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Trends in Consumer Food Choices Within the MyPyramid Milk Group

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Diets rich in milk and milk products can reduce the risk for low bone mass throughout the life cycle, and milk product consumption is associated with adequacy of intake for many nutrients. Therefore, milk and milk products have been emphasized in the 2005 *Dietary Guidelines for Americans* as foods the population is encouraged to consume. MyPyramid operationalizes the *Guidelines* through its recommended food intake patterns, which include amounts of foods an individual should eat from each food group and a discretionary calorie allowance. All MyPyramid patterns for adults and children 9 years and older include 3 cup-equivalents from the Milk group per day; patterns for 2- to 8-year-olds include 2 cups per day (Britten, Marcoe, Yamini, & Davis, 2006). It is also recommended that most choices be fat-free or low-fat. In 1999-2002, mean consumption from the Milk group by individuals 2 years and older in the United States was 1.7 cup-equivalents per day (Cook & Friday, 2005). This *Nutrition Insight* identifies trends over time in the proportions of Milk group intake that come from subcategories of fluid milk, yogurt, and cheese and the proportions of plain and flavored milk (a subgroup of fluid milk) that have various levels of fat content. It also considers the implications of this information for educational strategies intended to increase consumption of foods and beverages in the Milk group.

Data Sources and Methods

Participants over the age of 2 years in the Continuing Survey of Food Intakes by Individuals (CSFII) 1994-96 and the National Health and Nutrition Examination Survey (NHANES) 2001-02 and 2003-04 were included in this study. These surveys are complex, multistage probability samples of the civilian noninstitutionalized population of the United States. The surveys collect dietary intake data using the 24-hour dietary recall method; one day of data from each participant was used for this analysis. Data were weighted to provide consumption estimates that were representative of the population. The analytical sample size was 14,931 people in 1994-96; 9,699 in 2001-02; and 9,018 in 2003-04. Milk group intake, expressed as MyPyramid cup-equivalents, was calculated from the MyPyramid Equivalents Database (MPED) for 1994-96 and 2001-02 data (U.S. Department of Agriculture,

2006). The MPED was not available for NHANES 2003-04 data at the time of this study; so for the few new milk-containing foods in this survey, cup-equivalents were assigned by matching them to similar foods in the MPED.

The MPED assigns all milk products, including those consumed separately or as an ingredient in a mixed dish, to one of three subcategories:

- Fluid milk
- Yogurt
- Cheese

The fluid milk category includes plain or flavored milk and other products made with fluid milk, such as ice cream, sauces, shakes, casseroles, and soups. For this study, the category “plain and flavored milk” includes all milk reported as a separate item in the survey, whether consumed as a beverage or in combination with other foods, such as on cereal. Based on their fat content, plain and flavored milks were further categorized as:

- Fat-free
- 1% (low-fat)
- 2% (reduced-fat)
- Whole
- Milk with unspecified fat content

The fat content of fluid milk consumed as part of other food products is not reported in these surveys; therefore, it was not included in this categorization.

Milk Product Consumption

As shown in figure 1, the proportion of milk products (expressed as cup-equivalents) consumed as cheese has increased from 30 percent to 35 percent to 38 percent of the total Milk group intake by the U.S. population across the time period of the surveys. Yogurt consumption has remained steady at approximately 2 percent; fluid milk consumption has decreased from 67 percent to 62 percent to 60 percent of total Milk group intake.

Figure 1. Proportion of milk group intake from fluid milk, yogurt, and cheese

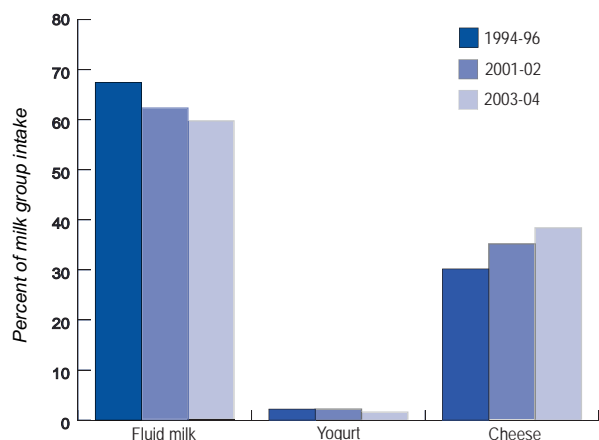
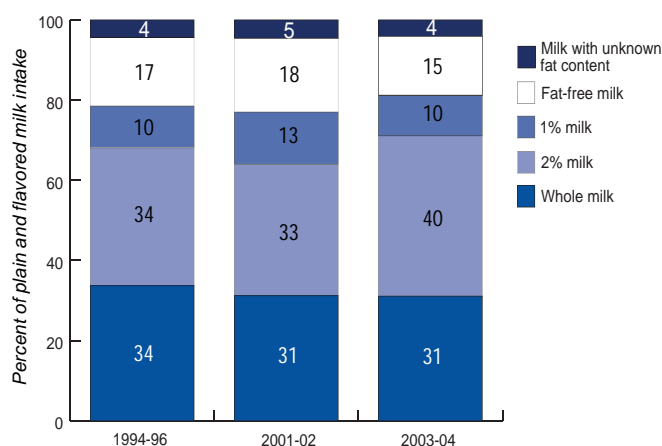


Figure 2. Proportion of various types of milk consumed across the survey periods, as a percentage of all milk as a beverage



Note: Numbers may not sum to totals due to rounding.

Plain and flavored milk made up 85 percent of all fluid milk consumption in 1994-96 and 82 percent in both 2001-02 and 2003-04. The fluid milk found in other milk products, such as ice cream, light ice cream, milk desserts, sauces, shakes, beverage mixes, and drinks such as smoothies, together made up 7 percent of fluid milk intake in 1994-96, 9 percent in 2001-02, and 8 percent in 2003-04. An additional 7 percent (1994-96), 9 percent (2001-02), and 10 percent (2003-04) of fluid milk were consumed as ingredients in mixed foods such as casseroles, soups, and coffee drinks. (Data not shown in figures.)

As shown in figure 2, the proportion of plain and flavored milk that was consumed as whole milk decreased from 34 percent in 1994-96 to 31 percent in 2003-04, while 2% milk increased from 34 percent to 40 percent. Fat-free and 1% milk together decreased from 28 percent to 25 percent of all plain and flavored milk over this time period. As a percentage of total Milk group intake, fat-free and 1% plain and flavored milk decreased from about 16 percent to about 12 percent over this time period. (Data not shown in figures.)


Conclusions and Implications

The proportion of Milk group intake that is cheese has steadily increased, and the proportion that is fluid milk has decreased from 1994-96 to 2003-04. In addition, the proportions of total Milk group intake that are fat-free or 1% milk have decreased. In the 2003-04 survey, 2% milk was the most common milk

selection. Its predominance reflects decreased relative consumption of 1% and fat-free milk, as well as of whole milk. The increase in cheese intake indicates that information on the saturated fat content of cheeses may be a useful part of nutrition education. The decrease in 1% and fat-free milk, compared with total consumption of milk as a beverage, and the increase in 2% milk consumption indicate that more information on the relative fat content of various fluid milk choices may also be needed. Consumers may not understand that 2% milk has approximately half the fat content of whole milk and that it is not considered to be a “low-fat” milk product.

References

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