

# Shining the light on health

production of vitamin D  
Vitamin D is present in  
with a different level  
The most active form is  
Vitamin D is produced  
and has to be converted into  
the active form with the aid of the liver  
Vitamin D is in its  
active form and is processed and used

Physiological function of  
Vitamin D: to maintain normal blood  
calcium and phosphorous by  
regulating their levels in the body. It also  
promotes the absorption of vitamins, minerals  
and promotes bone health. Without it, bones can  
become weak and skeletal diseases can

Best way to get vitamin D  
Vitamin D is also found in  
certain countries, such as  
the United States and even  
some countries are fortified with  
vitamin D. The average person gets  
about 100 IU in their diet. In  
countries where a supplement is not  
available, Vitamin D can be  
obtained from sources such as cod liver oil,  
mushrooms, certain  
egg yolks contains

## How much sun should we be getting?

Season, geographic latitude, time of day, cloud cover, smog, air pollution and sunscreen can affect your exposure to the sun and prevent vitamin D synthesis. Ten to 15 minutes of un-hindered exposure to the sun at least twice a week without sunblock is generally sufficient to produce an adequate amount of Vitamin D. However, be careful not to over-expose your skin to the sun.

A vitamin deficiency can occur when the intake is below recommended levels, when exposure to sunlight is limited, when the kidney can't convert the vitamin D to its active hormone, and in cases in which a person's body is resistant to the actions of vitamin D.

Vitamin D deficiency commonly results in rickets disease, especially in children. This results in very brittle bones and skeletal deformities. In adults who have a vitamin D deficiency, osteoporosis is common and results in a susceptibility to fractures and muscular weakness and bone pain.

## Who is susceptible to vitamin D deficiency?

☐ Infants who are solely breastfed:

breast milk alone does not provide a sufficient amount of the vitamin. Formula-fed infants are at a significant advantage, because the 1980 Infant Formula Act requires infant formulas to be fortified with Vitamin D.

☐ The elderly: vitamin D deficiency is common in older people as a result of poor nutrition, limited exposure to the sun, and the fact that older skin has more difficulties producing vitamin D.

☐ Home-bound people and people with limited sun exposure: Zail says it is remarkable how many people are under-exposed to sunlight.

☐ People with greater skin melanin content: Dark-skinned people are also susceptible to vitamin D deficiencies. Melanin is what gives the skin colour. Darker skin has high melanin content and this reduces the skin's ability to produce vitamin D from sunlight. It is recommended that darker-skinned people make sure that they consume food containing vitamin D to ensure they don't develop a deficiency.

Vitamin D is important for general wellbeing, and, unlike other vitamins, is free.