# Dietary Quality of Americans by Supplemental Nutrition Assistance **Program Participation Status**



### A Systematic Review

Tatiana Andreyeva, PhD, Amanda S. Tripp, MPH, Marlene B. Schwartz, PhD

Context: The Supplemental Nutrition Assistance Program (SNAP) is an effective component in reducing food insecurity in the U.S. In the discussion of strategies to also help SNAP participants maximize diet quality, it is important to know their current dietary patterns and food choices. This paper provides a systematic review of recent U.S. studies on dietary quality, food consumption, and spending among SNAP participants as compared to income-eligible and higher-income nonparticipants.

Evidence acquisition: The review, completed in 2014, summarized studies that were peerreviewed, published between January 2003 and August 2014, and provided data on dietary quality and intake of SNAP participants and nonparticipants.

Evidence synthesis: Twenty-five studies were included in this review. Daily caloric, macronutrient, and micronutrient intake of SNAP participants did not differ systematically from those of income-eligible nonparticipants; however, differences in dietary quality emerged. Adult SNAP participants scored lower on the Healthy Eating Index than either group of nonparticipants. Children's diets were similar among SNAP participants and low-income nonparticipants, but were less nutritious than diets of higher-income children. The evidence regarding sugar-sweetened beverage consumption was mixed, with most studies indicating significantly higher beverage intake among SNAP participants compared with higher-income nonparticipants, but no difference compared to income-eligible nonparticipants.

Conclusions: SNAP effectively alleviates food insecurity in terms of caloric, macronutrient, and micronutrient intake. Still, SNAP participants are struggling more than income-eligible and higherincome nonparticipants to meet key dietary guidelines. Future policies should ensure that this vital food assistance program addresses diet quality while reducing food insecurity.

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#### Context

**♦** he Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program, is the largest federal food assistance program that serves as a safety net against food insecurity and provides income support to alleviate poverty. In fiscal year (FY) 2014, SNAP served approximately 46.5 million people, about one in seven Americans.<sup>2</sup> Almost

From the <sup>1</sup>Rudd Center for Food Policy and Obesity, University of Connecticut, Hartford, Connecticut; and <sup>2</sup>Yale School of Public Health, Yale University, New Haven, Connecticut

Address correspondence to: Tatiana Andreyeva, PhD, Rudd Center for Food Policy and Obesity University of Connecticut, 1 Constitution Plaza, Hartford CT 06103. E-mail: tatiana.andreyeva@uconn.edu.

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half (45%) of SNAP participants were children under age 18 years and about 9% were aged 60 years or older. The total investment in SNAP exceeded \$73.7 billion in FY2014, providing on average \$125 in monthly food benefits per participant.<sup>2</sup>

Prior research has shown that SNAP meets the goal of reducing hunger and food insecurity among SNAP participants. 4-6 The program's impact on dietary quality and intake is less clear. The previous systematic review of SNAP outcomes conducted by the U.S. Department of Agriculture (USDA) in 2004 found little to no impact on dietary intake, including food energy and macronutrients. The effect of SNAP on food consumption varied by food type, but SNAP participants were significantly less likely to meet Dietary Guidelines recommendations. For example, SNAP participation was found to increase

consumption of meats, added sugars, and total fats, but had no effect on participants' intake of fruits, vegetables, grains, or dairy products.<sup>7</sup> Further evidence suggested that compared with income-eligible nonparticipants, SNAP participants were more likely to have nutritionally poor diets.<sup>8,9</sup>

Assessing the impact of SNAP on food insecurity and dietary quality is challenging, owing to several methodologic issues. Particularly important here is selection bias in that households in most need of food assistance and diet improvement are also more likely to participate in SNAP. Controlling for income does not resolve the issue; with the sliding-scale nature of SNAP benefits, many SNAP participants are at the lower end of income eligibility compared with income-eligible nonparticipants. As a result, baseline differences in food insecurity among participants and nonparticipants are so large that they could mask the beneficial effect of SNAP participation. Studying the impact of SNAP is further limited by the frequent use of survey data in which SNAP participation is misreported by as many as 19%-25% of respondents.<sup>10</sup> In addition, SNAP participation is often a dichotomous measure when SNAP benefits are variable amounts. Given benefit variation, program outcomes could vary too. Finally, an experimental design to test the effect of SNAP among randomly selected participants is impossible based on ethical grounds.

