

# Study finds constipation is a significant risk factor for major cardiac events

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An international study led by Monash University researchers has found a surprising connection between constipation and an increased risk of major adverse cardiac events (MACE), including heart attacks, strokes

and heart failure.

The study, led by Professor Francine Marques from the School of Biological Sciences and [published](#) in the *American Journal of Physiology-Heart and Circulatory Physiology* analyzed data from over 400,000 participants in the UK Biobank.

"Our study suggests that constipation, a common yet often overlooked health issue, may be a significant contributor to [cardiovascular disease](#)," said Professor Marques.

"Traditional cardiovascular risk factors such as [high blood pressure](#), obesity and smoking have long been recognized as key drivers of heart disease," she said.

"However, these factors alone do not fully explain the occurrence of major cardiac events."

"This study explored the potential role of constipation as an additional risk factor, revealing concerning results."

The research team analyzed data from 408,354 individuals, identifying 23,814 cases of constipation.

The findings showed that individuals suffering from constipation were more than twice as likely to suffer from a major cardiac event as those without constipation.

Moreover, the study highlighted a particularly concerning link between constipation and hypertension.

Hypertensive individuals who also suffered from constipation were found to have a 34% increased risk of subsequent cardiac events

compared to those with hypertension alone.

"Our research suggests that constipation may exacerbate the cardiovascular risks associated with high blood pressure, further increasing the likelihood of heart attacks and strokes," Professor Marques said.

In addition to these epidemiological findings, the study also explored the genetic links between constipation and cardiovascular disease.

"Positive genetic correlations were identified between constipation and various forms of MACE, indicating that shared [genetic factors](#) may underlie both conditions. This discovery opens new avenues for research into the underlying mechanisms that connect gut health and heart health," Dr. Leticia Camargo Tavares, co-first author of the study, explained.

"The implications of this study are far-reaching," Professor Marques said.

"With constipation affecting an estimated 14% of the global population, particularly [older adults](#) and women, these findings suggest that a significant portion of the population may be at an increased risk of cardiovascular disease due to their bowel health," she said.

The study authors emphasized the need for further research to explore the [causal relationship](#) between [constipation](#) and MACE and to identify the specific biological pathways involved. One of these mechanisms may be via a "leaky gut." [The team is recruiting participants to answer this question.](#)

This research challenges the traditional understanding of cardiovascular risk factors and underscores the importance of considering gut health in

the prevention and management of heart disease.

As the global burden of cardiovascular disease continues to rise, these findings could pave the way for new strategies in personalized medicine, helping to identify individuals at higher risk and potentially reducing the incidence of life-threatening cardiac events.

**More information:** TENGHAO ZHENG ET AL, Constipation is associated with an increased risk of major adverse cardiac events in a UK population, *American Journal of Physiology-Heart and Circulatory Physiology* (2024). [DOI: 10.1152/ajpheart.00519.2024](https://doi.org/10.1152/ajpheart.00519.2024)

Provided by Monash University

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