

Vitamin D might reduce some vascular risk factors and, consequently, risk of dementia

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Dear Editor,

A recent paper noted that vascular risk factors are associated with an increased risk of dementia and that studies investigating the effect of a multi-component intervention aimed at vascular risk factors to prevent or slow down cognitive decline and dementia are desirable.¹ Overlooked in the discussion was any mention of the possible role of vitamin D in reducing the risk of vascular risk factors and, hence, risk of dementia. Of the vascular risk factors mentioned, serum 25-hydroxyvitamin D [25(OH)D] has been found to be inversely correlated in observational studies with risk of hypertension² and diabetes mellitus.^{3,4} Lower serum 25(OH)D levels have also been found inversely correlated with the incidence of cardiovascular disease^{4,5} and cognitive impairment.⁶ While the mechanisms whereby vitamin D reduces the risk of cardiovascular disease have not been precisely delineated, there is mounting evidence that 'vitamin D may influence blood pressure through the renin-angiotensin system, parathyroid hormone levels, myocardial function, inflammation, and vascular calcification.'⁷ Vascular calcification is a marker of atherosclerotic burden and a risk factor for dementia.⁸

Since there is good evidence that higher serum 25(OH)D levels reduce the risk of vascular diseases, diabetes, and cognitive impairment, and since these diseases often precede dementia, vitamin D would very likely reduce the risk of dementia.⁹ Additional studies to examine this hypothesis would be very useful.

There are many other health benefits of vitamin D including reduced risk of many types of cancer and infectious diseases. It was estimated that if the population mean value of serum 25(OH)D level in the Netherlands were increased from 50-55 nmol/l to 105 nmol/l this would reduce all-cause mortality rates by 18%.¹⁰

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