

# Air pollution may trigger appendicitis

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A new study in *CMAJ* (*Canadian Medical Association Journal*) suggests that air pollution may trigger appendicitis in adults.

The study, conducted by researchers at the University of Calgary, University of Toronto and Health Canada, looked at 5191 adults admitted to hospital in Calgary, Alberta, Canada. Fifty-two per cent of admissions occurred between April and September, the warmest months of the year in Canada during which people are more likely to be outside.

The dominant theory of the cause of [appendicitis](#) has been obstruction of the appendix opening, but this theory does not explain the trends of appendicitis in developed and developing countries. Appendicitis cases increased dramatically in industrialized countries in the 19th and early 20th centuries, then decreased in the middle and late 20th century, coinciding with legislation to improve air quality. The incidence of appendicitis has been growing in developing countries as they become more industrialized.

Using Environment Canada's air pollution data for Calgary, the researchers determined the levels of ozone, nitrogen dioxide and other air-borne pollutants along with temperature. They found correlations between high levels of ozone and nitrogen dioxide and the incidence of appendicitis between age groups and genders. More men than women were found to have the condition.

"For unexplained reasons, men are more likely than women to have appendicitis," write Dr. Gilaad Kaplan of the University of Calgary and

coauthors. "Men may be more susceptible to the effects of outdoor air pollution because they are more likely to be employed in outdoor occupations," although they note that misclassifications of data could explain some of the difference.

While it is not known how [air pollution](#) may increase the risk of appendicitis, the authors suggest pollutants may trigger inflammatory responses. They recommend further studies to determine the link.

More information: <http://www.cmaj.ca/press/cmaj082068.pdf>

Source: [Canadian Medical Association Journal](#) ([news](#) : [web](#))

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