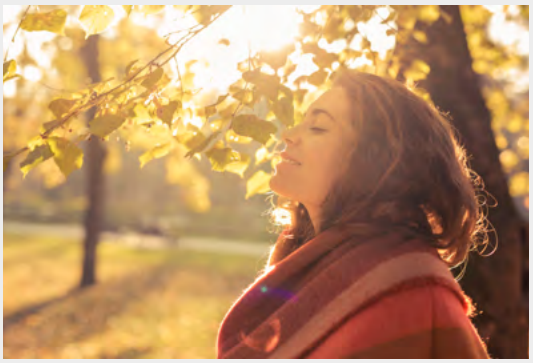
Vitamin D

UVB for an optimal vitamin D level


Do you think that vitamin D deficiency is something that only occurs in poor countries? The opposite is true. Vitamin D deficiencies occur in practically all developed countries. The Endocrine Society, an important international organisation of endocrinologists, believes that everyone should have a vitamin D level of at least 75 nmol/L. According to a Dutch study, published in the Nederlands Tijdschrift voor Geneeskunde (NTvG) in 2015, the average Dutch person will have a lower level.

The main source of vitamin D is sunlight. When exposed to sunlight, the skin produces vitamin D. That is why the concentration of vitamin D is highest at the end of summer. According to the study cited above, in the summer months - when the vitamin D level should be at its highest - the average Dutch person still only has a vitamin D level of 60 nmol/L. That is 15 points below what specialists consider optimal.

This fact alone is sufficient cause for concern. Vitamin D is crucial for strong bones and muscles, healthy blood vessels, an adequate immune system and many, many more health aspects. If vitamin D levels don't even reach the desired level in summer, what about winter?

Well, according to the 2015 study, vitamin D levels drop in winter and the average Dutch person then has a vitamin D level of around 45 nmol/L. So that's 30 points below the optimal level.

Fortunately, the average level is still above 30 nmol/L. If the vitamin D level is lower that, doctors take action. If the vitamin D level is below 30 nmol/L, the amount of vitamin D in the body is so low that this

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can immediately endanger health. Medically speaking, a vitamin D level of 45 nmol/L certainly needs to be corrected, but it is not an emergency.

It should be noted that we are talking about averages here. If we look at the figures more closely, in winter 30% of Dutch people have a vitamin D level that is actually below 30 nmol/L. That is almost 1 in 3 Dutch people.

The situation is slightly less alarming in summer, but even then 12 per cent of Dutch people have a vitamin D level below the critical limit of 30 nmol/L.

The best way to increase vitamin D levels is to move to a country where the sun always shines, and people spend most of their time outdoors, all year round. For most of us though, that is not an option. That is why, the Voedingscentrum (Nutrition Centre) advises large groups of Dutch people to take extra vitamin D tablets. Despite the indisputable logic behind this advice, not everyone feels comfortable with it.

An alternative to tablets is the use of UVB technology: lights that emit a mild and safe form of artificial sunlight, stimulating the skin to make vitamin D3 naturally. A study published by researchers from Amsterdam UMC in 2014 in Photodermatology, Photoimmunology & Photomedicine revealed just how effective UVB technology can be.

The experiment began just after summer had ended. The researchers saw that reflected in the test subjects' blood. They had a relatively high level of vitamin D in their blood: 73 nmol/L. That is significantly higher than the average Dutch adult has in their blood after the summer, but still not quite the optimal level defined by the Endocrine Society.

The researchers divided their test subjects into two groups. One group received no treatment with UVB light. This was the control group. Over a period of four months, vitamin D levels in this group dropped by 15 points to 58 nmol/L. This was to be expected.

The test subjects in the other group stood in front of a Dermasun Helios for 7 minutes almost every day while showering. So their skin received a small amount of artificial sunlight every day, which the researchers again saw reflected in the test subjects' blood. After four months, their vitamin D levels had risen to 93 nmol/L. Well within the optimal range.