

Women twice as likely to suffer infection with kidney stones and other urinary blockages

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While more men than women develop kidney stones and other obstructions in the urinary tract, women are more than twice as likely to suffer infections related to the condition, according to a new study led by Henry Ford Hospital researchers.

The researchers also found significantly higher rates of complications following one of two urgent treatments for the effects of urolithiasis – or stones in the kidneys and urinary tract – but stressed that this finding is based on preliminary and more research is needed.

The findings were published today in the peer-reviewed *European Urology*, the official publication of the European Association of Urology.

Not only did the study find that women are far more susceptible to infection when they develop urolithiasis, it also showed that the incidence of infection, including [sepsis](#) – a potentially fatal inflammation throughout the body touched off by infection – is on the rise.

The rate of related deaths, however, held steady, whom the researchers said is likely a result of "broad improvement in the management of sepsis and the critically ill."

"The research study was conducted because the rate of [infection](#) related

to urolithiasis was not known, and evidence was unclear about the best method for treating it," said the study's lead author, Jesse Sammon, DO, Urology Resident at Henry Ford's Vattikuti Urology Institute.

Nearly 400,000 [adult patients](#) hospitalized with infected urolithiasis from 1999-2009 were identified in the Nationwide Inpatient Sample, the largest all-payer inpatient care database in the U.S. Researchers then determined how often they were treated with either of two techniques – retrograde ureteral catheterization, or RUC, and percutaneous nephrostomy, or PCN.

In RUC, a [catheter](#) is inserted through the ureter to drain blocked urine and relieve pressure on the kidney. With PCN, a surgical instrument is used to pierce the patient's back, and then the kidney.

During the 10-year period studied by the researchers, the incidence of infected urolithiasis in [women](#) increased from 15.5 per 100,000, to 27.6. In men, there was an increase of 7.8 per 100,000, to 12.1. Related sepsis rose from 6.9 percent of urolithiasis patients to 8.5 percent, and severe sepsis increased from 1.7 percent to 3.2 percent.

While higher rates of sepsis, severe sepsis and prolonged hospital stays were found to be associated to PCN, the researchers cautioned that certain important variables required for comparison are not included in available data.

So conclusions that might be used to guide current and future treatment options would be hypothetical, they said, "demonstrating the pressing need for further study."

Provided by Henry Ford Health System

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