

Fruit and vegetable consumption linked to lower risk of early death for dialysis patients

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A new study found that higher consumption of fruits and vegetables may be associated with a lower risk of premature death in patients undergoing maintenance hemodialysis. The findings, which appear in an upcoming issue of the *Clinical Journal of the American Society of Nephrology* (*CJASN*), suggest that more studies are needed to fine-tune dietary recommendations for patients with kidney failure.

Higher [fruit](#) and [vegetable](#) intake is linked with lower cardiovascular and all-cause mortality in the general population, but kidney failure patients on hemodialysis are often discouraged from this type of diet due to its potential to cause a buildup of potassium (which is normally excreted in the urine).

A team led by Giovanni Strippoli, MD, Ph.D., (Diaverum AB, Sweden and the University of Bari, Italy) Valeria Saglimbene, MScMed, and Germaine Wong, MBBS, Ph.D. (University of Sydney School of Public Health, in Australia) designed a study to evaluate the association of fruit and vegetable intake with all-cause, cardiovascular, and non-cardiovascular mortality among adults treated with hemodialysis.

"Although diet is a key component of self-management and provides an important opportunity for a [collaborative approach](#) between patients and [healthcare professionals](#) to improve care, there is limited evidence on the impact of diet on patient-relevant outcomes," said Dr. Saglimbene.

In the study of 8,078 hemodialysis patients who completed food

frequency questionnaires, only 4% of patients consumed at least 4 servings of fruits and vegetables per day as recommended in the general population. The team noted that there were 2,082 deaths (954 from cardiovascular causes) over a median follow-up of 2.7 years. Compared with patients who had 0-5.5 servings of combined fruits and vegetables per week, those who had 5.6-10 servings and those who had more than 10 servings had 10% and 20% lower risks of dying from any cause, respectively, as well as 12% and 23% lower risks of dying from non-cardiovascular causes.

"These findings suggest that well-meaning guidance to limit fruit and vegetable intake to prevent higher dietary potassium load may deprive hemodialysis patients of the potential benefits of these foods; however, intervention trials of fruit and [vegetable intake](#) are needed to support dietary recommendations for hemodialysis patients," said Prof. Wong. "Future studies exploring the potential benefits of a whole dietary approach in the hemodialysis setting are also warranted and we aim to pursue them," added Prof. Strippoli.

In an accompanying editorial, Ranjani Moorthi, MD, MPH, MS (Indiana University) noted that the findings may spur future studies. "The hope is this excellent cohort study will form the basis of well-designed randomized controlled trials to test the effects of fruits and vegetables in [patients](#) undergoing hemodialysis, so we, their nephrologists, along with renal dietitians, can provide the details of dietary guidance they deserve."

More information: "Fruit and Vegetable Intake and Mortality in Adults Undergoing Maintenance Hemodialysis," *Clinical Journal of the American Society of Nephrology* (2019). [DOI: 10.2215/CJN.08580718](https://doi.org/10.2215/CJN.08580718)

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