



FOR IMMEDIATE RELEASE  
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**Air Pollution May Increase Risk of Appendicitis**  
*Researchers Offer Provocative New Theory for Common Cause of Surgery*

**Orlando, FL, October 6, 2008** – Could there be a link between high levels of air pollution and the risk of appendicitis? New research presented at the 73<sup>rd</sup> Annual Scientific Meeting of the American College of Gastroenterology in Orlando, suggests a novel connection.

“Adult onset appendicitis is a common condition whose cause is unclear and almost universally requires surgery,” explained Dr. Gilaad G. Kaplan of the University of Calgary.

Dr. Kaplan and his colleagues identified more than 45,000 adults who were hospitalized for appendicitis in Calgary between 1999 and 2006. In collaboration with research scientists from the Air Health Effects Division of Health Canada, the team used data from Environment Canada’s National Air Pollution Surveillance (NAPS) monitors that collect hourly levels of ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, and particulate matter of varying sizes. Regression analysis was used to evaluate whether short-term daily changes in air pollution levels were related to the development of appendicitis.

**More Appendicitis Hospitalizations on “High Ozone” Days**

When researchers compared the 5-day average of ozone concentrations prior to admission to the hospital, patients were approximately 15 percent more likely to be hospitalized for appendicitis on days of highest ozone concentrations compared to days of lowest ozone concentrations. Similar findings were seen for sulfur dioxide, nitrogen dioxide, and particulate matter, though with lower effect. Notably, the effect of air pollution was strongest during the summer months, when people were more likely to be outside.

Exposure to air pollutants, particularly ozone, was associated with a modest increased risk of developing appendicitis. Previous studies have shown that air pollution may promote other disease states through inflammation, and this may be the mechanism by which air pollution increases the risk of appendicitis.

“If the relationship between air pollution and appendicitis is confirmed, then improving air quality may prevent the occurrence of appendicitis in some individuals,” said Dr. Kaplan.

**About the American College of Gastroenterology**

Founded in 1932, the American College of Gastroenterology (ACG) is an organization with an international membership of more than 10,000 individuals from 80 countries. The College is committed to serving the clinically oriented digestive disease specialist through its emphasis on scholarly practice, teaching and research. The mission of the College is to serve the evolving

needs of physicians in the delivery of high quality, scientifically sound, humanistic, ethical, and cost-effective health care to gastroenterology patients.

The ACG is committed to providing accurate, unbiased and up-to-date health information. Visit the ACG Web site [www.acg.gi.org](http://www.acg.gi.org) to access educational resources for patients and their families spanning the broad range of digestive diseases and conditions - both common and not-so-common. Organized by disease, state and organ system, these educational materials, developed by ACG physician experts, are offered for the information and benefit of patients and the public.

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