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Calcium From Food May Benefit Bones More Than Supplements

Adequate calcium intake is essential for bone health, and a recent study shows that the source of our calcium may be just as important as how much we consume.

Researchers from Washington University School of Medicine have found that consuming calcium primarily from dietary sources rather than supplements seems to affect estrogen metabolism and positively impact bone mineral density in postmenopausal women. One-week diet records from 168 healthy postmenopausal white women were used to divide the subjects into three groups, based on their predominant source of daily calcium intake: 1) Supplement group, greater than 70% of calcium from supplements, 2) Diet group, greater than 70% of calcium from dietary sources and 3) Diet + Supplement group, greater than 30% but less than 70% of calcium from both diet and supplemental sources. The Diet and Diet + Supplement groups obtained nearly 93% of their daily dietary calcium from dairy foods. Results showed that women with a higher intake of dietary calcium experienced a shift in their estrogen metabolism and had greater bone mineral density scores compared to women who obtained their calcium primarily from supplements. Interestingly, the Diet group had greater bone mineral density despite having a lower average daily calcium intake compared to the Supplement group, perhaps illustrating the powerful positive effect of dietary calcium on bone health. The authors suggest that those at risk for bone loss should be encouraged to consume calcium-rich foods.

Napoli N, et al. Effects of dietary calcium compared with calcium supplements on estrogen metabolism and bone mineral density. *American Journal of Clinical Nutrition*. 2007; 85:1428-33.

Dairy Intake May Protect Against Prostate Cancer in Smokers

For men who smoke, a promising new study shows that dairy foods may provide protection against prostate cancer, the most common type of non-skin cancer affecting men.

New research out of the University of Washington suggests that a higher intake of dairy foods may help protect current, but not former, smokers from aggressive prostate cancer. The 12,000 male subjects aged 45-69 years, all of whom were current or former heavy smokers, completed food frequency questionnaires every other year throughout the 11 year study period as part of the Carotene and Retinol Efficacy Trial (CARET). For current smokers, the highest consumption of dairy foods was associated with a statistically significant 58% reduced risk of aggressive prostate cancer. Though not significant, the results were also suggestive of a protective effect among men with a family history of prostate cancer. The authors speculate that conjugated linoleic acid (CLA) and vitamin D found in milk and some other dairy foods may play a role in the protective effect observed. The authors say that further studies are needed to confirm these results before any firm conclusions can be reached about the role of dairy foods for prostate cancer prevention.

Neuhouser M, et al. (n-6) PUFA Increase and dairy foods decrease prostate cancer risk in heavy smokers. *Journal of Nutrition*. 2007; 137: 1821-1827.

Kids May Breathe Easier if Mom Increases Vitamin D Intake

In honor of healthy lung month, one research article reports that increased intake of vitamin D during pregnancy may decrease babies' risk of developing future breathing problems.

This new study published in *The American Journal of Clinical Nutrition* suggests that young children may be less likely to experience wheezing if their moms get more vitamin D while pregnant. The study looked at maternal vitamin D consumption using a food frequency questionnaire at 32 weeks of gestation, and lung function of 1,212 of their 5-year-old children. Results indicated that the children of women who consumed the most vitamin D during pregnancy (189-751 IU vitamin D daily from both

food and supplements) had a lower risk of ever wheezing, wheezing in the previous year and recurrent wheezing at age five. Furthermore, lower maternal total vitamin D intake during pregnancy was associated with a decreased bronchodilator response, one indicator of lung function. The authors note that prenatal vitamin D supplementation may be an effective strategy for reducing the future prevalence of asthma in children.

Devereux G, et al. Maternal vitamin D intake during pregnancy and early childhood wheezing. *American Journal of Clinical Nutrition*. 2007; 85: 853-859.

