

Will a warmer climate mean more kidney stones?

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U.S. study finds rates of these painful blockages are rising along with temperatures.

(HealthDay)—Add another possible woe to the growing list of consequences of climate change: Kidney stones.

A new study of American cities suggests that rising temperatures may increase the number of people who develop the painful urinary obstructions.

"These findings point to potential public health effects associated with global [climate change](#)," study leader Dr. Gregory Tasian, a pediatric urologist and epidemiologist at The Children's Hospital of Philadelphia, said in a hospital news release.

His team examined the medical records of more than 60,000 adults and children who were diagnosed with kidney stones between 2005 and 2011, and compared that information with daily [temperature](#) data.

The patients lived in cities with various types of climates: Atlanta, Chicago, Dallas, Los Angeles and Philadelphia.

As average annual daily temperatures rose above 50 degrees Fahrenheit, the risk of people developing kidney stones within 20 days increased in all cities except Los Angeles. Rates of [kidney stone](#) diagnoses also tended to peak within three days of hot weather.

"Although 11 percent of the U.S. population has had kidney stones, most people have not," Tasian noted. However, he believes that "it is likely that higher temperatures increase the risk of kidney stones in those people predisposed to stone formation."

That's because warmer temperatures contribute to dehydration, which results in a higher concentration of calcium and other minerals in the urine that can spur kidney stones, Tasian explained.

"Kidney stone prevalence has already been on the rise over the last 30 years, and we can expect this trend to continue, both in greater numbers and over a broader geographic area, as daily temperatures increase," Tasian said.

The study uncovered a connection between higher temperatures and risk of kidney stones, but didn't prove cause-and-effect. It was published July 9 in the journal *Environmental Health Perspectives*.

More information: The U.S. National Library of Medicine has more about [kidney stones](#).

Taisan GE et al, "Daily Mean Temperature and Clinical Kidney Stone Presentation in Five U.S. Metropolitan Areas: A Time Series Analysis," *Environmental Health Perspectives*, published July 10, 2014.

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