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FACTSHEET
The Importance of Vitamin D

What is vitamin D?

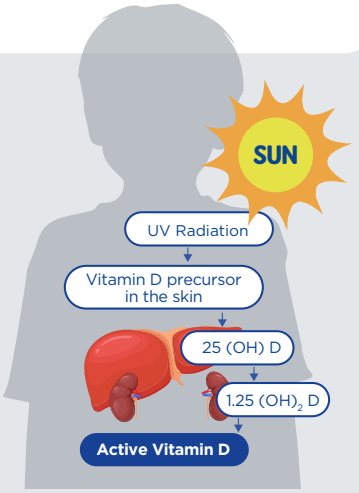
Vitamin D is an essential nutrient, supporting bone health and vital functions such as the immune system from conception through childhood and into adulthood[1].

Vitamin D is important for[1]:

- Healthy immune system
- Cell growth and differentiation
- Cardiovascular function
- Skeletal health
- Reducing the risk of infectious and allergic disease
- Maintaining appropriate balance of calcium and phosphate

Sources of vitamin D

Direct sunlight exposure is the best source of natural vitamin D, it is synthesized in the skin upon exposure to sunlight containing sufficient Ultraviolet B (UVB) radiation, levels of which are higher in the summer months, around midday. This is the main source for most people. It can also be obtained from foods or dietary supplements[2].



Dietary sources of vitamin D:

- Oily fish
- Organ meat such as liver
- Egg yolks
- Fortified foods like breakfast cereals and fat spreads
- For formula-fed infants: Infant formula milk[3]

What are the health risks of vitamin D deficiency?

Vitamin D deficiency is a public health concern in the UK[1]. The Department of Health and Social Care recommends that from birth to 1 year of age, breastfed babies should receive vitamin D drop supplements to make sure they get enough[4]

- Severe vitamin D deficiency can lead to fits or rickets[5].
- Subclinical vitamin D deficiency can lead to impacted bone health in which the bone can be thin and brittle. These can lead to increased risk of osteoporosis in later life[5].
- Vitamin D deficiency can also result in increased vulnerability to illness e.g., asthma, type 1 diabetes, respiratory infection, influenza[5,6].

Guidance on vitamin D supplementation in Ireland[1,4,7]

The Department of Health and Social Care recommends that babies who are being breastfed are given a daily vitamin D supplement from birth, whether the mother is taking a supplement containing vitamin D herself or not. Breastfed babies from birth to 1 year should be given a daily supplement containing 5 micrograms (µg) of vitamin D.

	Age	What is recommended?	Additional notes
Breastfed babies	Birth to 1 year of age	Daily supplement containing 5µg	
Formula fed or combination fed	Birth to 1 year of age	Daily supplement containing 5µg ONLY IF INTAKE OF FORMULA IS LESS THAN 300ml PER DAY	
Children aged 1-4 years		Daily supplement containing 5µg of vitamin D during the winter months	
Adults and children over 4 years		Everyone should consider taking a daily supplement containing 10µg of vitamin D during the autumn and winter.	During late March/early April-end September, most people can make all the vitamin D they need from sunlight and a balanced diet.

Groups at risk of low vitamin D[3]:

- Babies and young children, and children and adolescents who spend little time playing outside
- Women who are pregnant or breastfeeding
- People over 65 years old because their skin is not as good at making vitamin D
- People with darker skin tones
- Those who always cover most of their skin when outside

References: 1. Vitamin D and Health. SACN, 2016. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/537616/SACN_Vitamin_D_ and_Health_report.pdf Accessed September 2021. **2.** NHS. The new guidelines on vitamin D – what you need to know. Available at: NHS: the New Guidelines on Vitamin D (accessed September 2021). **3.** Vitamin D: food fact sheet Available at www.bda.uk.com/resource/vitamin-d.html (Accessed September 2021). **4.** Vitamins for children. NHS, 2021. Available at https://www.nhs.uk/conditions/baby/weaning-and-feeding/vitamins-for-children/ Accessed September 2021. **5.** Chang SW, Lee HC. Pediatr Neonatal 2019;60:237-244. **6.** Braegger C et al, J Pediatr Gastroenteral Nutr, 2013;56:692-701. **7.** NHS. Vitamin D. Available at https://www.nhs.uk/conditions/vitamins-and-minerals/vitamin-d/ Accessed Sepember 2021.

IMPORTANT NOTICE: Breast milk is best for babies and breastfeeding should continue for as long as possible. Professional advice of a healthcare professional must be followed on the need for and proper method of use of infant formulae and on all matters of infant feeding. For more information read the label.

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