

# Calcium and Vitamin D supplements are not associated with risk of heart attacks

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Calcium and Vitamin D supplements are not associated with risk of heart attacks. Credit: University of Southampton

New research from the University of Southampton has found no association between the use of calcium or vitamin D supplementation and cardiovascular events such as heart attacks.

Calcium and vitamin D supplements, which usually come in the forms of tablets, are widely used and have been generally viewed as relatively safe, but some researchers have previously raised concerns over potential links with cardiovascular disease.

In a new study, published in the *Journal of Bone and Mineral Research*, investigators from the Medical Research Council Lifecourse Epidemiology Unit, University of Southampton (MRC LEU), used the internationally unique UK Biobank cohort, comprising over 500,000 men and women aged between 40 and 69 years, to explore relationships between use of calcium and/or vitamin D supplementation and the risk of [cardiovascular events](#) such as heart attacks.

The analysis accounted for a wide range of other potential influences, and did not detect any statistically significant associations between use of the supplements and events such as heart attacks, hospital admission for angina, or related deaths.

The results are the first in such a large cohort of both men and women, with previous studies focused mainly on women. They are also the first to investigate the issue in such a large cohort in which both the exposures and the outcomes have been defined and sampled in a uniform fashion, with information on [cardiovascular outcomes](#) and deaths obtained from linkage to Hospital Episode Statistics and ONS Death Registry data.

Nicholas Harvey, Professor of Rheumatology and Clinical Epidemiology at the MRC LEU, University of Southampton, led the analysis. He said, "Calcium and vitamin D supplements are widely used in the population, and are particularly appropriate for those individuals at risk of deficiency in either nutrient. In this situation there is good evidence that they provide a modest reduction in fracture risk, although do not replace medications specifically licensed for the treatment of osteoporosis."

He added, "Whilst our current findings can never be absolutely definitive compared with those from a comprehensive randomised controlled trial, it is unlikely to be possible to undertake this sort of trial in practice, and our results provide reassuring findings with regard to cardiovascular outcomes, at least within the age range studied. Further

study will be needed as this population ages, to examine whether the lack of association persists into older age."

Professor Cyrus Cooper, Director and Professor of Rheumatology at the MRC LEU, University of Southampton said, "This work forms part of a larger programme of research at the MRC LEU, University of Southampton, addressing the determinants of osteoporosis and musculoskeletal health across the lifecourse, and demonstrates the importance of working with world leading globally unique resources such as the UK Biobank."

**More information:** Nicholas C Harvey et al. Calcium and Vitamin D Supplementation Are Not Associated With Risk of Incident Ischemic Cardiac Events or Death: Findings From the UK Biobank Cohort, *Journal of Bone and Mineral Research* (2018). [DOI: 10.1002/jbmr.3375](https://doi.org/10.1002/jbmr.3375)

Provided by University of Southampton

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