

# Indicators of Diet Quality, Nutrition, and Health for Americans by Program Participation Status, 2011–2016: The Supplemental Nutrition Assistance Program (SNAP) Report (Summary)

## Background

The Supplemental Nutrition Assistance Program (SNAP) is the largest domestic food and nutrition assistance program administered by the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture. The aim of SNAP is to increase food security and ensure low-income households have access to nutritious food.

This study is the fourth in a series that uses the National Health and Nutrition Examination Survey (NHANES) data to examine the relationship between SNAP participation and indicators of diet quality, nutrition, and health. As in previous studies, this study compares SNAP participants with income-eligible and higher income nonparticipants, by age and gender.

This study presents differences between SNAP participants and nonparticipants, but it does not assess the impact of SNAP on reported outcomes or infer causality.

This summary provides selected results of descriptive analyses comparing data on SNAP participants with income-eligible (less than or equal to 130 percent of Federal poverty level) and higher income nonparticipants for all individuals and by three age groups (children 18 years of age or younger), adults (19 to 59 years of age), and older adults (60 years or older) and by gender. Findings from matched and regression analyses are presented in the report and appendixes.

## Key Findings

- Although SNAP participants had lower total Healthy Eating Index (HEI)-2015 scores than both groups of nonparticipants, all Americans fell short of meeting the Dietary Guidelines.
- SNAP participants consumed less fruits and vegetables and more added sugars than income-eligible nonparticipants. However, they scored better on refined grains and sodium intake.
- Higher rates of obesity were observed in SNAP participants than nonparticipants, but there were differences by age and gender.

## Methods

The primary sources of data for this study were three cycles of NHANES data (2011–2012, 2013–2014, and 2015–2016). NHANES includes a sample of adults and children in the United States. Data are collected via interviews, physical examinations, and laboratory tests. Dietary intake data are collected via 24-hour dietary recalls. SNAP participation is based on self-reports.

The study examined four sets of outcomes:

1. **Diet quality** was examined on a given day using the Healthy Eating Index (HEI)-2015, a score which assesses adherence to the 2015–2020 Dietary Guidelines for Americans (DGA) and ranges from 0–100, with higher scores meaning better adherence.
2. **Indicators of Nutrition and Health** were assessed via weight status; disease risk; waist circumference; waist-to-height-ratio; blood pressure; blood biomarkers; and biochemical indicators.
3. **Food consumption patterns** were examined by estimating (1) the proportion of individuals consuming any foods from various supermarket aisle food groups and subgroups on a given day and (2) the average amounts consumed.
4. **Usual intakes** were calculated for energy, macronutrients, and micronutrients (vitamins and minerals) and compared to the Dietary Reference Intakes (DRIs).

**Selected Findings** (results are statistically significant unless otherwise noted)

### *Diet Quality*

---

**On average, SNAP participants had lower total HEI-2015 scores than income-eligible and higher income nonparticipants (55 versus 57 and 60 points, respectively).** However, mean total HEI-2015 scores were well below the possible maximum score of 100 for everyone, an indication that all diets were falling short of meeting the DGAs.

**Total diet quality scores of children and older adult SNAP participants were similar to their income-eligible nonparticipant cohorts.** SNAP participants 19 to 59 years of age had lower HEI-2015 scores compared to income-eligible nonparticipants (53 versus 57). Regression-adjusted estimates were similar to bivariate estimates.

### *Indicators of Nutrition and Health*

---

**Overall, SNAP participants had a higher prevalence of obesity (39 percent) than income-eligible (35 percent) and higher income (31 percent) nonparticipants but results varied by age and gender.**

- Boys participating in SNAP had a lower prevalence of obesity than income-eligible nonparticipants (18 versus 26 percent).
- Among adult men, SNAP participants had a higher prevalence of obesity than income-eligible nonparticipants (37 versus 32 percent).
- Girls and adult women participating in SNAP were more likely to be obese compared to their higher income nonparticipant age cohorts. Among adult women, SNAP participants also had a higher rate of obesity compared to income-eligible nonparticipants (52 versus 40 percent).
- Regression-adjusted estimates showed no significant differences in rates of overweight or obesity in children or adults between SNAP participants and nonparticipants. Older adult SNAP participants were less likely to be overweight or obese compared to income-eligible non-participants.

**Adult SNAP participants were less likely to have normal blood pressure compared to income-eligible and higher income nonparticipants (52 versus 57 and 56 percent, respectively).** In addition, children participating in SNAP

had a higher prevalence of elevated blood pressure compared with their higher income counterparts (9 versus 7 percent).

**Regression-adjusted estimates showed that adult SNAP participants were 4 percentage points more likely to have metabolic syndrome compared to income-eligible nonparticipants.**

**SNAP participants 12 years and over had a higher prevalence of diabetes than higher income nonparticipants (13 versus 8 percent).** Regression-adjusted estimates showed no significant differences in prevalence of diabetes between SNAP participants and either income-eligible nonparticipants or higher income nonparticipants in children, adults, or older adults.

### *Food Consumption Patterns*

---

**At the food group level, SNAP participants had similar consumption patterns to income-eligible nonparticipants. However, there were some differences, especially when looking at discrete food and beverage items:**

- **A lower percentage of SNAP participants reported consuming whole fruit, skim milk, and plain water on a given day compared to income-eligible nonparticipants.**
- **A higher percentage of SNAP participants reported consuming whole milk and noncarbonated sweetened drinks than either income-eligible or higher income nonparticipants.**
- **A lower percentage of SNAP participants reported consuming sweets and desserts or added fats and oils than higher income nonparticipants.**

### *Usual Intakes*

---

**SNAP participants consumed a smaller percentage of calories from saturated fats than higher income nonparticipants (10.9 versus 11.4 percent).** A higher percentage of SNAP participants met the DGA recommendations for saturated fat than higher income nonparticipants (31 versus 23 percent). Regression-adjusted estimates showed adult SNAP participants consumed 71 more calories from saturated fat and added sugars on a given day compared to income-eligible nonparticipants.

**SNAP participants consumed a greater percentage of calories from added sugars and had lower fiber intakes than both nonparticipant groups.** Women SNAP participants 19 to 59 years of age had the highest added sugar consumption (17 percent of calories). In contrast, income-eligible and higher income women nonparticipants reported consuming 13.9 and 12.3 percent of calories from added sugars, respectively.

**For More Information:**

Gleason, S., Hansen, D., Wakar, B. (2021). Indicators of Diet Quality, Nutrition, and Health for Americans by Program Participation Status: SNAP Report. Prepared by Insight Policy Research, Contract No. GS-10F-0136X. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, Project Officer: Michael Burke. Available online at: [www.fns.usda.gov/research-and-analysis](http://www.fns.usda.gov/research-and-analysis).