

Study examines vitamin D deficiency and cognition relationship

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Vitamin D deficiency and cognitive impairment are common in older adults, but there isn't a lot of conclusive research into whether there's a relationship between the two.

A new study from Wake Forest Baptist Medical Center published online ahead of print this month in the *Journal of the American Geriatrics Society* enhances the existing literature on the subject.

"This study provides increasing evidence that suggests there is an association between low vitamin D levels and cognitive decline over time," said lead author Valerie Wilson, M.D., assistant professor of geriatrics at Wake Forest Baptist. "Although this study cannot establish a direct cause and effect relationship, it would have a huge public health implication if vitamin D supplementation could be shown to improve cognitive performance over time because deficiency is so common in the population."

Wilson and colleagues were interested in the association between vitamin D levels and cognitive function over time in older adults. They used data from the Health, Aging and Body composition (Health ABC) study to look at the relationship. The researchers looked at 2,777 well-functioning adults aged 70 to 79 whose cognitive function was measured at the study's onset and again four years later. Vitamin D levels were measured at the 12-month follow-up visit.

The Health ABC study cohort consists of 3,075 Medicare-eligible, white

and black, well-functioning, community-dwelling [older adults](#) who were recruited between April 1997 and June 1998 from Pittsburgh, Pa., and Memphis, Tenn.

"With just the baseline observational data, you can't conclude that low vitamin D causes cognitive decline. When we looked four years down the road, low vitamin D was associated with worse [cognitive performance](#) on one of the two cognitive tests used," Wilson said. "It is interesting that there is this association and ultimately the next question is whether or not supplementing vitamin D would improve cognitive function over time."

Wilson said randomized, controlled trials are needed to determine whether vitamin D supplementation can prevent [cognitive decline](#) and definitively establish a causal relationship.

"Doctors need this information to make well-supported recommendations to their patients," Wilson said. "Further research is also needed to evaluate whether specific cognitive domains, such as memory versus concentration, are especially sensitive to low vitamin D levels."

Provided by Wake Forest University Baptist Medical Center

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