

DIET QUALITY OF AMERICANS BY SNAP PARTICIPATION STATUS: DATA FROM THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY, 2007-2010 – SUMMARY

Background

This report uses data from the National Health and Nutrition Examination Survey (NHANES) to provide a comprehensive picture of the nutrient intakes, food choices, and diet quality of USDA Supplemental Nutrition Assistance Program (SNAP) participants. Data are presented for SNAP participants, income-eligible nonparticipants, and higher income nonparticipants, broken out by age and gender. In general, there are more similarities than differences across the three groups.

Data and Methods

The report relies primarily on 24-hour dietary recall data from the 2007-2010 NHANES, supplemented with the NHANES household interview, health survey, and physical examination data, to describe food choices and supplement use, as well as to assess the adequacy of nutrient intakes of Americans by income class and SNAP-participant status.

The descriptive analyses cannot be used to attribute an impact of SNAP participation on diet quality, individual food choices, or health outcomes because of the potential for selection bias – the possibility that decisions to participate may reflect differences in underlying circumstances. In order to correct for this potential bias, the study also used propensity scoring to explore whether SNAP participants and income-eligible nonparticipants with similar characteristics had similar nutrient intakes, diet quality, and weight status. This method was also used to detect differences between children participating in SNAP only compared to those participating in SNAP and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) or SNAP and the National School Lunch Program (NSLP).

Nutrient Intakes

This study examined intakes of 18 essential vitamins and minerals, macronutrients (protein, carbohydrates, and fat) as a percentage of energy, and the percentage of energy consumed as solid fats, alcoholic beverages, and added sugars (empty calories).

- SNAP participants and income-eligible nonparticipants were about as likely to have adequate usual intakes for almost all vitamins,

minerals, and macronutrients. However, both low-income groups were less likely to have adequate intake of vitamins and minerals than higher income individuals.

- Nearly 90 percent of all persons had usual sodium intakes that exceeded the Tolerable Upper Intake Level (UL). SNAP participants were less likely than higher income nonparticipants to have usual sodium intakes that exceeded the UL.
- Only about one-third (32 percent) of all persons had usual intakes of saturated fat that were consistent with the *Dietary Guidelines for Americans* (DGA) recommendation (less than 10 percent of total calories from saturated fat). SNAP participants were more likely than higher income nonparticipants to have usual intakes of saturated fat that were consistent with the Dietary Guidelines recommendation.
- SNAP participants obtained a slightly larger share of their energy from empty calories (34 percent) than both low-income nonparticipants and higher income individuals (32 percent). This pattern was most pronounced among adults and did not appear among older adults.

Intake of Calories and Weight Status

Intake of calories and measures of Body Mass Index (BMI) were used to assess the appropriateness of usual daily energy intakes.

- Male SNAP participants had a lower usual calorie intake than higher income nonparticipants. There were no differences observed among females.
- Among all persons, 29 percent were overweight and 31 percent were obese. SNAP participants were more likely than income-eligible and higher income nonparticipants to be obese (40 percent versus 32 percent and 30 percent, respectively).

Food Consumption Patterns

This study examined the proportion of individuals consuming foods from 10 broad food groups and the average amounts consumed.

- Compared to income-eligible nonparticipants, SNAP participants were less likely to consume fruit or 100 percent fruit juice and vegetables, and were more likely to consume whole milk and soda.
- At the same time, SNAP participants were less likely than higher income nonparticipants to consume sweets and desserts, salty snacks, and added fat and oils.

Diet Quality

This study examined the overall quality of diets using the Healthy Eating Index-2005 (HEI-2005), a measure used to assess how well individuals' diets compare to the *Dietary Guidelines for Americans*. Higher scores indicate healthier diets.

- The diets of all groups fell far short of the *Dietary Guidelines for Americans*. The overall average score on the HEI-2005 was 60 out of a possible 100. SNAP participants had a lower HEI-2005 score than both income-eligible and higher income nonparticipants (57 versus 60 for both groups of nonparticipants).

Multivariate Analyses

- After matching SNAP participants with nonparticipants age 16 and over on characteristics including age, race/ethnicity, citizenship status, household composition, economic circumstances, and education, there were few differences in nutrient intakes.
- SNAP participants were more likely to be obese than income-eligible nonparticipants who were matched in economic and demographic characteristics (46 percent versus 36 percent). There were no statistically significant differences in diet quality.
- This analysis found that young children who received both SNAP and WIC had higher mean intakes of Vitamin D, calcium, and protein, suggesting participation in both programs may provide added dietary benefit than those who received only SNAP.
- This study also found that schoolchildren who received both SNAP and NSLP had higher HEI-2005 scores for whole fruit and milk consumption than those who only received SNAP, suggesting that participation in both programs may provide added dietary benefit.

Implications for SNAP Nutrition Promotion

While most Americans need to improve their diets substantially to conform to the DGA, this analysis revealed a number of patterns that can inform nutrition promotion efforts specifically among SNAP participants.

- **SNAP education programs can encourage participants to replace whole and reduced-fat milk with lowfat or nonfat milk.** In all age groups, SNAP participants were more likely than nonparticipants to consume whole or reduced-fat milk and less likely to consume lowfat or nonfat milk. Whole and reduced-fat milk contribute more calories from saturated and solid fat than lowfat or nonfat milk.
- **SNAP education programs can encourage participants to increase consumption of fruits and vegetables.** SNAP participants consumed fewer whole fruits and vegetables than both groups of nonparticipants.
- **SNAP education programs can encourage participants to reduce consumption of regular sodas.** SNAP participants were more likely to consume regular sodas than both groups of nonparticipants and were less likely to consume sugar-free sodas than higher income nonparticipants.

For More Information

Condon, Elizabeth and Susan Drilea, Carolyn Lichtenstein, James, Mabli, and Katherine Niland. (2015). *Diet Quality of Americans by SNAP Participation Status: Data from the National Health and Nutrition Examination Survey, 2007-2010*. Prepared by Walter R. McDonald & Associates, Inc. for the Food and Nutrition Service (available online at www.fns.usda.gov/research-and-analysis).