Risks outweigh benefits for calcium supplements: Meta-analysis

New research suggests that regularly taking calcium supplements might increase the risk of heart attack. (British Medical Journal, July 2010)

The study indicates that calcium supplements cause more cardiovascular events (such as heart attacks and stroke) than the number of fractures they prevent.

Calcium supplements are commonly taken by older people as a measure to reduce the effects of osteoporosis. The widely used supplements have been shown to marginally reduce the risk of fracture for osteoporosis sufferers and improve bone density, but very little research has been compiled on the risks of calcium supplementation.

The new study, led by Professor Ian Reid at the University of Auckland, is a meta-analysis of fifteen randomized trials on calcium supplements conducted in the last twenty years, with the aim to investigate the links between calcium supplementation and cardiovascular events.

From analyzing the data on the 12,000 people involved in the 15 trials, the researchers found that calcium supplements increase the risk of heart attack by about 30 percent. Although this increase in heart attack risk is modest, the researchers suggest that the widespread use of calcium supplements means “even a small increase in incidence of cardiovascular disease could translate into a large burden of disease in the population.” The researchers wrote: “The likely adverse effect of calcium supplements on cardiovascular events, taken together with the possible adverse effect on incidence of hip fracture and its modest overall efficacy in reducing fracture (about 10% reduction in total fractures) suggest that a reassessment of the role of calcium supplements in the prevention and treatment of osteoporosis is warranted.”

The results observed in this study only saw an increased risk in people using supplementation, and do not affect people with high dietary intakes of calcium. Professor Reid explained that this could be related to higher blood calcium levels from supplementation compared to dietary calcium – higher blood calcium levels are believed to lead to hardening of the arteries, which can cause heart attacks.

Prof. Reid believes the findings of the study indicate a need to review the use of calcium supplements in the general population, saying that the industry needed to “sit back and not just look at the benefits, but the clearly demonstrated risks.” Prof. Reid continued: “When you do the arithmetic, then it just doesn’t add up. The risks outweigh the benefits.”

Prof. Reid also believes that the study has broader implications for all nutritional supplements. He told NutraIngredients.com: “We have tended to focus on just the benefits of supplements without really looking at their safety. In the future I think we need to look at both the efficacy and the safety of supplements.

People assume that these supplements are natural. A high calcium meal is natural, but taking highly concentrated calcium tablets is not, and does not have the same effects” said Prof. Reid.

The Health Supplement Information Service responded to the research findings saying: “While the results of this meta-analysis are interesting and should encourage more research, the authors did not include the totality of the evidence on calcium supplementation and there were limitations to the analysis. For these reasons, it is not appropriate at this stage to change public health advice on the use of calcium supplements to maintain bone health.”

(Source: www.nutraingredients.com)