

High blood levels of vitamin E reduces risk of Alzheimer's

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High levels of several vitamin E components in the blood are associated with a decreased risk for Alzheimer's disease (AD) in advanced age, suggesting that vitamin E may help prevent cognitive deterioration in elderly people. This is the conclusion reached in a Swedish study published in the July 2010 issue of the Journal of Alzheimers Disease.

"[Vitamin E](#) is a family of eight natural components, but most studies related to Alzheimers disease investigate only one of these components, tocopherol", says Dr. Francesca Mangialasche, who led the study. "We hypothesized that all the vitamin E family members could be important in protecting against AD. If confirmed, this result has implications for both individuals and society, as 70 percent of all dementia cases in the general population occur in people over 75 years of age, and the study suggests a protective effect of vitamin E against AD in individuals aged 80+."

The study was conducted at the Aging Research Center (ARC), Karolinska Institutet, Stockholm, Sweden, in collaboration with the Institute of [Gerontology](#) and [Geriatrics](#), University of Perugia, Italy. The study included a sample of 232 participants from the Kungsholmen Project, a population-based [longitudinal study](#) on aging and dementia in Stockholm (Kungsholmen parish). All participants were aged 80+ years and were dementia-free at the beginning of the study (baseline). After 6-years of follow-up, 57 AD cases were identified.

The blood levels of all eight natural vitamin E components were

measured at the beginning of the study. Subjects with higher blood levels (highest tertile) were compared with subjects who had lower blood levels (lowest tertile) to verify whether these two groups developed [dementia](#) at different rates. The study found that subjects with higher blood levels of all the vitamin E family forms had a reduced risk of developing AD, compared to subjects with lower levels. After adjusting for various confounders, the risk was reduced by 45-54%, depending on the vitamin E component.

Dr Mangialasche notes that the protective effect of vitamin E seems to be related to the combination of the different forms. Another recent study indicated that supplements containing high doses of the E vitamin form α -tocopherol may increase mortality, emphasizing that such dietary supplements, if not used in a balanced way, may be more harmful than previously thought.

"Elderly people as a group are large consumers of vitamin E supplements, which usually contain only α -tocopherol, and this often at high doses", says Dr Mangialasche. "Our findings need to be confirmed by other studies, but they open up for the possibility that the balanced presence of different vitamin E forms can have an important neuroprotective effect."

More information: High plasma levels of vitamin E forms and reduced Alzheimers disease risk in advanced age, Journal of Alzheimer's Disease (JAD), 5 July 2010, [DOI: 10.3233/JAD-2010-091450](https://doi.org/10.3233/JAD-2010-091450)

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