

Appendicitis may be related to viral infections

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Can you catch appendicitis? And if you do, is it necessarily an emergency that demands immediate surgery?

Yes and no, according to a new study by UT Southwestern Medical Center surgeons and physicians.

The researchers evaluated data over a 36-year period from the National Hospital Discharge Survey and concluded in a paper appearing in the January issue of *Archives of Surgery* that [appendicitis](#) may be caused by undetermined viral infection or infections, said Dr. Edward Livingston, chief of GI/endocrine surgery at UT Southwestern and senior author of the report.

The review of hospital discharge data runs counter to traditional thought, suggesting that appendicitis doesn't necessarily lead to a burst appendix if the organ is not removed quickly, Dr. Livingston said.

"Just as the traditional appendix scar across the abdomen is fast becoming history, thanks to new single-incision surgery techniques that hide a tiny scar in the bellybutton, so too may the conventional wisdom that patients with appendicitis need to be operated on as soon as they enter the hospital," said Dr. Livingston. "Patients still need to be seen quickly by a physician, but emergency surgery is now in question."

Appendicitis is the most common reason for emergency general surgery, leading to some 280,000 appendectomies being performed annually.

Appendicitis was first identified in 1886. Since then, doctors have presumed quick removal of the appendix was a necessity to avoid a subsequent bursting, which can be an emergency. Because removing the appendix solves the problems and is generally safe, removal became the standard medical practice in the early 20th century.

But this latest research studying appendicitis trends from 1970 to 2006 suggests immediate removal may not be necessary. Evidence from sailors at sea without access to immediate surgery and from some children's hospitals, whose practice did not call for [emergency surgery](#), hinted that non-perforated appendicitis may resolve without [surgery](#), said Dr. Livingston.

In undertaking the study, the researchers screened the diagnosis codes for admissions for appendicitis, influenza, rotavirus and enteric infections. They found that seasonal variations and clustering of appendicitis cases support the theory that appendicitis may be a viral disease, like the flu, Dr. Livingston said.

Statistical data revealed peaks, which may be outbreaks of appendicitis, in the years 1977, 1981, 1984, 1987, 1994 and 1998. In addition, researchers uncovered some seasonal trends for appendicitis, documenting a slight increase in appendicitis cases during the summer.

"The peaks and valleys of appendicitis cases generally matched up over time, suggesting it is possible that these disorders share common etiologic determinates, pathogenetic mechanisms or environmental factors that similarly affect their incidence," Dr. Livingston said.

Researchers have been able to rule out flu and several other common infections as a direct cause. They also were able to rule out several types of intestinal viruses.

Appendicitis afflicts about one in 10 people during their lifetime. The condition occurs when the appendix becomes obstructed, but doctors are unsure why. Dr. Livingston and other UT Southwestern researchers in 1995 identified an unexpected rise in appendicitis cases, reversing a downward trend throughout the previous 25 years.

"Though appendicitis is fairly common, it still remains a frustrating medical mystery," Dr. Livingston said. "While we know surgical removal is an effective treatment, we still don't know the purpose of the appendix, nor what causes it to become obstructed."

Provided by UT Southwestern Medical Center

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