Does high uric acid predispose diabetic patients to kidney disease?

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Kidney disease poses one of the greatest burdens for people living with type 1 diabetes. A study newly awarded by the National Institutes of Health (NIH) will look at whether lowering uric acid levels can prevent people with type 1 diabetes from needing hemodialysis or kidney transplant.

David Maahs, MD, associate professor at the University of Colorado School of Medicine, Barbara Davis Center for Childhood Diabetes has been awarded a 5 year grant for $2.4 million dollars to evaluate the benefit of a drug called allopurinol, an FDA approved drug to lower uric acid. The money is part of a larger $24.3 million grant to the Joslin Diabetes Center.

"We are doing the study to see if we can slow down the decline of kidney function by decreasing uric acid. There are data showing moderately high serum uric acid levels increase progression to diabetic kidney disease," said Maahs. "If this is successful it could result in another method to prevent kidney disease in people with type 1 diabetes."

Ten to 15 percent of patients with type 1 diabetes develop advanced stage kidney disease. Uric acid is produced from the natural breakdown of your body's cells and from the foods you eat. Most uric acid is removed from the body in urine but if too much is produced, the level in the blood will increase. If uric acid increases then so does the risk for kidney disease.

Currently, the only ways to prevent diabetic kidney disease is tight control of blood sugar and blood pressure. If allopurinol can halt the loss of kidney function in people with type 1 diabetes, it could be an additional safe and inexpensive way to prevent or delay kidney failure.

Provided by University of Colorado Denver