



Nutrition for Family Living

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July, 2002 Topics

The nutritional consequences of flavored milk

Changes in fruit and vegetable consumption among US adults

Flaxseed – Wonder functional food or hype?

For further reading: From Wallet to Waistline: The Hidden Costs of Super Sizing

For further reading: Women's Health Statistics

Team Nutrition School Projects

The nutritional consequences of flavored milk

Children and adolescents are drinking less milk, with potentially serious consequences for their future bone health. Only 60% of preschoolers, 32% of teenage boys, and 13% of teenage girls got the recommended amount of calcium in a 1994-1996 survey. (see Nutrition for Family Living, Nov. 2001 <http://www.uwex.edu/ces/wnep/p3/mmpdfs/0111.pdf#page=6>). Parents and school food service personnel may be reluctant to offer flavored milk to children because of its added sugar, or the concern that children may become unwilling to drink unflavored milk. A study in the June, 2002 *Journal of the American Dietetic Assn.* used data from the 1994-1996 and 1998 USDA Continuing Survey of Food Intakes of Individuals (CSFII) to examine the role of flavored milk in the diets of 3,888 children and adolescents.

The major findings were:

- Children who drank flavored milk drank more milk and drank fewer soft drinks and fruit drinks, but the same amount of fruit juice, compared to children who did not drink flavored milk.
- Children who drank flavored milk had higher calcium intakes. They had similar intakes of fat and sugar when compared with children who did not drink flavored milk.

Previous research has shown that children who consume milk at lunch are more likely to get the recommended amount of calcium for the day. Flavored milk has been popular in school vending machines and may be a well-accepted, nutritious alternative to soft drinks and fruit drinks.

Implications for educators: According to the Dietary Guidelines, "Some foods with added sugars, like chocolate milk, presweetened cereals, and sweetened canned fruits, also are high in vitamins and minerals. These foods may provide extra calories along with the nutrients and are fine if you need the extra calories." For most children, as long as portion sizes are reasonable, flavored milks are acceptable choices for the 2-3 daily servings of milk, yogurt or cheese recommended by the Food Guide Pyramid.

Johnson RK, Frary C, Wang MQ. The nutritional consequences of flavored-milk consumption by school-aged children and adolescents in the United States. *J Am Diet Assn.* 2002; 102:853-856.

Lin BH, Guthrie J, Frazao E. American children's diets not making the grade. *Food Review.* 2001;24:8-17.



Changes in fruit and vegetable consumption among US adults

To investigate the effectiveness of the “5 A Day for Better Health” campaign, two telephone surveys were conducted in 1991 and 1997. More than 2,500 adult participants were asked about vegetable and fruit consumption and awareness of the 5 A Day message.

With the exception of Hispanics, more people were aware of the 5 A Day message in 1997 than in 1991. Whites, women, people with more education, and older age groups were most aware. These same demographic groups also consumed more vegetables and fruit per day. Most of the improvement in fruit and vegetable consumption during the six years between surveys was the result of higher fruit consumption (not including juice). Hispanics were the only racial/ethnic group analyzed that significantly increased their fruit and vegetable consumption from 1991-1997. For the general population, the estimated mean fruit and vegetable intake of 4 servings/day is still less than the recommended 5 A Day goal.

Implications for educators: This study suggests that a simple, positive message such as “5 A Day” can be effective and serve as a model for other nutrition and physical activity messages. The subgroups with the lowest awareness – men, smokers, African-Americans, those less educated, and those in younger age groups – have a greater need for interventions.

Stables GJ et al. Changes in vegetable and fruit consumption and awareness among US adults: Results of the 1991 and 1997 5 A Day for Better Health Program surveys. *J Am Diet Assoc.* 2002;102:809-817.



Flaxseed – Wonder functional food or hype?

From the desk of Sherry T.:

Flaxseed has been described as a “functional food” as far back as 3000 B.C. It has had famous proponents such as Hippocrates and Mahatma Gandhi. Flaxseed (also known as linseed) is considered a functional food for many reasons. In the popular press it has been tagged with the following health benefits:

- Control of constipation, diarrhea and irritable bowel syndrome
- Combating cholesterol and heart disease
- Cancer prevention
- Deterring diabetes
- Enhancing the immune system
- Improving weight management
- Improving memory, mood and attention
- Reducing symptoms of menopause

With this many health benefits, one would think that we should be eating it by the cupful, right? The caveat to this is that the husks contain compounds that can be toxic in high amounts. Therefore, no more than 2-3 tablespoons of flaxseed should be consumed on a daily basis.

What is in flaxseed that gives it this many different health claims? To begin with it is a rich source of fiber. There are 3.3 g of dietary fiber in one tablespoon. This compares to a medium apple (3.7 g). Diets rich in fiber have been linked to control of bowel function, lower rates of heart disease and diabetes. However, you should not depend on getting all of your daily fiber from flax because of the toxicity issue. Eating a diet rich in fruits, vegetables and whole grains helps you to get the 30 g of fiber linked to lower rates of disease.

Flaxseed is by far one of the leading dietary sources of a set of compounds called lignans. Lignans are plant estrogens that favor the production of a compound that has been shown to protect against breast cancer. By feeding flax the sex hormone concentrations in the blood can be altered. This may have a protective effect for cancers related to high estrogen concentrations during a woman's life, but special caution may be necessary during pregnancy and lactation. According to one researcher, “We simply do not know whether the low levels [of flax] that would be consumed as supplements by women during these periods would be beneficial or detrimental to the future development of breast cancer in their children or themselves,” (Bowen, 2001).

