

Supplements don't preserve kidney health in type 2 diabetes

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This is the largest study of vitamin D, left, and fish oil supplements in a population of type 2 diabetes patients. Credit: Randy Carnell / UW Medicine

Supplements of vitamin D and omega-3 fatty acids (often sold as fish oil) do not help people with type 2 diabetes stave off chronic kidney disease, according to findings from the largest clinical study to date of the supplements in this patient population.

The paper was published Friday, Nov. 8, 2019, in *JAMA* and presented concurrently at an American Society of Nephrology conference in Washington, D.C.

"We were hopeful for both of these interventions, vitamin D and [fish](#) oil, but they don't appear to be particularly effective for this purpose," said Dr. Ian de Boer, the paper's lead author. He is a professor of medicine at the University of Washington School of Medicine and associate director of the Kidney Research Institute, a collaboration of UW Medicine and Northwest Kidney Centers.

Of the [28 million Americans](#) who live with type 2 [diabetes](#), de Boer said, about 40 percent develop

chronic [kidney](#) disease, a condition in which the kidneys cannot adequately remove waste and fluid from the body. This disrupts a person's health in myriad ways and can progress to kidney failure. It also greatly increases the risk of cardiovascular events and death.

Previous animal-model and cell-culture studies have suggested that vitamin D and fish oil supplements have anti-inflammatory and other properties that might prevent or slow type 2 diabetes' progression to [chronic kidney disease](#). Research also has found associations between humans' kidney decline and lower levels of vitamin D and lower dietary intake of fish.

"A lot of people use the supplements hoping there are beneficial kidney and cardiovascular effects," de Boer said. "We wanted this study to clarify whether these supplements have any real kidney benefit in adults with diabetes. Even if it's not the result we hoped for, closing a chapter is useful for patients and clinicians and researchers alike."

The study was conducted as part of the nationwide [VITamin D and OmegA-3 Trial](#) (VITAL). The investigators designed a five-year study of kidney function in 1,312 adults with type 2 diabetes in the trial. The adults (men aged

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