In recent years, the quality of diets among SNAP participants has emerged as a public policy concern, given the increasing prevalence of diet-related chronic illnesses among all Americans, particularly in low-income populations. The current USDA approach to promoting nutrition among SNAP participants is nutrition education (SNAP-Ed) in accordance with the Healthy, Hunger-Free Kids Act of 2010. Authorized at \$407 million nationally (FY2015), SNAP-Ed provides federal grants to states for nutrition education and obesity prevention programs. The program aims to use evidence-based activities that promote healthy food choices within a limited budget. <sup>11</sup> Impact studies are underway to assess the effectiveness of SNAP-Ed initiatives. <sup>12</sup>

A wide range of additional policies has been proposed to improve dietary quality among SNAP participants. Many proposals focus on incentivizing purchases of healthy foods. The effect of providing financial incentives to SNAP participants at the point of sale was recently evaluated in an RCT. Known as the Healthy Incentive Pilot, the study showed that a 30% subsidy of targeted fruit and vegetable purchases increased their consumption by SNAP participants by 26%. There are also incentive programs, known as Double Bucks, that provide a match to SNAP benefits for fruit and vegetable purchases at farmers markets. Is Increased funding and

evaluation of these programs are expected through the Food Insecurity and Nutrition Incentive grant program authorized in the Agricultural Act of 2014. Food Insecurity and Nutrition Incentive grants will provide \$100 million over 5 years to support projects that increase purchases of fruits and vegetables among SNAP participants by providing incentives at the point of purchase.<sup>16</sup>

In contrast to the incentive approaches, some proposals suggest restrictions on allowable foods for purchase with SNAP benefits, such as disallowing the use of SNAP funds to purchase sugar-sweetened beverages (SSBs) or foods of minimal nutritional value. Other proposals include a general benefit increase and new approaches based on behavioral economics. In fall 2014, USDA established a new research center to test ideas based on behavioral economics on how to improve healthy food purchases among participants in food assistance programs.<sup>17</sup>

To inform the ongoing discussion about SNAP, this paper provides a systematic review of recent U.S. studies on the quality of diets among Americans by SNAP participation status. Specifically, it describes the current evidence on dietary quality, food consumption, and spending among SNAP participants as compared to income-eligible and higher-income nonparticipants, and considers to what extent the program might have a positive or negative association with dietary quality and intake. Comparisons to nonparticipants provide a reference for better interpretation of findings and more policyrelevant analysis. Meeting the dietary recommendations is a goal for all Americans, but expectation setting for SNAP participants should consider the feasibility of meeting these goals among people with similar and higher incomes. The paper updates results from another literature review that examined data on dietary outcomes of SNAP participation published between 1973 and 2002.7

#### **Evidence Acquisition**

Studies were identified by searching electronic databases (PubMed and EconLit), examining research publications from the USDA Economic Research Service and the Food Nutrition Service, and reviewing bibliographies of the extracted studies. Searches were completed using the key words SNAP OR food stamp with each of these terms: diet, dietary adequacy, dietary effects, dietary impacts, dietary intake, dietary outcomes, dietary quality, dietary patterns, dietary practices, dietary trends, dietary variety, food choices, food intake, food consumption, food selections, food use, Healthy Eating Index, eating behaviors, eating practices, nutrient intake, nutrient content, nutritional adequacy, sugar-sweetened, fruits and vegetables, vegetables, fruits, whole grains, soda, food, and nutrition. Most of these search terms were used in the previous review on the topic.<sup>7</sup>

The inclusion criteria for this review were that the paper:

- 1. was a peer-reviewed study;
- 2. used U.S. data;

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