

## **Excess Calcium Intake Can Raise Your Risk of Cardiovascular Disease**

by Teri Lee Gruss, citizen journalist

(NaturalNews) Are postmenopausal women putting themselves at increased risk for cardiovascular disease and hip fractures by consuming excessive calcium? That is a question that two recent studies shed light on, one published January 2008 in the British Medical Journal (BMJ) and one published in the December issue of the American Journal of Clinical Nutrition (AJCN).

The British Medical Journal published the results of a University of Auckland, New Zealand study designed to assess the effects of calcium supplements on healthy postmenopausal women's risk for cardiovascular events including heart attack, stroke and sudden death.

The randomized, placebo controlled trial involved 1,471 postmenopausal women with an average age of 74 years old and was conducted over a five year period.

732 women were randomized to take calcium citrate (Citrical) in a 400 mg dose before breakfast and a 600 mg dose in the evening for a total of 1000 mg per day of supplemental calcium. 739 women were randomized to take a placebo. The women were evaluated every 6 months.

21 women in the calcium treated group and 10 women in the placebo group experienced a heart attack, the most common CVD (cardiovascular disease) event found. The calcium treated group had a 47% higher incidence of heart attack, stroke or sudden death.

Researchers, headed by Dr. Ian Reid, concluded that "Calcium supplementation in healthy postmenopausal women is associated with upward trends in cardiovascular event rates. This potentially detrimental effect should be balanced against the likely benefits of calcium on bone".

Dr. Reid noted that the study "does not unequivocally show an adverse cardiovascular effect of calcium but suggests that this matter needs to be considered carefully before calcium supplementation can be broadly advocated".

The AJCN published the results of a meta analysis study conducted at University Hospital Zurich that, according to Professor Heike Bischoff-Ferrari, found no protective association between hip fractures and intake of calcium over 555 mg per day.

Researchers reviewed randomized controlled studies involving over 5600 women 58 years old or older and found, according to a Reuters report that "calcium supplementation may increase the risk for hip fracture by 64%".

Professor Bischoff-Ferrari suggested that current recommendations for calcium may be too high and recommendations for vitamin D too low.

## **The current calcium AI (adequate intake) for American males and females:**

Age:AI for calcium:

1-3 years500 mg

4-8800

9-131300

14-181300

19-501000

51 >1200

*Adequate intake* is a recommendation that is made by the Food and Nutrition Board of the Institute of Medicine of the National Academy of Sciences (FNB/IOM/NAS). An AI recommendation is made when board members don't believe that there is enough scientific evidence to establish a RDA (recommended dietary allowance) for a specific nutrient.

According to the academic text *Understanding Nutrition* "An AI must rely more heavily on scientific judgments because sufficient evidence is lacking. An AI is expected to exceed average requirements. AIs are more tentative than RDA".

Current calcium recommendations are based on "balance studies" which measure the point at which calcium intake equals calcium excretion. Research suggests that this balance occurs at approximately 550 mg.

The FNB/IOM has established the Tolerable Upper Intake Level (UL) for calcium at 2500 mg daily for all age groups.

The FNB/IOM is reassessing the AI for vitamin D and most likely will increase recommendations when they conclude their review, which could take several years. Is it time for the FNB/IOM to reassess recommendations for calcium intake too?

## **Have you heard about the Calcium Paradox?**

The World Health Organization says of the calcium paradox: "hip fracture rates are higher in developed countries where calcium intake is higher than in developing countries where calcium intake is lower (and this) clearly calls for an explanation". Yes it does.

According to a recent report from Harvard School of Public Health, the "average daily intake (of calcium) in countries such as India and Japan is as low as 300 mg and that fracture rates are low" in these countries.

According to the WHO "In countries with a high fracture incidence, a minimum of 400-500 mg of calcium intake is required to prevent osteoporosis. The interaction between calcium intake and physical activity, sun exposure, and intake of other dietary components (e.g. vitamin D, vitamin K, sodium, protein) and protective phytonutrients, needs to be considered before recommending increased calcium intake in countries with low fracture incidence in order to be in line with recommendations for industrialized countries".

