

## Vitamin D

Vitamin D is known as the 'sunshine vitamin' because our bodies can make vitamin D from the sun. When sunlight hits our skin, the ultra-violet B (UVB) sun rays are used to make vitamin D. Adults can get vitamin D from exposure to the sun; however, it is not possible for babies to safely get the vitamin D they need from the sun. Therefore, health authorities now advise that babies and infants are given a vitamin D supplement. I will discuss vitamin D guidelines for children later in this article.

### Why do I need vitamin D?

Vitamin D helps absorb calcium and phosphorus from the intestines so it can be absorbed by the bones, keeping the skeleton strong. Children who get too little vitamin D can develop rickets, a bone deforming condition that can lead to bowlegs and knock-knees. In adults, a D shortage can contribute to osteoporosis, the "brittle bones" disease, and bring on pain in the bones and joints. Vitamin D deficiency also causes a mild muscle weakness, thus increasing the risk of falls and hence fractures in older people. Therefore, vitamin D supplementation is often important in this age group.

### What are good sources of Vitamin D?

Your body can actually manufacture D on its own (with a little help from the sun). With 10 to 15 minutes of direct sunshine on your hands and face three times a week, most people can make all they need. The National Osteoporosis Society recommends about 20 minutes of sun exposure to the face and arms, every day during the summer, to provide you with enough vitamin D for the year. But because exposure to sunlight can vary widely depending on the time of year, location, and other factors, experts state that supplements may be necessary if you do not get enough vitamin D through diet or sunlight. Many types of milk, along with some breads and cereals, are fortified with vitamin D. You can also find D naturally in fatty fish such as salmon, margarine and egg yolks.

### Do I need a supplement?

Supplements may be required in people over 50, those who do not get much sun, and do not eat much milk and cereal. Many people may not get enough direct sun in the winter to meet their vitamin D needs. This is particularly a problem for older people, whose bodies do not make the vitamin as efficiently and who may not be able to stomach dairy products. In addition, many older people in residential care settings such as nursing home rarely see sun so vitamin D supplements may be needed. Most multivitamins contain 270 µg (400 IU) of D. People over 70 can pick up another 135 µg (200 IU) by adding a calcium-plus-D supplement. Whelehans supply *Adult D*<sup>®</sup> vitamin D supplement which contains 1000IU of vitamin D<sub>3</sub>. It costs €11.95 per 100 pack. This is a very cost effective vitamin D supplement as it works out at only €3.58 per month when you take one daily. D<sub>3</sub> is the easiest type of vitamin D to absorb. It is not recommended to take above 4000IU of vitamin D daily but unlike vitamin A, there is no evidence that high levels of vitamin D pose any risk to health.

### New Research

Between 40 to 80 per cent of Irish people over 65 have a vitamin D deficiency. New research has found that a daily supplement of 700 to 1000IU of vitamin D reduces the risk of fractures from falls among older people by 19%. The British Medical Journal shows that a dose of less than 700IU per day has no effect in reducing fractures. Research is also showing that vitamin D plays an important role in helping the immune system. It may also help prevent illnesses like diabetes, heart disease, rheumatoid arthritis, multiple sclerosis as well as some forms of cancer.

## Drug interactions

Some blood pressures called diuretics (eg thiazides) can reduce the urinary excretion of vitamin D hence increasing the risk of too much vitamin D. Some epilepsy medication such as phenytoin can reduce vitamin D levels.

## Vitamin D in infants and children

New guidelines regarding Vitamin D were released in 2010 by the Food and Safety Authority of Ireland and the Department of Health. It is recommended that all infants, from birth to 12 months, whether breastfed or formula fed, be given a daily supplement of 5 µg (200 IU) vitamin D. This should be provided by a supplement containing vitamin D exclusively.

These guidelines were released because children (and adults) in Ireland have been found to have low levels of vitamin D. There has been an increase in the number of cases of rickets in Ireland in recent years.

Babies need vitamin D supplements for the following reasons:

- Babies skin is very sensitive to the sun and should not be exposed to direct sunlight
- Babies food (breast milk, formula milk or solid foods) may not have enough Vitamin D
- Between 0-12 months, babies grow very quickly and have a greater need for vitamin D to form strong bones

Babies with African, Afro-Caribbean, Middle- Eastern or Indian ethnic backgrounds are at even higher risk of having low levels of vitamin D. Their stores of vitamin D may be particularly low when born as their mothers' skin may not be as efficient at making vitamin D from low the levels of sunlight experienced in Ireland.

### What type of Vitamin D supplement should be given to a baby?

Vitamin D<sub>3</sub> (cholecalciferol) is the preferred form of vitamin D for infants. Liquid form is preferred. Products that contain other vitamins as well as vitamin D (such as multivitamin products) should not be used. In Whelehans we sell *BabyD*<sup>®</sup> Vitamin D liquid and *BabyVitD<sub>3</sub>*<sup>®</sup> drops. They each contain 5 µg of vitamin D<sub>3</sub> recommended for children aged 0-12 months. Very high amounts of vitamin D are harmful. The recommended 5µg vitamin D a day is very safe for babies. Harmful effects only begin at levels that are five times higher than this recommended dose. For children over 1 year, Whelehans stock *JuniorVitD<sub>3</sub>*<sup>®</sup> drops which contains 10µg of vitamin D<sub>3</sub>.

**Disclaimer: Please ensure you consult with your healthcare professional before making any changes recommended**

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