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Geographic Differences in the Relative Price of Healthy Foods

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A balanced and healthful diet consists of a variety of foods. The Dietary Guidelines for Americans indicate that within broad food groups, such as dairy, meat, or grains, there are more healthful options (those that maximize nutrients and minimize added fats or sugars) and less healthful ones. Although healthy foods can be affordable, if less healthy foods are cheaper, individuals may have an economic incentive to consume a less healthful diet. Using a unique price database, we explore whether healthy foods generally cost more than less healthy options and whether the price differences between healthy and less healthy foods vary across the country.

What Did the Study Find?

The study looked at seven healthy food groups (whole grains, dark green vegetables, orange vegetables, whole fruit, low-fat milk (skim and 1%), fruit juice, and bottled water) and compared their prices per 100 grams with the prices of less healthy alternatives.

- Some healthy foods were more expensive than less healthy foods, but in other cases, healthier options were less expensive.
 - Whole grains were more expensive than refined grains across the United States, with prices ranging from 23 percent higher (San Francisco) to more than 60 percent higher (nonmetro Pennsylvania and New York) than for refined grains.
 - Fresh and frozen dark green vegetables were more expensive than starchy vegetables in all markets (prices ranging from 20 to 80 percent higher than starchy vegetables), but orange vegetables (e.g., carrots, sweet potatoes, and winter squash) were less expensive than starchy vegetables in some markets, including metro New York, San Francisco, and Florida.
 - Low-fat milk (skim and 1%) was between 10 and 20 percent less expensive than whole and 2% milk in most markets.
 - Low-fat milk was more expensive than nonalcoholic carbonated beverages in some markets, but less expensive in others.
 - Bottled water is the same price or less expensive than soda in all but one market (urban New York), with a price ranging from 6 percent (Boston) to over 33 percent (San Francisco) lower than the price for soda.

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- Prices of healthy foods vary widely across the United States.
 - Whole grains (compared with refined grains), dark green and orange vegetables (compared with starchy vegetables), low-fat milk (compared with soda), and fruit juice (compared with fruit drinks) demonstrate the largest geographic price variation.
 - The geographic variation in the price of whole fruit when compared with sweet or savory commercially prepared snacks is generally smaller than that of other comparisons. On a per-gram basis, whole fruit is 60-70 percent less expensive in all markets.
- Some price differences narrowed between 1998 and 2006.
 - Whole grains became relatively less expensive over time; the relative price decreased 5 percentage points, on average.
 - The price of low-fat milk, as compared with the price of carbonated soda, decreased nearly 12 percentage points, on average.

How Was the Study Conducted?

Using prices from the Quarterly Food-at-Home Price Database, we compared prices per 100 grams of packaged whole-grain products with their refined-grain counterparts; dark green vegetables with starchy vegetables, orange vegetables with starchy vegetables, whole fruit with commercially prepared sweet snacks, low-fat milk with whole and 2% milk, low-fat milk with carbonated nonalcoholic beverages, bottled water with carbonated nonalcoholic beverages, and fruit juice with noncarbonated nonalcoholic caloric beverages (fruit drinks). We calculated market-level relative prices of the healthy food groups and their less healthy counterparts for 2006, as well as the quarterly and annual average relative prices within nine census divisions between 1998 and 2006.