

No elevated 10-year risk of heart disease for people who become ill during a large *E. coli* outbreak

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According to a new study in *CMAJ* (*Canadian Medical Association Journal*), people who became ill during the Walkerton, Ontario, *Escherichia coli* O157:H7 outbreak were not at greater risk of heart disease or stroke 10 years later.

E. coli O157:H7 is a common cause of 'food poisoning.' This bacterium most recently caused the outbreak involving beef from XL foods (Alberta) in September 2012, and was the major cause of illness during the large Walkerton *E. coli* outbreak in May 2000. In the United States, there are 63 000 infections each year, with 12 major outbreaks since 2006. This bacterium is notorious for damaging the kidneys and can cause [high blood pressure](#). Thus, there is a concern that people infected with *E. coli* may be at risk of heart attack and stroke years later.

The study involved 898 adults who had consumed drinking water that was polluted by [cow manure](#) in Walkerton in May 2000. At that time, more than 2300 people became ill with severe [gastroenteritis](#), and 7 died. Researchers linked data from the Walkerton Health Study to large health care databases in the province of Ontario.

"We found that the 10-year risk for cardiovascular disease was not higher among adults who had severe gastroenteritis during an *E. coli* O157:H7 outbreak," writes Dr. Amit Garg, a kidney specialist and professor of medicine, epidemiology at Western University, Lawson

Health Research Institute, London, Ont., and scientist, Institute for Clinical Evaluative Sciences, Toronto, Ont., with coauthors. "Although we definitely want to avoid anyone getting infected in the first place, this new information is reassuring for those who develop an infection from *E. coli* O157:H7."

Previous studies by the same authors have described a higher incidence of high blood pressure and [chronic kidney disease](#) after *E. coli* O157:H7 infection. There was also the suggestion of a higher risk of cardiovascular disease, but this relied on participant recall of cardiovascular events. The current study examined cardiovascular disease events recorded in large health care databases at the time of hospitalization, and did not have the limitation of participant recall.

Close scrutiny of people in Walkerton by community physicians and visiting health care professionals may have helped prevent heart disease. These efforts included screening and extra care for hypertension and kidney disease. Prescriptions for hypertension medications increased 8-fold among participants from Walkerton compared with a 3-fold increase among people in nearby communities.

More information: www.cmaj.ca/lookup/doi/10.1503/cmaj.112161

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