


## Diet Patterns and Kidney Disease

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As a life-long kidney patient born with post-urethral valves, with dialysis and kidney transplant experience in childhood, adolescence, and adulthood, I was intrigued to read “Healthy Dietary Patterns and Incidence of CKD: A Meta-Analysis of Cohort Studies” (1). The results of the publication demonstrate that a healthy diet is associated with reduced incidence of CKD and albuminuria (a symptom of kidney disease).

Although the systematic review and meta-analysis studied healthy adults, the evidence that a diet rich in whole grains, vegetables, fruits, legumes, nuts, low-fat dairy, and fish (while consuming less red and processed meats, sodium, and sugar-sweetened beverages) is associated with a lower incidence of CKD is at least suggestive that maintaining a similar healthy diet provides benefits for patients with chronic illness, specifically CKD.

The results from the meta-analysis provide further data for providers and patients to consider and discuss. Personally, I am well aware of the growing evidence regarding the benefits a healthy diet can provide, including an effect on weight, heart disease, diabetes, and hypertension. My provider team may continue to advise me of the benefits (including the findings of the meta-analysis) of adhering to a specific diet (Mediterranean, vegetarian, *etc.*), although it is ultimately my choice to decide to adhere to a particular diet.

I strive to be an engaged and educated consumer of healthcare. Most patients with kidney disease desire to partner with their providers to become more informed, empowered decision makers in healthcare choices. Although we rely on our providers, the decisions regarding care fall solely upon us (and any trusted caregiver), taking all relevant information into account when making knowledgeable decisions which balances our health, longevity, and quality of life. Now that I am aware of the findings from the recent publication, it becomes my prerogative to choose if I want to change my eating habits, give up the frequent sugary beverages and salty snacks, and replace them with more fruits, vegetables, and nuts.

Another aspect of the meta-analysis I would like to comment on, which is acknowledged in the *Study Characteristics* section and elsewhere in the publication, is the unfortunate omission of children and adolescents in the cohorts included in the meta-analysis. The cohorts included in the final article had participants with ages

ranging from 27 to 71. This overlooks the large and significant population of pediatric and adolescent patients who could benefit from similar findings relevant to their demographic age group. Unfortunately, pediatric and adolescent patient populations are typically under-represented in research for various reasons. This point is demonstrated by the fact that the researchers of the publication were not able to find cohort studies including children that met all of the stated requirements of the systematic review for final inclusion into the meta-analysis.

Although assuredly not equivalent in numbers of adults living with CKD, children and adolescents with kidney disease are still an important population. Whereas epidemiologic data on earlier stages of CKD for children are still limited, there are approximately 10,000 pediatric and adolescent patients in the United States living with ESKD. Having grown up with kidney disease, I have direct experience with the lack of relevant research and published knowledge being available to me, my parents, and my provider team to answer many care questions. We were limited in our ability to make informed decisions because pediatric data were not available. I think the fact that children and adolescents are not included in this paper illustrates that this is still a challenge.

It is particularly challenging to accept that important findings like those in the meta-analysis are not inclusive of children because of the life-long effect CKD and other chronic illnesses have on children and adolescents diagnosed with the disease. We grow up and many times experience more of the symptoms of our disease and are stratified into higher-risk categories for other diseases and comorbidities later in life. In addition, with more children with obesity and being diagnosed with hypertension and diabetes at earlier ages, I would expect there will be an increase in children, adolescents, and young adults diagnosed with kidney disease. Research findings that a healthy diet pattern can prevent CKD in this patient population, with key considerations for dietary needs in growing children, would be welcomed information so that patients and their caregivers might be better informed and choose to establish healthy eating habits earlier for their children.

The researchers of the meta-analysis state that further research, including clinical trials, is needed to further compare the effectiveness of specific dietary guidelines.

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I would hope that in further research, children and adolescents are included as they (with their caregivers) strive to be engaged and educated healthcare consumers. Not including younger populations in the generation of new, applicable knowledge through research is doing children and adolescents with kidney disease, and their provider team partners, a big disservice.

**Author Information**

Mr. Lennon is a life-long kidney patient and the Executive Director of the Improving Renal Outcomes Collaborative, a network-based learning health system of patients and families, clinicians, and researchers from >30 of the most advanced pediatric hospitals and health systems in the country. The network works together to solve some of the difficult problems for children with kidney disease by harnessing the inherent motivation and expertise of all stakeholders to improve care and spawn innovation, while sharing best practices and data about medical care,

followed by the application of quality improvement methods to progress health outcomes.

**Disclosures**

Mr. Lennon has nothing to disclose.

**References**

1. Bach K, Kelly J, Palmer S, Khalesi S, Strippoli G, Campbell K: Healthy dietary patterns and incidence of chronic kidney disease: A meta-analysis of cohort studies. *Clin J Am Soc Nephrol* 14: 1441–1449, 2019

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See related editorial, “Can Dietary Patterns Modify Risk for CKD?” and article, “Healthy Dietary Patterns and Incidence of CKD: A Meta-Analysis of Cohort Studies,” on pages 1419–1420 and 1441–1449, respectively.