

## Vitamin D study suggests no mortality benefit for older women

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Doctors agree that vitamin D promotes bone health, but a belief that it can also prevent cancer, cardiovascular disease and other causes of death has been a major health controversy. Consistent with advice issued last fall by the Institute of Medicine, a new study finds that vitamin D did not confer benefits against mortality in postmenopausal women after controlling for key health factors such as abdominal obesity.

"What we have is clinical trial evidence that for the most part vitamin D doesn't seem to be helpful for conditions where people thought it might," said study lead author Charles Eaton, professor of [family medicine](#) and of epidemiology in the Warren Alpert Medical School of Brown University and a physician at Memorial Hospital in Pawtucket, R.I. "The best we can tell is that there isn't an association. Once we took into account these other factors, high levels didn't provide a benefit and low levels didn't put you at risk."

In the study, published online Oct. 26 in the [American Journal of Clinical Nutrition](#), Eaton led an analysis of data from 2,429 [postmenopausal women](#) aged 50 to 79 who participated in the broad-based Women's Health Initiative study, in which Eaton and many co-authors were investigators. They tracked [blood levels](#) of vitamin D in the women and their mortality over a 10-year period. They not only looked at death from all causes but also focused on cancer and [cardiovascular disease](#).

In all, 225 of the women died, including 79 from cardiovascular disease

and 62 from cancer.

Eaton said he expected to find some protective effect against such mortality from vitamin D, and at first glance — controlling only for age, ethnicity, and whether women took part in a calcium and vitamin D supplement trial — that's what the data showed. But what was apparent in the data was that the women with the lowest levels of vitamin D also had a lot of other negative health indicators. The team therefore controlled for several more key [health factors](#), such as smoking, history of cardiovascular disease, history of cancer, alcohol consumption, and waist circumference. The additional controls, especially waist circumference, which is a measure of [abdominal obesity](#), eroded the statistical significance of vitamin D's seemingly protective effects down to nothing.

The one exception was that women with thinner waistlines (less than 35 inches) and with the lowest vitamin D levels seemed to have a greater risk of "all-cause" mortality within the 10-year analysis period. That result, however, was right on the borderline of statistical significance.

"If you are thin, this data suggest that maybe low vitamin D levels are potentially harmful and you should talk to your doctor about what to do about them," Eaton said.

Eaton said he and his co-authors can only speculate about why abdominal obesity was an especially important and powerful factor to control for in their analysis. In the study they note that abdominal obesity is associated with several negative health indicators that may overwhelm any modest benefit vitamin D might have. They also point out that fat tissue can store vitamin D, possibly meaning that [women](#) with larger waistlines are storing more of the vitamin than their blood serum levels alone would reveal.

More research into the connections between abdominal fat and the health effects of vitamin D could help resolve the question, Eaton said. He also said that a major new trial of vitamin D supplements and health called "VITAL" is getting underway and will likely inform the broader controversy about what vitamin D is good for.

For now, Eaton said, "there's not enough evidence to do anything about our [vitamin D](#) levels if it's not in regard to [bone health](#)."

Provided by Brown University

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