

What's in the Shopping Cart?

Food Purchase Research Provides Insights Into Diet Quality

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When examining consumer food habits, nutritionists typically focus on analyses of food consumption. However, much can also be learned from studying food-purchasing behavior. Despite the increasing popularity of restaurant and takeout meals, Americans still obtain about two-thirds of their daily calories from food prepared at home.¹ So, the purchasing choices they make when shopping at the grocery store are important first steps to a healthy diet.

With this in mind, nutrition education often includes food-purchasing advice. For decades, the US Department of Agriculture (USDA) has developed food plans that provide recommendations for how to purchase foods for a diet that meets the *Dietary Guidelines*, with plans adapted to different cost levels (thrifty, low cost, moderate cost, and liberal).² Recently, researchers at USDA's Economic Research Service (ERS) compared grocery store purchases as recorded by Nielsen Homescan panelists in 1998–2006 with USDA liberal food plan recommendations.² The Homescan data set, collected by a private market research firm, consists of a sample of US households who recorded their food and beverage purchases from all retail stores. Economic Research Service researchers organized more than 60 000 different products into USDA food plan categories. Findings reveal that consumer spending came close to matching USDA food plan recommendations for only 1 of the food categories examined—potatoes (Figure). Panelists underspent on all categories of vegetables except potatoes. Panelists overspent on other foods such as refined grains, fruit juices, regular dairy products (including whole milk and butter), and meats. Refined grains—which include non-whole-grain crackers, cookies, breads, and pasta—accounted for 17% of the panelists' spending instead of the 5% recommended in the USDA food plan. Dietary guidance suggests limiting added fats and sugars, and USDA food plan expenditure recommendations are correspondingly low, but the Homescan

panelists' expenditures for these categories were well above recommendations. Spending on convenience options, such as frozen or refrigerated entrees, was also higher than recommended.

This comparison of actual to recommended purchasing patterns provides information that can guide information efforts to help US consumers make healthier choices. Analyses of purchase data can also provide insight into the effectiveness of information efforts such as Federal nutrition labeling or supermarket shelf-tag systems. As an example, a recent study that used store-level purchase data found that the Guiding Stars Program, a shelf-tag nutrition information system used in some supermarkets in the United States, increases consumer demand for ready-to-eat breakfast cereals that the program rates as more nutritious.³ A follow-up study integrated these findings with consumption data from the National Health and Nutrition Examination Survey to estimate the impact such changes could have on whole-grain and added sugar content of consumer diets.⁴ The studies discussed above make use of data collected by private sector firms. In 1935, USDA began collecting data on food purchases of American consumers,⁵ but since 1987–1988, USDA nationwide surveys of food consumption have not included data on food purchases and prices.⁶ In 2012, for the first time in more than 20 years, USDA fielded a study of American food-purchasing behavior. The National Household Food Acquisition and Purchase Study (FoodAPS) collected data from American households on the complete types and amounts of all foods acquired from all sources over the course of a week.⁷ This included information on food purchases at supermarkets, grocery stores, and so on, as well as purchases of prepared foods at fast food and other restaurants, foods acquired from food pantries and food assistance programs, and foods obtained from family and friends. Households reported where the food was obtained, price paid, and type of payment—for example, if the household paid cash or if it paid using funds obtained through the Supplemental Nutrition Assistance Program or with a WIC program voucher. Respondents also provide information on such topics as use of labeling and the food characteristics they value, such as nutrition, convenience, price, and taste. Survey data are supplemented by data on the local food environment, such as the number and type of stores in the surrounding area, allowing examination of issues of local food access and affordability.

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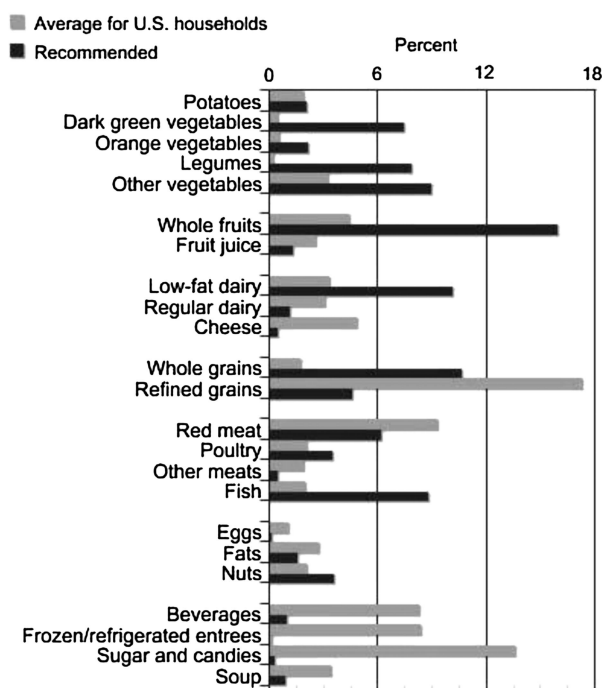
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Food expenditure shares



Source: USDA, Economic Research Service calculations using Nielsen Homescan data for 1998-2006 and USDA's Liberal Food Plan.

FIGURE. Grocery spending patterns of US households do not match US Department of Agriculture (USDA) food plan recommendations.

The data collection was funded by 2 USDA agencies, ERS and the Food and Nutrition Service. Economic Research Service researchers will publish a series of Economic Information Bulletins that will provide basic descriptive information on foods purchased and prices paid by American consumers, along with their nutritional characteristics. These bulletins will provide a basis for more in-depth research by ERS researchers and others. The FoodAPS data will be made available to university and other nongovernmental researchers under conditions that protect the confidentiality of survey respondents.

The FoodAPS data and the research opportunities they provide come at a timely moment. There is growing in-

terest on the part of both consumers and the food industry in nutritionally improved food products. However, consumers also value other food characteristics such as price, preparation time, and other aspects of convenience and may benefit from guidance that helps them to evaluate products on a range of characteristics and make healthy selections that also meet other wants and needs. The food values analysis application described by Muth and colleagues in this issue is an interesting approach to providing information on a range of food product characteristics.⁸ As the authors note, it can help nutrition educators to guide consumers in making purchase choices. As information from FoodAPS analysis becomes available, these analyses can also be of assistance, helping nutrition educators to further tailor and target their messages.

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