

## Vitamin D

### What is Vitamin D?

Vitamin D, although widely known as a vitamin, is also a hormone (once it is converted by the kidney and liver). Therefore, vitamin D has many roles within the body. The most understood role is its ability to help the body absorb calcium and phosphorus. Vitamin D also assists with:

- bone development and strength
- cell growth
- maintaining a healthy immune system
- hormone function
- nervous system regulation

Vitamin D is found in food sources and supplements; however it is very hard to get adequate amounts of vitamin D from these sources alone. The body's main source of vitamin D comes from the skin being exposed to UV radiation in sunlight. When sunlight hits our skin, it reacts with a cholesterol-like substance and produces vitamin D. The amount of sun exposure needed depends on your skin colour, where you live and the time of year.

### Vitamin D deficiency

Vitamin D deficiency is a common condition in Australia, affecting a large number of individuals, even though Australia has one of the highest UV radiation levels in the world and is well known for its abundance of sunshine. Those individuals who are at risk of vitamin D deficiency due to little exposure to UV radiation include:

- elderly people (vitamin D production decreases with age)
- people with little or no sun exposure, e.g. people who are hospitalised or live in residential care
- people who work irregular hours or shift work
- babies of mothers who have low levels of vitamin D
- people with dark skin
- people who cover their skin for cultural or religious reasons
- postmenopausal women

It is suggested that up to eight out of 10 people in these high risk groups have some form of vitamin D deficiency. If you fit into one of these groups, consult your health practitioner to discuss whether you need to have your vitamin D levels tested.

If vitamin D deficiency is left untreated it can contribute to the development of:

- rickets (in children)
- osteomalacia (soft bones)
- osteoporosis

There is also evidence that suggests that vitamin D deficiency may be related to an increased risk for the development of:

- osteoarthritis
- tooth decay
- hearing loss
- sarcopenia
- multiple sclerosis
- epilepsy
- some cancers
- diabetes
- heart disease
- depression
- cognitive dysfunction

## Testing Vitamin D levels

Vitamin D levels are checked with a blood test. 'Vitamin D deficiency' is diagnosed when extremely low levels of vitamin D are detected in the blood. A range of values for 'normal' vitamin D levels exists, and the current recommendations are to maintain vitamin D levels within this range. Your general practitioner can advise you of your need to have a blood test, how best to increase your vitamin D levels, and what levels are suitable for you.

## How to ensure sufficient Vitamin D levels

To ensure you are getting enough vitamin D, try to expose yourself to a sensible amount of sunlight, eat vitamin D enriched food and if advised by a health practitioner, take vitamin D supplements.

### Sunlight:

You need to balance the risk of skin cancer from too much sun exposure with some exposure to help maintain vitamin D levels. Follow these simple tips to ensure you safely obtain adequate levels of vitamin D from the sun:

- Exposing your face, arms, hands or legs to the sun for 10 minutes in summer, 15-20 minutes in spring and autumn, and 30 minutes in winter outside peak UV times (10am-2pm or 11am-3pm daylight saving times) should give you enough vitamin D. It is important to note that people with darker skin may need longer sun exposure periods. During these short times, there is usually no need to worry about sun protection such as sunscreen, as sunscreen blocks the UV from touching the skin and therefore no vitamin D is created.
- Always protect yourself from the sun when the UV index is above 3, which means strong enough to damage skin. For example, cover your body with clothes and apply sunscreen to exposed areas. To check daily updates on the UV index visit: [www.sunsmart.com.au](http://www.sunsmart.com.au).
- Do not use solariums as a substitute for sunlight. The UV radiation in solariums does not help to produce vitamin D and will **not** help with vitamin D deficiency, rather it increases your risk of skin cancer due to exposing your skin to dangerous levels of UV radiation.

### Foods:

Dietary sources of vitamin D include egg yolk, 'oily' fish such as salmon & sardines, cod liver oil and vitamin D fortified foods such as bread, cereals, margarines and milk. It is important to remember that food sources will provide only a small amount of vitamin D, so sensible sunlight exposure remains the easiest and most effective method to maintain optimal vitamin D levels.

### Supplements:

There are a number of vitamin D supplements available. If you think you are low or deficient in vitamin D, consult your general practitioner, trained naturopath or dietitian as to what supplement and what amount is best for you.

### Further information:

[www.jeanhailes.org.au](http://www.jeanhailes.org.au)

[www.cancer.org.au](http://www.cancer.org.au) – Cancer Council

[www.sunsmart.com.au](http://www.sunsmart.com.au) – SunSmart

[www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au) – Better Health Channel

[www.osteoporosis.org.au](http://www.osteoporosis.org.au) – Osteoporosis Australia

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This fact sheet is designed to be informative and educational. It is not intended to provide specific medical advice or replace advice from your health practitioner.

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