

According to American Journal of Clinical Nutrition, dietary calcium contributes to denser bone among postmenopausal women

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DIETARY CALCIUM CONTRIBUTES TO DENSER BONE AMONG POSTMENOPAUSAL WOMEN

Postmenopausal women consuming the recommended dietary allowance of calcium have stronger and denser bones, and therefore are less prone to fractures, than similar women who consume less calcium, according to a study published in the November issue of the American Journal of Clinical Nutrition.

The study supports the notion that dietary calcium can help prevent osteoporosis or fragile bone disease in elderly women, a common cause of skeletal disease affecting an estimated 15-20 million American women.

"This paper suggests that all women should be alert throughout their lives, up to and through menopause, to consume calcium," said Paul Saltman, a professor of biology at the University of California, San Diego and one of the study's principal investigators.

"If you do, you can significantly lower your risk of osteoporosis," he added.

As outlined, some 131 San Diego women volunteers, aged 52-92, were each given a food-frequency questionnaire to determine their dietary calcium intake. Subjects were asked to estimate the amount and frequency of foods consumed over the past year from a list of 18 food or food-related categories. Portion sizes were rated as small, medium or large; frequency of consumption was rated as per day, week, month or year.

Volunteers were then scanned with an imaging device called a dual-photon absorptiometer, which measures the bone density of the lumbar spine region. The spine is particularly sensitive to bone loss.

The scans demonstrated that women who consumed an average of 878 milligrams per day of calcium--slightly higher than the recommended dietary allowance (RDA) of 800 milligrams per day for adults aged 25 and older--had greater than 5 percent more bone mass than women with an average of 402 milligrams of calcium per day. According to previous studies, an extra 5 percent bone density can reduce fracture risk by 50 percent.

Saltman noted that the only significant difference between the two groups of women was their intake of calcium. He added that 80 percent of the subjects ate less than the calcium RDA, which is equivalent to three daily servings of calcium-rich food.

"One-third of all women postmenopausally will have a fracture at some site before they die," said Saltman. "That's a serious public health problem and that's why we addressed this issue.

"We've shown you don't have to look for magic bullets, you don't have to clone a gene," he added.

"We are not talking about a drug, we are talking about eating the proper food. And there is zero risk."

Good sources of dietary calcium, which count as "servings," are 8 oz. of milk (whole or skim) or 8 oz. of calcium-fortified juices. Other foods that provide a "serving" of calcium include 8 oz. of low-fat yogurt, 2 cups of broccoli, 6 oz. of canned salmon with bones included, or 2 oz. of cheese. The Surgeon General's office and the National Osteoporosis Foundation both recommend that women increase their intake of calcium to reduce the risk of osteoporosis.

Saltman and his collaborators noted that although the study does not distinguish between the benefit of lifelong calcium intake and a positive influence of dietary calcium later in life, there is ample evidence that both can reduce risks for osteoporosis.

The study was supported by the National Institute of Aging and the Procter & Gamble Company. Other study members were Mark Bracker, M.D., UCSD Department of Community and Family Medicine; David Sartoris, M.D., UCSD Radiology Department; Linda Strause, UCSD Biology Department; and Mark B. Andon and Kenneth T. Smith, both of Procter & Gamble.

According to health authorities, everyone should have at least THREE servings of calcium-rich foods totaling 800 mg every day. Teens and young adults (11-24) and pregnant and nursing mothers should have at least FOUR servings totaling 1200 mg every day.