{Editors' Note: Dairy foods such as milk are among the few significant food sources of vitamin D, with one 8-ounce glass of vitamin D-fortified milk supplying 25% of the Daily Value. Some yogurts and cheeses are also fortified with vitamin D.}

{Scientific synopsis provided by Karen Giles-Smith, MS, RD, United Dairy Industry of Michigan}

Harvard Study Links Calcium and Vitamin D Intakes with Reduced Breast Cancer Risk

Just in time for October, National Breast Cancer Awareness Month, a well-known study links nutrients in your glass of milk to a lower risk of breast cancer.

Data collected from the Harvard Women's Health Study has linked higher levels of calcium and vitamin D intake with a lower risk of breast cancer in premenopausal women. Breast cancer diagnoses and dietary data, including calcium and vitamin D intake from food and supplements, were tracked through health surveys and food questionnaires from more than 30,000 women for an average of 10 years. After adjusting for breast cancer risk factors, statistical analysis revealed that premenopausal women with the highest calcium and vitamin D intakes had the lowest risk of invasive breast cancer, particularly larger or poorly differentiated breast tumors. Dairy foods were the major sources of both calcium and vitamin D in this population, accounting for 53% and 39% of total intakes, respectively.

Lin J, et al. Intakes of Calcium and Vitamin D and Breast Cancer Risk in Women. *Archives of Internal Medicine*. 2007; 167: 1050-1059.

{Scientific synopsis provided by Bonnie Johnson, MS, RD, Dairy Council of Utah/Nevada}

Cheese May Help Older Americans Stay Sharp

Including cheese as part of the recommended three servings of dairy a day may help elderly individuals maintain their mental performance.

A new study reports that cheese intake is associated with reduced cognitive impairment, which is good news since diseases such as Alzheimer's are on the rise and little is known about causes and prevention. Over 1,000 elderly men and women participating in the State-wide Survey of Alabama's Elderly (1986-87) completed questionnaires to assess their mental status and dietary intake. Cheese intake was associated with a reduced prevalence of cognitive impairment, even after adjusting for demographic and other dietary factors. Bread or cereal intake was also associated with reduced cognitive impairment, while dessert intake (other than fruit) was linked to higher prevalence of impairment. The researchers speculate that several components of cheese, including the amino acid tyramine, may be responsible for its association with improved cognitive function.

Rahman A, et al. Dietary Factors and Cognitive Impairment in Community-Dwelling Elderly. *Journal of Nutrition, Health & Aging*. 2007. 11(1): 49-54.

FAST FACT

Standards for Foods in Schools: Healthy Choices Can Compete

October 15th-19th is National School Lunch Week, which celebrates the National School Lunch Program. Meals served to over 30 million children each day as part of this program must meet federal nutrition standards, however no standards currently exist for food served outside of school meal programs, also known as "competitive foods." The National Academy of Sciences' Institute of Medicine aims to change this and recently published recommendations for establishing nutrition standards for competitive foods in schools, such as items sold a la carte, in vending machines or school

stores. The report encourages schools to make more nutrient-rich foods like low-fat and fat-free dairy foods, fruits, vegetables and whole grain foods available to students throughout the day. Also included is a specific recommendation to increase the availability of low-fat and fat-free white and flavored milk and yogurt, with modest amounts of added sugars, to help students meet the Dietary Guidelines recommendation of three servings of dairy foods each day.

Institute of Medicine, Committee on Nutrition Standards for Foods in Schools. Nutrition Standards for Foods in Schools: Leading the Way Toward Healthier Youth. April 2007.

<http://books.nap.edu/catalog/11899.html>.

{Scientific synopsis provided by Bonnie Johnson, MS, RD, Dairy Council of Utah/Nevada}

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The National Dairy Council® was founded in 1915 and conducts nutrition education and nutrition research programs through national, state and regional Dairy Council organizations, on behalf of America's dairy farmers.

To schedule an interview with an expert, call 312/240-2880 or send an e-mail to ndc@dairyinformation.com.

For more information about cheese check out ilovecheese.com or for marvelous milk recipes, check out www.whymilk.com. For delicious dairy recipes visit www.3aday.org or for information on nutrition research, check out www.nationaldairycouncil.org.

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