

Simple urine test may help identify individuals with diabetes at risk for cognitive decline

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The presence of protein in the urine may be a marker of risk for future cognitive decline in patients with type 2 diabetes and normal kidney function, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society of Nephrology (CJASN)*. The finding suggests that urinary protein may be an early warning sign regarding patients' cognitive abilities.

Individuals with diabetes have an increased risk of experiencing cognitive impairment, especially impairment due to vascular causes. Joshua Barzilay, MD (Kaiser Permanente of Georgia/Emory School of Medicine), Lenore Launer, PhD (National Institute on Aging) and their colleagues evaluated whether albuminuria—a kidney complication that is common in people with diabetes and is characterized by protein excretion in the urine—predicts cognitive decline in older adults with diabetes.

The researchers studied 2977 diabetics with an average age of 62 years. Patients were recruited between August 2003 and December 2005 and were followed until June 2009. Participants underwent three [neuropsychological tests](#): at the start of the study and again at 20 and 40 months. Tests included information processing speed, [verbal memory](#), and executive function.

People with persistent albuminuria over four to five years had greater

percent declines on information processing speed than participants without albuminuria. Persistent and progressive albuminuria were linked with a greater than 5% decline in information processing speed scores but not with verbal memory or executive function performance.

"Our finding was a subtle change in cognition; however, were this decline to continue over 10 to 15 years it could translate into noticeable [cognitive decline](#) by the age of 75 to 80 years, when cognitive impairment generally becomes clinically evident," said Dr. Barzilay.

"Given how common albuminuria and diabetes are in the older population, these findings have a great deal of importance from a population point of view. Moreover, albuminuria is also common among older people with hypertension without diabetes."

More information: The article, entitled "Albuminuria and Cognitive Decline in People With Diabetes and Normal Renal Function," will appear online on August 29, 2013, [DOI: 10.2215/CJN.11321112](https://doi.org/10.2215/CJN.11321112)

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