

# E coli infection linked to long-term health problems

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People who contract gastroenteritis from drinking water contaminated with *E coli* are at an increased risk of developing high blood pressure, kidney problems and heart disease in later life, finds a study published online in the *British Medical Journal*.

The findings underline the importance of ensuring a safe food and water supply and the need for regular monitoring for those affected.

It is estimated that *E coli* O157:H7 infections cause up to 120,000 gastroenteric illnesses annually in the US alone, resulting in over 2,000 hospitalizations and 60 deaths. However, the long term health effects of *E coli* infection in adults are largely unknown.

A team of researchers from Lawson Health Research Institute (Lawson) and The University of Western Ontario (Western) assessed the risk for hypertension, renal impairment and cardiovascular disease within eight years of gastroenteritis from drinking contaminated water.

The team used data from the Walkerton Health Study, the first study to evaluate long term health after an outbreak of gastroenteritis in May 2000 when a municipal water system became contaminated with *E coli* O157:H7 and *Campylobacter* bacteria.

Study participants were surveyed annually and underwent a physical examination and laboratory assessment to track their long term health.

Of 1,977 adult participants, 1,067 (54%) experienced [acute gastroenteritis](#), of which 378 sought medical attention.

Compared with participants who were not ill or only mildly ill during the outbreak, participants who experienced acute gastroenteritis were 1.3 times more likely to develop hypertension, 3.4 times more likely to develop renal impairment, and 2.1 times more likely to have a [cardiovascular event](#), such as a heart attack or stroke.

"Our findings underline the need for following up individual cases of food or water poisoning by [E coli](#) O157:H7 to prevent or reduce silent progressive vascular injury," says Dr. William Clark, Scientist at Lawson, Nephrologist at London Health Sciences Centre and Professor of Nephrology at Western's Schulich School of Medicine & Dentistry. "These long term consequences emphasize the importance of ensuring safe food and water supply as a cornerstone of public health."

Provided by University of Western Ontario

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