

Discounts on purchases of healthy foods can improve diets, study finds

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Lowering the costs of healthy foods in supermarkets increases the amount of fruits, vegetables and whole grain foods that people eat, while also appearing to reduce consumption of nutritionally less-desirable foods, according to research from the RAND Corporation.

Researchers examined a program available to members of South Africa's largest [private health insurance](#) company that provides a rebate of 10 percent or 25 percent on purchases of healthy foods. The program, started in 2009, now has about 800 participating supermarkets and enrolls more than 260,000 households.

Interest has been growing in the United States and elsewhere about the ability of food discount programs to help improve diets. The U.S. Congress in 2008 approved funding for a demonstration of the concept, and both employers and [insurance companies](#) in the United States are beginning to test the approach.

In the South African program, shoppers can get the rebate on a list of foods selected by a panel of nutritionists, physicians and behavioral scientists. That list has over 6,000 items that account for 20 percent of food spending at supermarkets. Eligible items are marked at [supermarket shelves](#) and include [fruits and vegetables](#), [whole grains](#), nonfat dairy, but excludes most items with added sugars or salt.

The research team collected supermarket scanner data linked to 170,000 households and [survey data](#) about diet patterns from 350,000 individuals,

including both those who participated in the rebate program and those who did not. Regardless of how the information was analyzed, lower prices for healthy foods were significantly associated with better self-reported diet.

"These findings offer good evidence that lowering the cost of nutritionally preferable foods can motivate people to significantly improve their diet," said Roland Sturm, a study co-author and a senior economist at RAND, a nonprofit research organization. "But behavior changes are proportional to price changes. When there is a large gap between people's actual eating behaviors and what nutritionists recommend, even a 25 percent price change closes just a small fraction of that gap."

The analysis of supermarket scanner, published online this month by the *American Journal of Preventive Medicine*, found that a rebate of 25 percent increased the ratio of healthy to total food purchased by 9.3 percent. In addition, the rebate increased the ratio of fruit and vegetables to total food purchases by 8.5 percent, and decreased the ratio of less-desirable food to total food purchases by 7.2 percent.

Less-desirable items that are discouraged include cookies, candy, chips, and soft drinks. The effects of the price subsidies appeared stable over time and the 25 percent rebate had consistently greater impact than the smaller rebate.

The research team also analyzed survey responses. Based on self-report, individuals who received a 25 percent rebate consumed an additional half-serving of fruits and vegetables each day. Those same participants reported being less likely to consume fast food, foods high in sugar and salt, fried foods and processed meats. There was no evidence that the rebate program reduced rates of obesity or that fewer participants were overweight. Survey results were published in the January issue of the

American Journal of Health Behavior.

The research evaluates a benefit offered by Discovery Health, the largest health insurer in South Africa with about a one-third market share. The company's Vitality program is a supplemental benefit and a prerequisite for the HealthyFood benefit. The HealthyFood benefit is available to members at no cost, but needs to be activated by phone or online.

Upon activation, Vitality members receive a 10 percent rebate on [healthy food](#) purchases at participating supermarkets and become eligible for a 25 percent rebate after completing an online health risk assessment questionnaire. The maximum monthly purchase amount eligible for a rebate is 4,000 rands (about \$480) per family.

"This program may be unique worldwide due to its size and geographic scope and is the only one funded by the private sector on an ongoing basis," said Ruopeng An, co-author of the studies and a fellow at the Pardee RAND Graduate School. "It is a real-life program, not a lab experiment, so we have to use different statistical tools to analyze it."

The research team employed fixed-effects panel data models to control for unobservable constant differences between participants and non-participants and instrumental variables to achieve an approximate randomization, among other tools.

Provided by RAND Corporation

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