

Kidney impairment decreases blood flow to the brain, boosting risk of brain disorders

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Impaired kidney function may lead to decreased blood flow to the brain, and ultimately to the occurrence of stroke or dementia. The findings, which come from a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology* (JASN), suggest that maintaining optimal kidney health can provide benefits to the brain.

Stroke and dementia are more common in patients with [chronic kidney disease](#) than in individuals in the general population, but it's unclear why. To investigate a potential kidney-brain link, M. Arfan Ikram, MD, PhD, Sanaz Sedaghat, MSc (Erasmus University Medical Center, in the Netherlands), and their colleagues examined information on 2645 participants in the population-based Rotterdam Study, looking at individuals' [kidney function](#) and [blood flow](#) to the brain.

The investigators found that poor kidney function was strongly related to decreased blood flow to the brain, or hypoperfusion. Also, poor kidney function was linked to stroke and dementia most strongly in participants with hypoperfusion. These findings were independent from known cardiovascular risk factors.

"Our findings provide a possible explanation linking kidney disease to brain disease," said Dr. Ikram. "Also, given that kidney disease and hypoperfusion of the brain are both possibly reversible, there might be an opportunity to explore how improving these conditions can ultimately reduce one's risk of developing brain disease." The study also shows that the kidney-brain link is not confined to patients with chronic [kidney](#)

[disease](#), but extends to persons from the general population without overt disease.

More information: The article, entitled "Kidney Function and Cerebral Blood Flow: The Rotterdam Study," will appear online at jasn.asnjournals.org/ on August 6, 2015.

Provided by American Society of Nephrology

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