

Press Release



UV light therapy to combat vitamin D deficiency

A pilot study has proved that Vitamin D deficiency can be remedied by regular UV light treatment

Veldhoven, 17 January 2011 (SRF) During the winter months, when the UV rays are not sufficient to stimulate vitamin D production in the human skin as the sunlight is too dim, the human body can suffer from an acute vitamin D deficiency. For older, frailer people who, throughout the year, spend little time outside and are not able to spend time in the sunshine, the risk of suffering from a vitamin D deficiency is particularly acute. A shortage of the "sunshine vitamin" can lead to osteoporosis, frequent falls, and often fatal bone fractures as well as infections and autoimmune diseases. Treatment with vitamin D supplements is a common method used to counter a vitamin D deficiency.

Another method has been found, in a pilot study by Dutch scientists, to be at least as effective as supplements and is cheaper: The treatment of eight patients in a nursing home, who were suffering from low levels of vitamin D, with UV light - once a week, over a period of eight weeks - raised their vitamin D levels to almost the scientifically recommended minimum level.

"The results of the study indicate that vitamin D deficiency can be effectively remedied and prevented through regular, on-going treatment with UV light," said Victor Chel from the medical faculty of the University of Amsterdam, which was responsible for the study. In addition, Chel went on to explain that this treatment was less expensive than the administration of vitamin D supplements and was useful in cases where the patient is already taking several kinds of medication, which is often the case with older people who, as they suffer from multiple illnesses, are restricted in terms of the drugs they are able to take.

For the pilot study eight patients in a nursing home with an average age of 79 - the age range was 71-87 years of age- were used as subjects. All subjects had their vitamin D levels measured at the beginning of the study, and were found to have an average of 28.5 nano-moles per litre of blood (nmol/L) which is considerably below the deficiency threshold of 50 nmol/L. Over an eight-week period the subjects were exposed to UV light using lamps with a UVB intensity of 0.5 MED (minimal erythema dose) once a week. Following the study, the subjects' vitamin D levels averaged 46.5 nmol/L. An average level of 50 nmol/L of vitamin D is scientifically considered to be a sufficient level for the positive effects of the vitamin to begin to be observed. 70-100 nmol/L are the optimal levels. Vitamin D production is stimulated by UV radiation with 90 percent of it being produced in the skin.

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 exposure to moderate UV radiation available to the general public.

Note:

A summary of the study "V.G.M. Chel, M.E. Oms, S. Pavel, F. de Gruijl, A. Brand and P. Lips: Prevention and treatment of vitamin D deficiency in Dutch psycho geriatric nursing home residents by weekly half- body UVB exposure after showering: a pilot study" can be found on the SRF-Website www.sunlightresearchforum.eu and is available to download.

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