

Link between high cholesterol and heart disease 'inconsistent', new study finds

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New research from RCSI University of Medicine and Health Sciences has revealed that the link between 'bad' cholesterol (LDL-C) and poor health outcomes, such as heart attack and stroke, may not be as strong as

previously thought.

Published in *JAMA Internal Medicine*, the research questions the efficacy of statins when prescribed with the aim of lowering LDL-C and therefore reducing the risk of cardiovascular disease (CVD).

Previous research has suggested that using statins to lower LDL-C positively affects health outcomes, and this is reflected in the various iterations of expert guidelines for the prevention of CVD. Statins are now commonly prescribed by doctors, with one third of Irish adults over the age of 50 taking statins, according to previous research.

The new findings contradict this theory, finding that this relationship was not as strong as previously thought. Instead, the research demonstrates that lowering LDL-C using statins had an inconsistent and inconclusive impact on CVD outcomes such as myocardial infarction (MI), stroke, and all-cause mortality.

In addition, it indicates that the overall benefit of taking statins may be small and will vary depending on an individual's personal risk factors.

The lead author on the paper is Dr. Paula Byrne from the HRB Centre for Primary Care Research based in RCSI's Department of General Practice. Commenting on the findings, Dr. Byrne says that "the message has long been that lowering your [cholesterol](#) will reduce your risk of heart disease, and that statins help to achieve this. However, our research indicates that, in reality, the benefits of taking statins are varied and can be quite modest."

The researchers go on to suggest that this updated information should be communicated to patients through informed clinical decision-making and updated clinical guidelines and policy.

This important discovery was a collaboration with Professor Susan M Smith, also of RCSI and with researchers from the University of New Mexico, USA, (Dr. Robert DuBroff), the Institute for Scientific Freedom in Denmark (Dr. Maryanne Demasi), Bond University in Australia (Dr. Mark Jones) and independent researcher Dr. Kirsty O'Brien.

More information: Evaluating the Association Between Low-Density Lipoprotein Cholesterol Reduction and Relative and Absolute Effects of Statin Treatment, *JAMA Internal Medicine* (2022). [DOI: 10.1001/jamainternmed.2022.0134](https://doi.org/10.1001/jamainternmed.2022.0134)

Provided by RCSI

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