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Are Lower Income Households Willing and Able To Budget for Fruits and Vegetables?

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Americans eat too few fruits and vegetables, and the problem is worse among low-income households. Past studies suggest that low-income households, when given only a small increase in their buying power, do not allocate additional dollars to fruit and vegetable purchases. Only at higher levels of income are additional dollars budgeted for these foods. One explanation is that households have competing needs and wants, some of which are preferred over fruits and vegetables when additional dollars become available.

What Is the Issue?

Discrepancies between actual consumption and recommendations, as outlined in the Dietary Guidelines for Americans, are fueling interest in ways to promote consumption of fruits and vegetables, especially among low-income households. This study expands on past analyses of food spending by low-income households to explore two issues that may enable better targeting of nutrition funding and education. First, if a household earns less than 130 percent of the poverty line, on what types of foods might it allocate a portion of any small increase in income? Second, does a household's income need to rise much higher than 130 percent of the poverty line before spending increases on fruits and vegetables?

What Did the Study Find?

In 2003, households earning below 130 percent of the poverty line spent less than higher income households on six out of seven food types examined in this study. Even so, a small increase in income will not likely induce them to spend more on fruits and vegetables. Beef expenditures and spending on frozen prepared foods do increase. Focus group analyses suggest that beef and frozen prepared foods may be priorities over fruits and vegetables for reasons of taste and convenience.

However, it appears that a household's income does not need to rise much higher than 130 percent of the poverty line—a cutoff for the Food Stamp Program—before the average household does allocate additional resources to fruits and vegetables, given a small increase in income. A positive income effect is found among households earning between 130 and 185 percent of the poverty line. Among such households, a 10-percent increase in income prompts a 1.15-percent and 1.93-percent increase in fruit and vegetable expenditures, respectively.

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How Was the Study Conducted?

Researchers analyzed data on 5,275 households who completed the Consumer Expenditure Survey published by the Bureau of Labor Statistics in 2003. We divided these households into three groups based on their reported incomes relative to the poverty line. The “low-income” group included households earning less than 130 percent of the poverty line. Researchers then compared households’ expenditures, by income group, on seven types of food: beef, milk and other dairy products, bread and other baked foods, frozen meals and other frozen prepared foods, eggs, fruits, and vegetables. These seven were chosen to include items from each of the major food groups, along with a popular type of convenience food—frozen entrees and other frozen foods. In total, these seven food types account for about half of what a typical low-income household spends on food for at-home consumption.

Statistical models of the relationship between a low-income household’s income and its spending on each of the seven foods were then estimated. If a statistically significant relationship between spending and income were found, the researchers concluded that households will allocate some portion of a small increase in income to the purchase of that food. Foods receiving a portion of any increase in income were considered spending priorities for low-income households.

Statistical models of food spending by higher income households were also estimated to determine whether households allocate more resources to foods, including fruits and vegetables, once their income reaches higher levels, and if these levels are much greater than 130 percent of the poverty line.

Finally, the study reviewed focus group and food consumption studies to understand why certain foods may be priorities for low-income households, such as for reasons of taste or convenience, and to corroborate the study’s findings.