

# Vitamin D deficiency increases risk of chronic headache

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Vitamin D deficiency may increase the risk of chronic headache, according to a new study from the University of Eastern Finland. The findings were published in *Scientific Reports*.

The Kuopio Ischaemic Heart Disease Risk Factor Study, KIHD, analysed the serum [vitamin D](#) levels and occurrence of headache in approximately 2,600 men aged between 42 and 60 years in 1984-1989. In 68% of these men, the serum vitamin D level was below 50 nmol/l, which is generally considered the threshold for vitamin D deficiency. Chronic headache occurring at least on a weekly basis was reported by 250 men, and men reporting [chronic headache](#) had lower serum vitamin D levels than others.

When the study population was divided into four groups based on their serum vitamin D levels, the group with the lowest levels had over a twofold risk of chronic headache in comparison to the group with the highest levels. Chronic headache was also more frequently reported by men who were examined outside the summer months of June through September. Thanks to UVB radiation from the sun, the average serum vitamin D levels are higher during the summer months.

The study adds to the accumulating body of evidence linking a low intake of vitamin D to an increased risk of chronic diseases. Low vitamin D levels have been associated with the risk of headache also by some earlier, mainly considerably smaller studies.

In Finland and in other countries far from the Equator, UVB radiation from the sun is a sufficient source of vitamin D during the [summer months](#), but outside the summer season, people need to make sure that they get sufficient vitamin D from food or from vitamin D supplements.

No scientific evidence relating to the benefits and possible adverse effects of long-term use in higher

doses yet exists. The Finnish Vitamin D Trial, FIND, currently ongoing at the University of Eastern Finland will shed light on the question, as the five-year trial analyses the effects of high daily doses of vitamin D on the risk factors and development of diseases. The trial participants are taking a vitamin D supplement of 40 or 80 micrograms per day. The trial also investigates the effects of vitamin D supplementation on various pain conditions.

**More information:** Jyrki K. Virtanen et al. Low serum 25-hydroxyvitamin D is associated with higher risk of frequent headache in middle-aged and older men, *Scientific Reports* (2017). [DOI: 10.1038/srep39697](https://doi.org/10.1038/srep39697)

Provided by University of Eastern Finland

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