

Study will test promising treatment to forestall kidney disease among diabetics

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Paul Wild has been a reliable research volunteer at the University of Minnesota for 20 years, participating in two landmark studies that changed the standard of care for diabetes, a disease that afflicts more than 24 million Americans.

"Looking back, it was probably the best thing I ever did," said the Mendota Heights dentist.

Now, Wild, 61, is among 480 patients being recruited for a \$24 million, 3 {-year test to see whether a medication that has been used routinely to prevent gout can delay the onset of potentially fatal [kidney disease](#) in patients with Type 1 [diabetes](#).

If the study succeeds, the medication, called allopurinol, could be to [diabetic kidney disease](#) what baby aspirin is to heart attacks, said Dr. Luiza Caramori, an endocrinologist helping to oversee the study at the university. The drug could delay the need for dialysis and kidney transplants by eight to 10 years, she said, saving thousands of lives and tens of millions of dollars in medical spending.

Diabetes has reached epidemic proportions in the United States, with rates increasing so fast that researchers predict that 1 in 3 Americans born after 2000 could develop either type 1 or type 2. As many as 30 percent of diabetics will develop serious kidney disease within 20 years of their diagnosis, making it the leading cause of [kidney failure](#) in the United States. And because the waiting list for a kidney is so long,

hundreds of patients die each year waiting for a transplant.

While the University of Minnesota study is limited to subjects with Type 1 diabetes, Caramori said positive findings are likely also to benefit the far more common Type 2 diabetics.

"It's amazing that in the past 20 years we've basically made no progress in delaying kidney disease in patients with diabetes," she said. "It's also disappointing and scary, because the rates of complications are quite high in these patients."

Type 1 diabetes occurs when the immune system destroys the body's ability to produce insulin. It affects fewer than 1 in 10 diabetics. The much more common Type 2 often results from genetic predisposition, coupled with obesity and lifestyle factors, leading initially to resistance to the body's own insulin.

The University of Minnesota is one of seven U.S. sites and two international locations recruiting participants for the study.

Results from three small preliminary studies indicate that allopurinol shows real promise. It suppresses the production of an enzyme, xanthine oxidase, a result of metabolic activity, which can lead to excess acid in the urine.

It's also cheap and has been used in the United States for nearly 50 years to prevent gout flare-ups.

The study will assign subjects randomly to two equal groups. They will get either allopurinol or a placebo - neither the patients nor their doctors will know which - and they'll have to visit a study center or a site working remotely with the centers 17 times over three years for a variety of procedures and tests.

Diabetics account for about 45 percent of people with end-stage kidney disease. Caramori said the survival rate, once they enter dialysis, is very low.

"So there's a big fight trying to bring funds to diabetes research. There's a lot of money allocated to cancer that can benefit, of course, many patients. But even more funds are allocated to AIDS, for example, where the fraction of the population that's affected is much smaller," she said. Though both diseases are important, by comparison, she said, "We are not doing well in terms of spending money in diabetes research."

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