed 21 May 2024)

These are general guidelines about nutrition. If you have concerns about your diet, please talk to your doctor about seeing a dietitian.