

# 'D' is for defence



Vitamin D supplementation has numerous health advantages, and is especially beneficial in Ireland where sunshine levels are low

VITAMIN D is essential for healthy bones, but is present in very few foods. It is also known as the sunshine vitamin, because it is made in the body when ultraviolet rays from sunlight strike the skin.

Sunshine is the primary source of this vitamin, with the body producing it as a result of the action of sunlight on the skin. However, Ireland's northerly latitude and lack of winter sunlight means that we cannot make enough vitamin D in this way. As a result, some people choose to take supplements.

#### Optimal levels of vitamin D

When doing a blood sample, most experts agree that 80nmol/L can be considered the boundary between Vitamin D inadequacy and normalcy. The problem, however, is that many more people in Ireland than previously thought are having values even below 50nmol/L, particularly post-menopausal women.

Intake of 1mcg (40IU) Vitamin D equals an estimated 0,6-1,2 nmol/L increase in blood serum values. Age, skin colour and health status all play part in people's absorption of this vitamin.

A strong-dosed vitamin D supplement of at least 1500 IU is therefore often used to correct this imbalance.

#### Healthy immune system

If the body doesn't get a sufficient amount vitamin D, the risk of developing bone abnormalities such as osteomalacia (soft bones) or osteoporosis (fragile bones) increases.

As well as playing a vital part in the growth and development of healthy teeth and bones, optimum Vitamin D levels play

an important role in facilitating normal immune system function.

The sunshine vitamin has been shown to reduce the risk of a number of conditions, including multiple sclerosis, heart disease and influenza. According to US research, Vitamin D could help to reduce the likelihood of a person developing the flu, which is particularly common in these cold winter months.<sup>1</sup>

#### Decreased diabetes risk

People who have good levels of vitamin D in their bodies may also have a lower risk of developing type 2 diabetes, according to a study in 2011. German scientists carried out tests on people taking part in an ongoing health study and found that those with lower levels of the vitamin in their blood were at an increased risk of developing type 2 diabetes.

According to the researchers, this lower risk could be partly due to the vitamin's anti-inflammatory effect and could have major consequences for the prevention of the condition. They noted that low levels of vitamin D are 'relatively widespread' in certain parts of the world, particularly in the winter months due to the lack of sunlight.

Very fair-skinned people who burn easily – which would include many Irish – may need to take vitamin D supplements as they may not be making enough of the vital nutrient in their body.

The German researchers insisted that if follow-up studies confirm their results, 'a targeted improvement in the supply of vitamin D to the general public could at the same time reduce the risk of develop-

ing diabetes'. Details of these findings are published in the journal, *Diabetes Care*.

#### Cognitive benefits

The benefits of maintaining optimum vitamin D levels also extend to healthy functioning of the brain – the vitamin appears to play an integral role in the cognitive health of women as they age.<sup>3</sup>

In one US study, scientists looked at more than 6,200 older women and found that those with lower levels of vitamin D in their bodies were more likely to display cognitive impairment and cognitive decline.

Meanwhile, another US study, which involved almost 500 women, found that those who had a higher intake of vitamin D in their diets had a reduced risk of developing Alzheimer's disease.

In fact, among the women who took part in the study, those who developed Alzheimer's had lower vitamin D intake than those who developed other types of dementia or no dementia at all.

The two studies were published in the *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*.

In addition to sunlight and supplements, vitamin D can also be found in a limited number of foods. These include oily fish, egg yolks and fortified foods like milk and cereal.

– Gillian Tsoi

#### References

1. Randomized trial of vitamin D supplementation to prevent seasonal influenza A in schoolchildren. *Am J Clin Nutr* 2010 May; 91(5): 1255-60
2. Condon, D. Vitamin D may reduce diabetes risk, 2011. Available from: [www.irishhealth.com](http://www.irishhealth.com)
3. Condon, D. Vitamin D important for cognitive health; 2012. Available from: [www.irishhealth.com](http://www.irishhealth.com)