



## Extended Research Article

# Eradication of *Helicobacter pylori* for prevention of aspirin-associated peptic ulcer bleeding in adults over 65 years: the HEAT RCT

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Published August 2025

DOI: 10.3310/LLKF7871

## Plain language summary

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Health Technology Assessment 2025; Vol. 29: No. 42

DOI: 10.3310/LLKF7871

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# Plain language summary

## Background

Low-dose aspirin is valuable in protecting people at increased risk from having heart attacks and strokes, but increases the risk of bleeding, particularly from stomach ulcers. The main cause of stomach ulcers is the bacteria *Helicobacter pylori*. We carried out a trial to test whether antibiotic treatment to eradicate *Helicobacter pylori* would protect participants from ulcer bleeding.

## Methods

General practitioners in 1208 United Kingdom general practices searched their records to find people aged 60 and over who were taking low-dose aspirin. We used a breath test to detect *H. pylori* infection. Those with a positive result were randomly assigned to receive well-established eradication treatment with two antibiotics (clarithromycin and metronidazole) and a drug that reduces stomach acidity (lansoprazole), or matching placebos (dummy pills) twice daily for a week. We used routinely collected general practitioner and hospital data and death certificates to see if the treatment reduced the outcome of hospitalisation or death from ulcer bleeding.

## Findings

We breath tested over 30,000 people. Over 5000 tested positive and were randomly assigned to receive active treatment (2677 people) or placebos (2675 people). Over an average of 5 years' follow-up, 44 people were hospitalised because of ulcer bleeding. People who had received active treatment were 65% less likely to develop ulcer bleeding in the first 2.5 years compared to those who had received placebos. However, this benefit reduced after longer follow-up, and there was no difference between the treatments when data from beyond 2.5 years were included in the analysis. *H. pylori* eradication was not cost-effective because of the large number of subjects that needed to be treated to prevent one ulcer bleed.

## Conclusion

*Helicobacter pylori* eradication protects against ulcer bleeding in people on aspirin, but this may not be sustained.

# Health Technology Assessment

ISSN 2046-4924 (Online)

Impact factor: 4

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## This article

The research reported in this issue of the journal was funded by the HTA programme as award number 09/55/52. The contractual start date was in March 2012. The draft manuscript began editorial review in August 2023 and was accepted for publication in February 2025. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' manuscript and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this article.

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