

High supplemental calcium intake may increase risk of cardiovascular disease death in men

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A high intake of supplemental calcium appears to be associated with an increased risk of cardiovascular disease (CVD) death in men but not in women in a study of more 388,000 participants between the ages of 50 and 71 years, according to a report published Online First by *JAMA Internal Medicine*.

[Calcium supplementation](#) has become widely used, especially among the [elderly population](#), because of its proposed bone health benefits. However, beyond calcium's established role in the prevention and treatment of osteoporosis, its health effect on nonskeletal outcomes, including cardiovascular health, remains largely unknown and has become "increasingly contentious," the authors write in the study background.

Qian Xiao, Ph.D., of the [National Cancer Institute](#), Bethesda, Md., and colleagues examined whether the intake of dietary and supplemental calcium was associated with mortality from total CVD, heart disease and [cerebrovascular diseases](#). The study participants were 388,229 men and women ages 50 to 71 years from the National Institutes of Health-AARP Diet and Health Study in six states and two metropolitan areas from 1995 through 1996.

"In this large, prospective study we found that supplemental but not [dietary calcium](#) intake was associated with an increased CVD mortality

in men but not in women," the authors conclude.

During an average 12 years of follow-up, 7,904 CVD deaths in men and 3,874 CVD deaths in women were identified and supplements containing calcium were used by 51 percent of men and 70 percent of women. Compared with non-supplement users, men with an intake of supplemental calcium of more than 1,000 mg/day had an increased risk of total CVD death (risk ratio [RR], 1.20), more specifically with heart disease (RR, 1.19), but not significantly with cerebrovascular disease death (RR, 1.14).

For women, supplemental calcium intake was not associated with CVD death, heart disease death or cerebrovascular disease death. Dietary [calcium intake](#) also was not associated with CVD death in men or women.

"Whether there is a sex difference in the cardiovascular effect of calcium supplement warrants further investigation. Given the extensive use of calcium supplement in the population, it is of great importance to assess the effect of supplemental calcium use beyond bone health," the authors conclude.

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