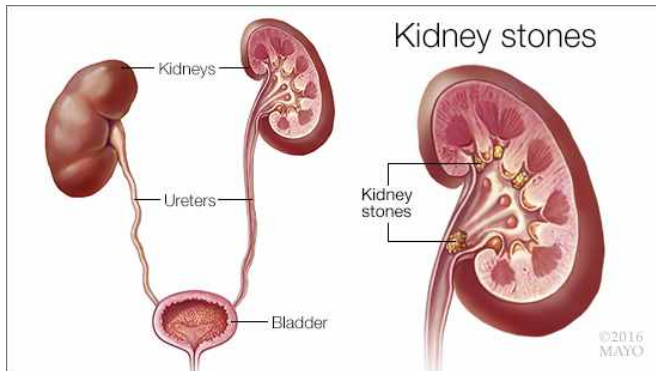


# Research connects first-time kidney stone formers and chronic kidney disease

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Credit: Mayo Clinic

Mayo Clinic nephrologists have uncovered a connection between first-time kidney stone formers and chronic kidney disease. In a paper published today in *Mayo Clinic Proceedings*, researchers announce a persistent decline in kidney functioning following an individual's first case of kidney stones.

A Mayo Clinic team led by William Haley, M.D., and Andrew Rule, M.D., assessed a group of 384 stone formers three months after their first stone event to study the effect of [kidney stones](#) on their kidney function. Compared to the control group, kidney stone formers maintained higher levels of the blood marker cystatin C and higher levels of urine protein ? both of which are connected with higher risk of [chronic kidney disease](#).

"Even after adjusting for other risk factors, including urine chemistries, hypertension and obesity, we still found that those with a kidney stone episode had subsequent abnormal kidney function," says Dr. Rule. "This helps us better understand the long-term implications of kidney stones beyond recovery time."

Kidney stones affect just over 7 percent of adults, and that number has been on the rise. Though previous studies have identified a long-term risk of chronic kidney disease in kidney stone formers, prior research has not assessed [kidney function](#) immediately after their first stone event.

The small, hard mineral deposits that characterize kidney stones can cause severe pain, nausea and difficulty passing urine. An increased risk of chronic kidney disease, however, could make the condition one that has a more long-term impact on an individual's health.

"This research shows that the implications of kidney stones may go beyond the discomfort they are so often associated with," says Dr. Rule. "Prevention of kidney stones may be beneficial for a person's overall kidney health."

**More information:** William E. Haley et al. Kidney Function After the First Kidney Stone Event, *Mayo Clinic Proceedings* (2016). [DOI: 10.1016/j.mayocp.2016.08.014](#)

Provided by Mayo Clinic

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