

Calcium supplements linked to significantly increased heart attack risk

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Calcium supplements might increase the risk of having a heart attack, and should be "taken with caution," concludes research published in the online issue of the journal *Heart*.

Furthermore, boosting overall [calcium intake](#) from dietary sources confers no significant advantage in terms of staving off [heart disease](#) and stroke, the findings indicate.

Previous research has linked higher calcium intake with a lowered risk of [high blood pressure](#), [obesity](#), and [type 2 diabetes](#), all of which are [risk factors for heart disease](#) and stroke.

And [calcium supplements](#) are commonly recommended to elderly people and women who have gone through the [menopause](#) to prevent bone thinning.

The authors base their findings on almost 24,000 participants of one of the German arms of the European Prospective Investigation into Cancer and Nutrition (EPIC) study in Heidelberg.

All the participants were aged between 35 and 64 when they joined the study in 1994-8.

Normal [diet](#) for the preceding 12 months was assessed using food frequency questionnaires and they were quizzed about whether they regularly took vitamin or mineral supplements.

Their health was tracked for an average of 11 years, during which time 354 heart attacks, 260 strokes, and 267 associated deaths occurred.

After taking account of factors likely to influence the results, those whose diets included a moderate amount (820 mg daily) of calcium from all sources, including supplements, had a 31% lower risk of having a heart attack than those in the bottom 25% of calcium intake.

But those with an intake of more than 1100 mg daily did not have a significantly lower risk. There was no evidence that any level of calcium intake either protected against or increased the risk of [stroke](#), which backs up the findings of other research, say the authors.

But when the analysis looked at vitamin/mineral supplements, it found that those who took calcium supplements regularly were 86% more likely to have a heart attack than those who didn't use any supplements.

And this risk increased further among those who used only calcium supplements. They were more than twice as likely to have a heart attack as those who didn't take any supplements.

The authors conclude: "This study suggests that increasing calcium intake from diet might not confer significant cardiovascular benefits, while calcium supplements, which might raise [[heart attack](#)] risk, should be taken with caution."

In an accompanying editorial, Professors Ian Reid and Mark Bolland from the Faculty of Medical and Health Science at the University of Auckland in New Zealand, say that the safety of calcium supplements "is now coming under increasing scrutiny."

They point to previous research, showing a link between these supplements and kidney stones, and gut and abdominal symptoms, and

note that while trial evidence suggests that calcium supplements cut levels of cardiovascular risk factors, this doesn't actually translate into fewer heart attacks and strokes.

They also suggest that many women taking calcium supplements to ward off brittle bones are already healthier than those who don't, and that the overall protective effect is modest—in the order of just 10%.

The evidence that dietary calcium is helpful while calcium supplements are not can be explained by the fact that dietary calcium is taken in small amounts, spread throughout the day, so is absorbed slowly, they say.

Supplements, on the other hand, cause calcium levels in the blood to soar above the normal range, and it is this flooding effect which might ultimately be harmful, they suggest.

"Calcium supplements have been widely embraced by doctors and the public, on the grounds that they are a natural and therefore safe way of preventing osteoporotic fractures," they write.

"It is now becoming clear that taking this micronutrient in one or two daily [doses] is not natural, in that it does not reproduce the same metabolic effects as calcium in food," they say.

Given that it is neither safe nor effective, boosting calcium intake from supplements should be discouraged, they contend.

And they conclude: "We should return to seeing calcium as an important component of a balanced diet, and not as a low cost panacea to the universal problem of postmenopausal bone loss."

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