

Shining the light on health

Production of vitamin D
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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.