

# Low vitamin E levels associated with physical decline in elderly

**Researchers at Yale School of Medicine have found that a low concentration of vitamin E in the blood is linked with physical decline in older persons.**

Published in the January 23 issue of Journal of the American Medical Association, the study included 698 people age 65 or older who were randomly selected from the population registry in two municipalities close to Florence, Italy. The researchers, led by first author Benedetta Bartali of Yale, collected blood samples to measure the levels of micronutrients including folate, iron and vitamins B6, B12, D and E. They assessed physical decline in the study participants over a three-year period using an objective test of three tasks: walking speed, rising repeatedly from a chair, and standing balance.

“We evaluated the effects of several micronutrients and only vitamin E was significantly associated with decline in physical function,” said Bartali, a nutritionist and a Brown-Coxe Postdoctoral Fellow at Yale School of Medicine. “The odds of declining in physical function was 1.62 times greater in persons with low levels of vitamin E compared with persons with higher levels.”

Bartali added, “It is unlikely that vitamin E is simply a marker for poor nutrition because our results are independent of energy intake, and the effect of low levels of other micronutrients was not significant. Our results suggest that an appropriate dietary intake of vitamin E may help to reduce the decline in physical function among older persons. Since only one person in our study used vitamin E supplements, it is unknown whether the use of vitamin E supplements would have the same beneficial effect.”

Bartali stresses that vitamin E was the only antioxidant measured in the study and further studies are needed to determine whether low levels of other antioxidants would yield the same results.

As an antioxidant, vitamin E may prevent or reduce the propagation of free radicals in the human body, which are associated with physical decline. This may help reduce muscle or DNA damage and the development of pathological conditions like atherosclerosis. Bartali said further studies are needed to determine the mechanisms of how low levels of vitamin E contributes to a decline in physical function.

Source: Yale University

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