In other words, in countries with low fracture rates and low incidence of fractures, recommendations for increased calcium intake are not appropriate.

### **In the mean time...how can you avoid excess calcium intake?**

Assess your daily calcium intake from diet and supplements. Get out a piece of paper and add up your total daily calcium intake from foods *and* all nutritional supplements that you take. Learn the calcium content of the foods that you regularly eat. You can use the USDA Standard Reference data base to find the calcium content of hundreds of foods. You will find it at the following link: (<http://www.nal.usda.gov/fnic/foodco...>) .

Consider the following dietary sources of calcium:

- \* 1 cup milk 300 mg
- \* 1 cup calcium fortified orange juice 300 mg
- \* 1 cup low fat yogurt 345-400 mg
- \* 1 ounce cheddar cheese has about 204 mg
- \* 1 cup cottage cheese 300 mg
- \* ½ cup cooked beans 45-113 mg
- \* ½ cup cooked spinach 115 mg
- \* ½ cup cooked broccoli 35 mg

You can see that two servings of yogurt, one of milk and one ounce of cheese contains about 1300 mg of calcium. If you add daily vegetable *and* bean sources of calcium *and* multiple vitamin mineral *and* calcium/vitamin D supplements you may well be exceeding the daily AIs for calcium and may also be exceeding the daily UL. Is calcium deficiency really as likely as we have been led to believe?

Millions of American women use calcium/vitamin D supplements like Bayer's Citrical™ and Wyeth's Caltrate™. Both of these pharmaceutical companies heavily promote their calcium supplements.

Dosage suggestions on these products range from 400 mg to over 1200mg a day. Your daily dietary intake of calcium is your best guideline for deciding if and how much supplemental calcium you may (or may not) need.

Since our food supply is increasingly fortified with calcium, don't forget to add calcium fortified food sources like fruit and vegetable juices, butter substitutes, cereals, and dry beverage mixes into your daily totals. According to the USDA nutrient database just one cup of General Mill's

whole grain Total cereal contains 1000 mg of calcium, and that doesn't include the milk. Are people really aware of just how much calcium is in their daily diets?

Like other vital nutrients, optimal amounts of calcium promote health *but* excesses come with serious adverse side effects. Excess calcium puts us at increased risk for soft tissue calcification, atherosclerosis, heart attack, stroke and, according to new evidence, increased risks for hip fractures.

How much calcium do we really require for bone health, cardiovascular health, overall health? That is becoming less clear, but well designed large scale studies are indicating that we may require much less than we have been led to believe.

Sources:

BMJ, 1/15/2008, *Vascular events in healthy older women receiving calcium supplementation: randomised controlled trial* (<http://www.bmj.com/cgi/content/full...>)

American Journal of Clinical Nutrition, Vol. 86, No. 6, 1780-1790, December 2007, *Calcium intake and hip fracture risk in men and women: a meta-analysis of prospective cohort studies and randomized controlled trials* (<http://www.ajcn.org/cgi/content/abs...>)

*Understanding Nutrition*, E. Whitney & S. Rolfes, Wadsworth, 2002, p. 14

Calcium content of commonly eaten foods:

UCLA: Calcium Content of Food (<http://gotblood.ucla.edu/Documents/...>)

Harvard School of Medicine:

(<http://body.aol.com/learn-about-it/...>)

Recommendations for preventing osteoporosis, World Health Organization

(<http://www.who.int/nutrition/topics...>)

Journal of Food Composition and Analysis

Volume 18, Issue 6, September 2005, Pages 595-598

Calcium fortification of food can add unneeded dietary phosphorus

Additional reading from NaturalNews:

Bill Sardi's article The Cause Of Heart Disease: High Cholesterol or Excess Calcium?

NaturalNews, Monday, December 17