

PERL concludes reduced uric acid has no impact on kidney disease in type 1 diabetes

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Diabetic kidney disease (DKD) remains one of the most intractable complications of diabetes. Progress has been made using glycemic and blood pressure control, but the search continues for improved treatments for the estimated one in four adults with diabetes who has some level of nephropathy and continues at risk for eventual kidney failure.

Observational studies have shown that higher serum uric acid (SUA) is associated with a higher risk of DKD in type 1 [diabetes](#). This held out the possibility that reducing blood levels of uric acid might prevent or slow the progression of the disease.

The Preventing Early Renal Loss in Diabetes (PERL) study was established in 2013 as a 16-site, multinational (US, Canada, and Denmark), randomized, placebo-controlled clinical trial to test whether sustained reductions of SUA would benefit patients' kidney health. The conclusions of the study were announced today at the annual meeting of the American Society of Nephrology: three years of sustained reductions of blood levels of [uric acid](#) with the generic drug allopurinol did not benefit type 1 diabetes patients with mild to moderate kidney disease.

"On the one hand, we are disappointed because we don't have something new to offer to people with type 1 diabetes who are at risk for kidney problems," says Alessandro Doria, MD, Ph.D., MPH, Senior Investigator in the Section on Genetics and Epidemiology at Joslin Diabetes Center, Professor of Medicine at Harvard Medical School, and co-principal investigator of the study with S. Michael Mauer, MD, University of

Minnesota Medical School. "On the other hand, we are quite satisfied by the fact that we have provided a clear, unambiguous answer to an important scientific question."

While the initial hypothesis was disproved, this study focused on a limited subset of the diabetes community. "We cannot exclude that in people with type 2 diabetes or with different stages of kidney disease, there might be an effect," says Doria.

The research team plans to continue monitoring the PERL cohort, both to assess the possibility of delayed effects of allopurinol on the group and to gather more data on the development of [diabetic kidney disease](#) over time and on the [risk factors](#).

"We have an amazing biobank of samples that we collected during the study," says Doria. "And one can correlate biomarkers measured in those samples with long-term health outcomes. The longer the follow-up, the more power there is in the study because we'd have a longer snapshot of the trajectory of declining kidney function in these people."

Provided by Joslin Diabetes Center

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