

Study adds weight to link between calcium supplements and heart problems

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New research published in the British Medical Journal today adds to mounting evidence that calcium supplements increase the risk of cardiovascular events, particularly heart attacks, in older women.

The findings suggest that their use in managing [osteoporosis](#) should be re-assessed.

[Calcium supplements](#) are often prescribed to older (postmenopausal) women to maintain bone health. Sometimes they are combined with [vitamin D](#), but it's still unclear whether taking calcium supplements, with or without vitamin D, can affect the heart.

The Women's Health Initiative (WHI) study - a seven-year trial of over 36,000 women – found no cardiovascular effect of taking combined calcium and vitamin D supplements, but the majority of participants were already taking personal calcium supplements, which may have obscured any adverse effects.

So a team of researchers, led by Professor Ian Reid at the University of Auckland, re-analysed the WHI results to provide the best current estimate of the effects of calcium supplements, with or without vitamin D, on the risk of [cardiovascular events](#).

They analysed data from 16,718 women who were not taking personal calcium supplements at the start of the trial and found that those allocated to combined calcium and vitamin D supplements were at an

increased risk of cardiovascular events, especially heart attack.

By contrast, in women who were taking personal calcium supplements at the start of the trial, combined calcium and vitamin D supplements did not alter their cardiovascular risk.

The authors suspect that the abrupt change in blood calcium levels after taking a supplement causes the adverse effect, rather than it being related to the total amount of calcium consumed. High blood calcium levels are linked to calcification (hardening) of the arteries, which may also help to explain these results.

Further analyses - adding data from 13 other trials, involving 29,000 people altogether - also found consistent increases in the risk of heart attack and stroke associated with taking calcium supplements, with or without vitamin D, leading the authors to conclude that these data justify a reassessment of the use of calcium supplements in older people.

But in an accompanying editorial, Professors Bo Abrahamsen and Opinder Sahota argue that there is insufficient evidence available to support or refute the association.

Because of study limitations, they say "it is not possible to provide reassurance that calcium supplements given with vitamin D do not cause adverse cardiovascular events or to link them with certainty to increased cardiovascular risk. Clearly further studies are needed and the debate remains ongoing."

Provided by British Medical Journal

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