

Vitamin B Does Not Slow Cognitive Decline in Alzheimer's

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A clinical trial led by Paul S. Aisen, M.D., professor of neurosciences at the University of California, San Diego School of Medicine, showed that high-dose vitamin B supplements did not slow the rate of cognitive decline in patients with mild to moderate Alzheimer disease. The study will be published in the October 15 issue of the *Journal of the American Medical Association (JAMA)*.

Aisen is director of the Alzheimer's Disease Cooperative Study (ADCS), a multi-center network spanning the United States and Canada, which conducted the clinical trial to determine if reduction of an amino acid called homocysteine would reduce the risk of Alzheimer's disease or slow its progression. Homocysteine is known to be involved in neurological disease, including Alzheimer's, and its metabolism is affected by B vitamins. Therefore, it was thought that B vitamin supplements might offer a new therapeutic approach in treating Alzheimer' disease.

"Prior studies using B vitamin supplementation to reduce homocysteine levels in patients with Alzheimer's weren't large enough, or of long enough duration to effectively assess their impact on cognitive decline," said Aisen. "This study of several hundred individuals over the course of 18 months showed no impact on cognition, although it resulted in lower levels of homocysteine in these patients."

The study included supplementation with folic acid and vitamins B6 and B12 for 18 months in 409 individuals with mild to moderate Alzheimer's disease. Participants were randomly assigned to two groups of unequal size; to increase enrollment, 60 percent were treated with high-dose supplements and the remaining 40 percent treated with identical dosages of placebo. A total of 340 participants (202 in active treatment group and 138 in placebo group) completed the trial while taking study medication. Cognitive abilities were measured via testing with the Alzheimer Disease Assessment Scale (ADAS-cog).

The researchers found that the ADAS-cog score did not differ significantly between treatment groups, but that symptoms of depression were more common in the high-dose supplement group.

“Our study does not support the treatment of individuals with mild to moderate Alzheimer’s disease and normal vitamin levels with B vitamin supplements,” the authors conclude.

The ADCS, a consortium of more than 50 research institutions in the United States and Canada, is headquartered at UC-San Diego and funded by the National Institute on Aging (NIA), part of the National Institutes of Health.

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