Flaxseed also contains very high amounts of omega-3 fatty acids (2.2 g per tablespoon). In order to release this oil from the seed you need to crack or mill it before consumption. If you buy it already milled, the fatty acids begin to oxidize and therefore you lose “potency.” A recent article described the incorporation of flax seed into spaghetti. While the initial process of putting the flax into the spaghetti gave losses, the storage and cooking practices did not seem to alter the amount of fatty acids in the final product. Thus, spaghetti made with flax could increase dietary omega 3 fatty acids. The body can take the essential fatty acids of linoleic (18:2) and linolenic acid (18:3) and elongate them to other fatty acids needed for normal metabolism. Two other long chain fatty acids eicosapentaenoic (EPA, 20:5) and docosahexaenoic (DHA, 22:6) are found



Nutrition for Family Living July, 2002

predominantly in fish and fish oils in the diet. Therefore, if you want to have these longer fatty acids in the diet, fish oil is the best source. Omega-3 fatty acids are considered essential to maintaining optimal health.

The bottom line: If you enjoy flaxseed then by all means it can be part of a healthy diet, but remember to consume it in moderation. Most importantly it is better to eat a broad based diet rich in a variety of fruits, vegetables and whole grains – nature's functional foods.

References:

Bowen, P.E. Evaluating the health claim of flaxseed and cancer prevention. *Nutr Today*. 2001; 36: 144-158.

Hutchins, A.M. et al. Flaxseed consumption influences endogenous hormone concentrations in postmenopausal women. *Nutr Cancer* 2001; 39: 58-65.

Joseph, J.A. et al. *The Color Code: A revolutionary eating plan for optimal health*. Hyperion, New York: 2002, p. 195.

Manthey, F. et al. Processing and cooking effects on lipid content and stability of α -linolenic acid in spaghetti containing ground flaxseed. *J Agricul Food Chem*. 2002; 50: 1668-1671.

Tarpila, S. et al. The effect of flaxseed supplementation in processed foods on serum fatty acids and enterolactone. *Eur J Clin Nutr*. 2002; 56: 157-165.

USDA nutrient database: http://www.nal.usda.gov/fnic/cgi-bin/nut_search.pl

www.goldenflax.com



Nutrition for Family Living July, 2002

For further reading

From Wallet to Waistline: The Hidden Costs of Super Sizing

As a follow-up to our May articles on portion size, check out this report from the National Alliance for Nutrition and Activity (NANA). The report addresses the relationship between food prices and portion sizes. It makes some really interesting points about “value marketing,” where food companies encourage the customer to spend a little extra money to purchase larger portion sizes and the customer feels that they have “gotten a deal.” Often, the customer has also purchased a lot more calories and fat. For example, going from a small to a super-sized Coke fountain drink costs approximately 60 cents more, but can provide 330 extra calories!

The report is available on the web at: <http://www.aicr.org/r061802report.pdf>

Women’s Health Statistics

A new statistical report on the status of American women’s health has been released by the US Dept. of Health and Human Services. The report highlights current and historical data on some of the most pressing health challenges facing women and their families, including nutrition, physical activity and obesity. Data are organized in three main categories: population characteristics, health status and health services utilization.

The report is available online at <http://mchb.hrsa.gov/data/women.htm>. Free hard copies are available from the HRSA Information Center (call 1-888-ASK-HRSA or visit the center’s web site at www.ask.hrsa.gov).



Nutrition for Family Living July, 2002

Team Nutrition School Projects

Thirty schools/districts around Wisconsin are participating in a special initiative led by Julie Allington at the Wisconsin Dept. of Public Instruction (DPI) to build healthier school environments. If one or more of the schools is in your area, please check out the project and local plans at the following website and offer to help promote good nutrition for children.

<http://www.dpi.state.wi.us/dpi/dltcl/bbfcsp/tn.html>

This project helps schools improve their school nutrition environment. Each school's team has identified Projected Outcomes for their project. The project period for the schools is February 2002 through June 2003. As the schools define and work on their action plans, DPI will post project descriptions and progress made on the above website, including resources and trainings that the school staffs have found helpful. For more information, please contact Susan Nitzke, UW-Madison/Extension Nutrition Specialist, 608-262-1692, or Julie Allington, Nutrition Education Consultant and Team Nutrition Project Director at DPI, 608-267-9120.

Participating schools:

Audubon Middle School, Milwaukee Public Schools
Bay View Middle School, Howard-Suamico School District
Bristol School District No. 1
Cashton Elementary School
Congress South, Milwaukee Public Schools
Cudahy School District
Dodgeland School District
Elcho School District
Fairview Elem. School, Pulaski Community School District
Freedom Area School District
Greendale School District
Hartford Union High School
Hustisford School District
James Madison School, Appleton Area School District
Johnston Elem. School, Appleton Area School District
Kewaunee School District
Ladysmith-Hawkins School District
Lincoln Avenue School, Milwaukee Public Schools
Marshfield School District
Maryland Avenue School, Milwaukee Public Schools
Milton School District
Mineral Point School District
Oconto School District
Riverside High School, Milwaukee Public Schools
Sauk Prairie School District
Sparta Meadowview School
St. Henry School, Watertown
Stockbridge School District
Superior School District
Viroqua School District