



Press release

Optimised supply of vitamin D prevents dental cavities

A study proves that the sunshine vitamin encourages the production of anti-microbial peptides

Veldhoven, 9 August 2011 (SRF) The risk of developing cavities can be significantly reduced through the optimised supply of vitamin D. A vitamin D level of at least 30 nanogrammes per millilitre of blood (30 ng/ml) encourages the body to produce its own anti-microbial peptides, including cathelicidins and defensins, which inhibit cavity pathogens. This was the result of a study carried out by William B. Grant, one of the best known experts worldwide in the field of vitamin D research, and presented in the professional journal "Dermato-Endocrinology".

In this study in the USA, Grant evaluated 325 scientific studies covering a period from the middle of the 19th century to today and which prove the connection between the intensity of UV radiation and the formation of cavities. Grant explains the relationship as follows:

"Cavities are significantly more common in geographical regions with lower levels of UV radiation intensity than in regions with higher levels. UV radiation encourages the production of vitamin D and vitamin D in turn is the motor for producing anti-microbial peptides which prevent cavities from forming". Grant recommends placing greater emphasis of an optimised supply of vitamin D in dental prophylaxis.

Vitamin D production is stimulated by UV radiation with 90 percent of it being produced in the skin. An average vitamin D level of at least 30 nanogrammes per millilitre of blood (30 ng/ml) is generally considered by experts to be the value at which the positive effects of vitamin D are seen. Values between 40 and 60 ng/ml are considered optimal.

The Sunlight Research Forum (SRF) is a non-profit organisation based in the Netherlands. Its aim is to make the latest medical and scientific evidence on the effects of moderate exposure to UV radiation available to the general public.

Source:

William B. Grant: "A review of the role of solar ultraviolet-B irradiance and vitamin D in reducing risk of dental caries", in: Dermato-Endocrinology 3:3, 1-6; July/August/September 2011

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