

Background

The diets of most Americans fall short of the *Dietary Guidelines for Americans*. This exploratory analysis examines dietary patterns of low-income individuals classified as healthy and less healthy eaters based on their score on the Healthy Eating Index (HEI)-2005.

The HEI-2005 is a 100-point score that measures how well populations adhere to the *Dietary Guidelines for Americans*. For this analysis, individuals with HEI-2005 scores of 70 or higher are defined as healthy eaters (scored by top 10 percent of the general population). Individuals with scores below 49 (scored by half of the general population) are defined as less healthy eaters.

Methods

We analyzed data from the National Health and Nutrition Examination Survey (NHANES), 1999-2004 for individuals from households with incomes below 200 percent of the Federal poverty level. We examined adults and children (ages 2 to 18) separately as children tend to score higher on the HEI-2005.¹ Descriptive tabulations shed light on the characteristics of healthy and less healthy eaters. We used a cluster analysis to identify comprehensive dietary patterns or “styles of eating” that are associated with healthy or less healthy diets. The cluster analysis grouped individuals into distinct groups based on food group intakes.

¹ U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, *Dietary Quality of American by Food Stamp Participation Status: Data from the National Health and Nutrition Examination Survey, 1994-2004* by Nancy Cole and Mary Kay Fox, Abt Associates, Inc and Mathematica Policy Research. FNS Project Officer: Jenny Genser, Alexandria, VA: 2008 (available online at www.fns.usda.gov/ora).

Findings

Socio-Demographic Characteristics

A summary of key differences in the characteristics of all low-income adults and children is shown below. Many of these differences were also observed in subgroups of Supplemental Nutrition Assistance Program (SNAP) participants, and income-eligible nonparticipants.

Healthy Eaters	Less Healthy Eaters
<p><i>Adults were more likely to be:</i></p> <ul style="list-style-type: none"> • female • older than 60 • foreign-born • not working • in a one-person household <p><i>or have:</i></p> <ul style="list-style-type: none"> • high blood pressure • high cholesterol • diabetes <p><i>Children were more likely to be:</i></p> <ul style="list-style-type: none"> • age 2 to 5 • with a foreign-born householder • with a married householder 	<p><i>Adults were more likely to be:</i></p> <ul style="list-style-type: none"> • male • age 19-40 • African American • working at least 20 hours per week • smokers <p><i>or have:</i></p> <ul style="list-style-type: none"> • very low food security • more than 2 hours of screen time per day <p><i>Children were more likely to be:</i></p> <ul style="list-style-type: none"> • age 12 to 18 • African American <p><i>or have:</i></p> <ul style="list-style-type: none"> • very low food security among children

Dietary Characteristics

The dietary characteristics of healthy and less healthy eaters for both adults and children and for SNAP participants, income-eligible nonparticipants, other low-income participants were nearly identical. A summary of key

differences in dietary characteristics of all low-income adults and children is shown below.

Healthy Eaters	Less Healthy Eaters
<p><i>Adults and children were more likely to:</i></p> <ul style="list-style-type: none"> • eat breakfast • eat three meals daily • consume milk, fruit, fresh fruit and fruit juice, vegetables, and whole grains • eat smaller amounts of foods suggested for occasional consumption • consume nutrient-rich diets 	<p><i>Adults and children were more likely to:</i></p> <ul style="list-style-type: none"> • eat in a restaurant • consume sweetened beverages • obtain larger shares of calories from snacks, mixed dishes, and added sugars and fats • consume higher calorie/lower nutrient diets

Dietary Patterns

We used a cluster analysis to determine whether there are dietary and socio-demographic characteristics associated with distinct patterns of healthy and less healthy eating habits and found that:

- Healthy eaters consumed fewer calories, on average, than less healthy eaters.
- Some less healthy foods (such as high-fat milk or sweet breakfast foods) were more frequently consumed in the less healthy dietary patterns, but were also present in some dietary patterns for healthy eaters.

- Both healthy eaters and less healthy eaters had patterns with high intakes of sugar-sweetened beverages.

Implications for Nutrition Education

- There is room for improvement in the diets of all individuals, including those identified as healthy eaters.
- Because of differences in the characteristics of less healthy eaters, nutrition education should be tailored to specific population subgroups – men, African Americans, teenagers, smokers, or those with very low food security, for example – whenever possible.
- Nutrition education efforts should focus on reducing intakes of high-calorie, low-nutrient foods such as sugar-sweetened beverages, high-fat dairy, and desserts while promoting as alternatives water, fat-free or low-fat milk, and fruits or low-fat/low-calorie dessert choices.

For More Information

U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, *Characteristics and Dietary Patterns of Healthy and Less Healthy Eaters in the Low-Income Population* by Ben-Shalom, Yonaton, Mary Kay Fox, and P.K. Newby, Mathematica Policy Research. FNS Project Officers: Kelly Kinnison and Jenny Genser, Alexandria, VA: 2012 (available at www.fns.usda.gov/ora).

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