

Conclusions

Our findings demonstrate that household beverage choice can have an important impact on the nutritional quality of the household food supply. The beverage choices a household makes have important effects on household calories, an important consideration given America's current obesity problem. Beverage choices also impact calcium availability in the home food supply, another major public health concern.

Limitations of the data used for this study must be noted. For example, food purchasing is not equivalent to food consumption. Some purchased items may be wasted—milk may spoil and be discarded uneaten, for example—and some items may be consumed by non-household members (guests). But, it is reasonable to assume that household food purchases will be strongly correlated with consumption, and can be considered proxies for the quantity of the foods and beverages consumed from the at-home food supply.

For most Americans, the at-home food supply provides the larger part of their diet, but food prepared away from home—i.e., restaurant, fast-food, and take-out foods—plays a much more important role in today's diet than in previous decades. In 1977-78, foods from the home food supply made up 82 percent of Americans' daily diets (as measured in calories consumed). By 1995, the share of diet obtained from the home food supply had dropped to 66 percent. Given this shift, it is useful to consider how the beverage choices Americans make away from home might complement their at-home choices.

Our analysis indicates more households purchased soft drinks than milk. Lin et al. also have found that the calcium density of food obtained from restaurant and fast-food sources is lower than the calcium density of food from the home food supply. Since milk is the major source of calcium in American diets, this indicates that milk consumption away from home is likely even lower than from home foods. The only exception is foods obtained by children at schools and day care, where USDA regulations require that meals served as part of the Federal School Meal Programs must contain milk. Clearly, USDA meal programs can play an important role in improving calcium adequacy of the diets of participating children.

Our study reinforces the need for dietary guidance on beverage choice. In addition, the differences in beverage purchases we found to be associated with particular household characteristics have implications for content and targeting of nutrition education messages. Current USDA dietary guidance publications include advice on beverage choices—for example, the Food Guide Pyramid for Children recommends two servings from the milk group daily, and includes a picture of a soft drink in the tip of the Pyramid, indicating they should play an occasional role in the diet. Purchasing habits of lower income households are of particular concern, given USDA's substantial investment in Food Stamp Nutrition Education.

These data were collected in 1999. Since then changes in dietary guidance—most notably the 2000 and 2005 revisions of the Dietary Guidelines for Americans—have created an increased emphasis on beverage choice as a nutrition education message. In 2000, the Dietary Guidelines message on sugars was

changed from “Choose a diet moderate in sugars” to “Choose beverages and foods to moderate your intake of sugars.” The committee altered the wording of the guidelines to emphasize beverages because soft drinks and fruit-flavored beverages were found to be the No. 1 and No. 3 most important sources of added sugars in American diets. The 2000 Dietary Guidelines also emphasized the need for improving American’s calcium intakes and identified both milk and calcium-fortified fruit juice as recommended sources. This advice was reiterated in the 2005 Dietary Guidelines, which encourage consumption of 3 cups of fat-free or low-fat milk daily, while limiting intake of beverages with added sugars and sweeteners. These data can be considered a baseline for future studies investigating effects of the Dietary Guidelines’ increased emphasis on beverage choices.

Perhaps in response to these new nutrition education emphases, there have been important changes in the beverages available for purchase since these data were collected. Calcium fortification of juices has become increasingly common. New beverage products such as drinkable yogurt have been introduced. These changes in the marketplace may have important effects on the nutrient contribution of beverages to the household food supply. As newer data become available, it will be interesting to assess the impact of dietary guidance on the beverage marketplace and consumer beverage choices.