

Keep up your calcium!

The issue: There have been several recent stories and reports in the press and on radio about Calcium Supplements and an increased risk of heart attacks.

These reports are based on the results of a single study published in early 2008 by Prof. Ian Reid from the University of Auckland NZ, of 1471 women. The study suggested increased heart attack rates, results which differ from many other studies of calcium treatment.

The results of this one study do not provide sufficient evidence to recommend that older women should stop taking calcium supplements because of an increased risk of heart disease. The weight of evidence to date indicates no increased risk of heart attacks or stroke with increased calcium intakes from diet or supplements and certainly does not outweigh the 30% reduction in fractures with a high calcium diet with extra vitamin D if levels are low.

There have been a number of large, long-term studies of more than 10 years that have found no increased risk of heart disease or stroke when taking daily calcium supplements. In fact, one study actually found that consuming more calcium reduced the risk of heart attacks and strokes. For example,

- The *Nurses' Health Study* followed 85,764 women for 14 years, and found that there was a long-term protective effect of calcium supplementation on stroke (Iso H. et al 1999).
- In men (Health Professionals Follow-up Study), found that after 12 years, neither dietary, nor supplemental intakes of calcium were related to the risk of heart disease (Al-Delaimy WK. et al 2003).
- In 36,282 postmenopausal women who consumed calcium combined with vitamin D for 7 years, there was no effect on the number of strokes or heart attacks. (Hsia J. et al 2007).
- In an Australian study conducted in 1460 women with an average age of 75 yrs, who took either a calcium supplement or a placebo (blank tablet) for 5 years, there was no increased risk of heart disease in those taking the calcium supplement. (Prince et al 2006)

Calcium supplementation is effective in reducing fractures and reducing bone loss in older men and women, particularly in those on low intakes of dietary calcium (Tang et al. 2007).

Preventing a fracture when we are older means that we are more likely to be able to maintain a better quality of life as we age: remaining mobile, living independently and making sure we consume sufficient calcium can help reduce our risk of fracture. This should remain the case.

References

Iso H, Stampfer MJ, Manson JE, Rexrode K, Hennekens CH, Colditz GA, Speizer FE, Willett WC. Prospective study of calcium, potassium, and magnesium intake and risk of stroke in women. *Stroke*. 1999 Sep;30(9):1772-9

Al-Delaimy WK, Rimm E, Willett WC, Stampfer MJ, Hu FB. A prospective study of calcium intake from diet and supplements and risk of ischemic heart disease among men. *Am J Clin Nutr*. 2003 Apr;77(4):814-8

Hsia J, Heiss G, Ren H, Allison M, Dolan NC, Greenland P, Heckbert SR, Johnson KC, Manson JE, Sidney S, Trevisan M; Women's Health Initiative I Calcium/vitamin D supplementation and cardiovascular events. *Circulation*. 2007 Feb 20;115(7):846-54.

Tang BM, Eslick GD, Nowson C, Smith C, Bensoussan A. Use of calcium or calcium in combination with vitamin D supplementation to prevent fractures and bone loss in people aged 50 years and older: a meta-analysis. *Lancet*. 2007 Aug 25;370(9588):657-66.

The Burden of Brittle Bones, Epidemiology, Costs & Burden of Osteoporosis in Australia 2007 Prepared by The Department of Medicine, University of Melbourne, Western Hospital, Footscray, Victoria. For Osteoporosis Australia, Final Draft August 2007.

Prince RL, Devine A, Dhaliwal SS, Dick IM. Effects of calcium supplementation on clinical fracture and bone structure: results of a 5-year, double-blind, placebo-controlled trial in elderly women. *Arch Intern Med* 2006;166(8):869-75.

Grant AM, Avenell A, Campbell MK, McDonald AM, MacLennan GS, McPherson GC, et al. Oral vitamin D3 and calcium for secondary prevention of low-trauma fractures in elderly people (Randomised Evaluation of Calcium Or vitamin D, RECORD): a randomised placebo-controlled trial. *Lancet* 2005;365(9471):1621-8.