

# Antibiotics could be alternative to surgery as treatment for appendicitis

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A study by researchers at the University of Southampton shows that antibiotics may be an effective treatment for acute non-complicated appendicitis in children, instead of surgery.

The systematic review of existing literature is published in *Pediatrics*.

The condition, which causes the appendix—a small organ attached to the large intestine—to become inflamed due to a blockage or infection, affects mainly children and teenagers. Appendicitis is currently treated through an operation to remove the appendix, known as an appendectomy, and it is the most common cause of emergency surgery in children.

The review, led by Nigel Hall, Associate Professor of Paediatric Surgery at the University of Southampton, assessed existing literature published over the past 10 years that included 10 studies reporting on 413 children who received non-operative [treatment](#) rather than an appendectomy.

It shows that no study reported any safety concern or specific adverse events related to non-surgical treatment, although the rate of recurrent appendicitis was 14 per cent.

Mr Hall, who is also a Consultant Paediatric and Neonatal Surgeon at Southampton Children's Hospital, commented: "Acute appendicitis is one of the most common general surgical emergencies worldwide and surgery has long been the gold standard of treatment. But it is invasive

and costly, not to mention extremely daunting for the child concerned and their family. Our review shows that antibiotics could be an alternative treatment method for children. When we compared the adult literature to the data in our review it suggested that antibiotic treatment of [acute appendicitis](#) is at least as effective in children as in adults. This now needs to be explored more widely."

The review says that longer term clinical outcomes and cost effectiveness of antibiotics compared to appendicectomy require further evaluation, preferably as large randomised trials to reliably inform decision making.

To further this research Mr Hall and his team in Southampton, along with colleagues at St George's Hospital in Tooting, Alder Hey Children's Hospital in Liverpool and Great Ormond Street Hospital, are currently carrying out a year-long feasibility trial which will see children with [appendicitis](#) randomly allocated to have either surgery or antibiotic treatment.

Mr Hall said: "In our initial trial, we will see how many patients and families are willing to join the study and will look at how well children in the study recover.

"This will give us an indication of how many [children](#) we may be able to recruit into a future larger trial and how the outcomes of non-operative treatment compare with an operation."

**More information:** Efficacy and Safety of Non-Operative Treatment for Acute Uncomplicated Appendicitis: A Meta Analysis, March 2017, *Pediatrics* (published online on Friday 17 February).

Provided by University of Southampton

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