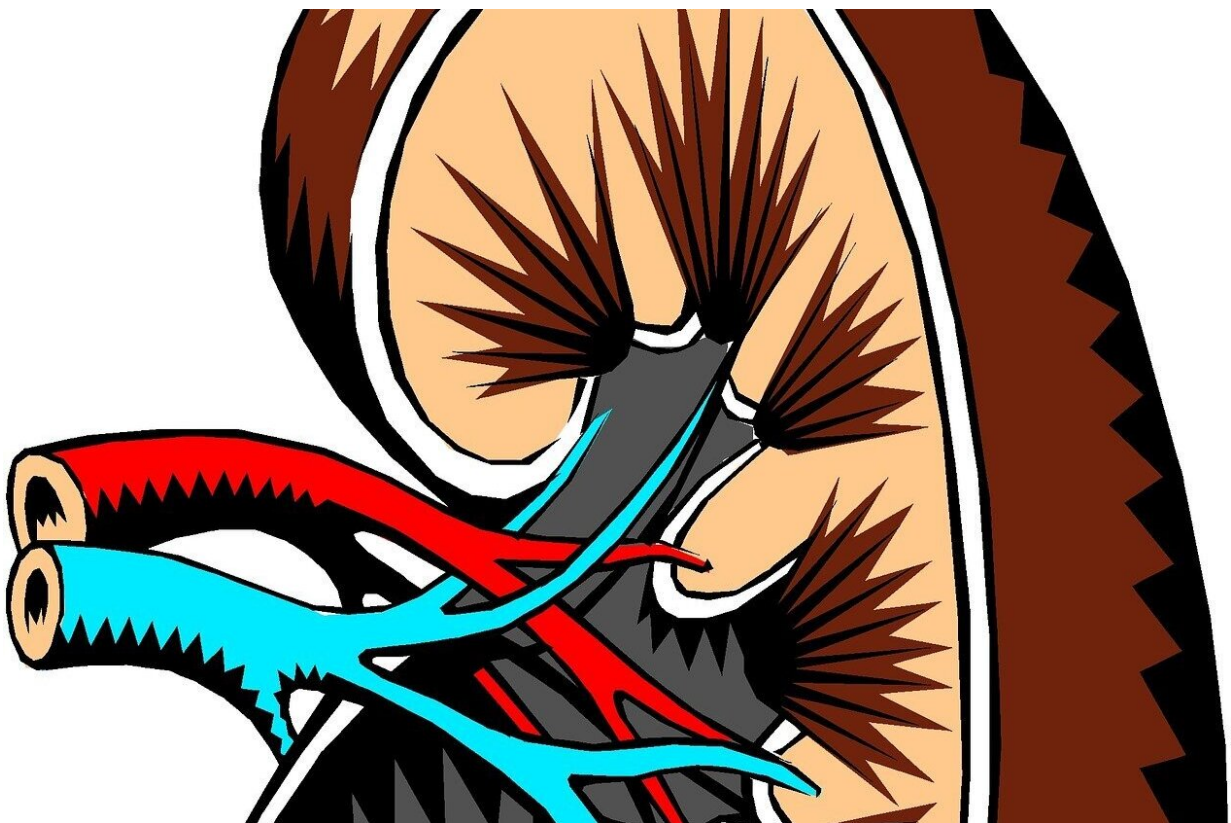


Do vitamin D supplements offer kidney-related benefits for individuals with high diabetes risk?

August 6 2021



Credit: Pixabay/CC0 Public Domain

A recent clinical trial described in *CJASN* has examined the potential of vitamin D supplementation for protecting the kidney health of

individuals with pre-diabetes.

In the [general population](#), low blood vitamin D levels have been associated with higher risks of various diseases, including type 2 diabetes and [kidney disease](#). Sun H. Kim, MD, MS (Stanford University School of Medicine) and her colleagues conducted a secondary analysis of the Vitamin D and type 2 diabetes (D2d) study to evaluate the effects of vitamin D supplementation on [kidney](#) health in individuals with pre-diabetes, a condition that increases risk for type 2 diabetes, which in turn is the leading cause of kidney disease.

The study randomized 2,423 adults with overweight/obesity and pre-diabetes to vitamin D₃ 4000 IU per day or placebo, for a median treatment duration of 2.9 years. "The D2d study is unique because we recruited individuals with high-risk pre-diabetes, having 2-out-of-3 abnormal glucose values, and we recruited more than 2,000 participants, representing the largest vitamin D diabetes prevention trial to date," said Dr. Kim.

During the trial, there were 28 cases of kidney function worsening in the vitamin D group and 30 in the placebo group, and the average change in kidney function during follow-up was similar in both groups. "Our results did not show a benefit of vitamin D supplements on kidney function. About 43% of the study population was taking outside-of-study vitamin D, up to 1000 IU daily, at study entry, though. Among those who were not taking any vitamin D on their own, there was a suggestion for vitamin D lowering the amount of urine protein over time, which means that it could have a beneficial effect on kidney health. Additional studies are needed to look into this further."

Dr. Kim added that vitamin D supplementation is popular, and it's difficult for clinical trials of vitamin D supplementation to show a benefit if the population studied is not vitamin D deficient. "The

majority of the study population had sufficient blood vitamin D levels and normal kidney function," she said. "Benefits of vitamin D might be greater in people with low blood [vitamin D](#) levels and/or reduced kidney function."

More information: Sun H. Kim et al, Effect of Vitamin D Supplementation on Kidney Function in Adults with Prediabetes, *Clinical Journal of the American Society of Nephrology* (2021). [DOI: 10.2215/CJN.00420121](#)

Provided by American Society of Nephrology

Citation: Do vitamin D supplements offer kidney-related benefits for individuals with high diabetes risk? (2021, August 6) retrieved 29 April 2023 from <https://medicalxpress.com/news/2021-08-vitamin-d-supplements-kidney-related-benefits.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--