

Low vitamin D levels a risk factor for pneumonia

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A University of Eastern Finland study showed that low serum vitamin D levels are a risk factor for pneumonia. The risk of contracting pneumonia was more than 2.5 times greater in subjects with the lowest vitamin D levels than in subjects with high vitamin D levels. The results were published in *Journal of Epidemiology and Community Health*.

The follow-up study carried out by the UEF Institute of Public Health investigated the link between serum vitamin D3 and the risk of contracting pneumonia. The study involved 1,421 subjects living in the Kuopio region in Eastern Finland. The serum vitamin D3 levels of the subjects were measured from blood samples drawn in 1998–2001, and these data were compared against reported [cases of pneumonia](#) in hospital records in the same set of subjects in 1998–2009. The results showed that during the follow-up, subjects with serum vitamin D3 levels representing the lowest third were more than 2.5 times more likely to contract pneumonia than subjects with high [vitamin D3](#) levels. Furthermore, smoking constituted a significant risk factor for pneumonia. The risk of contracting pneumonia also grew by age, and was greater in men than women. At baseline, the mean serum D3 concentration of the study population was 43.5 nmol/l, and the mean age of the study population was 62.5 years.

Earlier research has shown that [vitamin D deficiency](#) weakens the [immune defence](#) system and increases the risk of mild respiratory infections. This University of Eastern Finland study was the first one to establish that vitamin D deficiency also increases the risk of contracting

pneumonia in the ageing general population. According to the researchers, this finding supports earlier observations on the diverse role of vitamin D in the body, and it also calls for further research on vitamin D deficiency as a public health issue. In northern latitudes, there is enough sun exposure to maintain sufficient vitamin D levels in summer, but not during the winter season, and vitamin D supplementation is often required. The recommended daily intake of vitamin D in Finland is 20 micrograms for those over 60 years of age.

Provided by University of Eastern Finland

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