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Diet Quality of American School-Age Children by School Lunch Participation Status:

Data from the National Health and Nutrition Examination Survey, 1999-2004

United States Department of Agriculture
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Table of Contents

List of Tables

List of Figures

Executive Summary

This report uses data from the National Health and Nutrition Examination Survey (NHANES 1999–2004) to provide a comprehensive picture of the diets of American school-age children (ages 5 to 18). The report examines the nutrient intakes, food choices, and diet quality of children on days when school was in session. Results for children who participated in the National School Lunch Program (NSLP) are compared with results for children who did not participate in the NSLP. These comparisons are made in two income groups—low-income children, whose household income was at or below 185 percent of the federal poverty level (these children were eligible to receive NSLP meals free or at a reduced price), and higher-income children whose household income exceeded this cut-off (these children could participate in the NSLP, but had to pay full price for their meal).

The National School Lunch Program

The NSLP operates through the Nation's schools. Almost 99 percent of all public schools and 83 percent of all public and private schools combined participate in the NSLP. All children in participating schools are eligible to receive NSLP lunches. Children from low-income families are eligible to receive lunches free or at a reduced-price; children from higher-income families can purchase lunches for full price (at a subsidized rate). Schools receive reimbursement for all lunches served, with higher reimbursements paid for meals served free or at a reduced-price.

In fiscal year 2007, the NSLP, provided lunches to an average of 30 million school-age children per day—more than 5 billion lunches overall at a federal cost of 10.9 billion dollars. More than half (59 percent) of NSLP lunches were served to children from low-income families. Participation in the NSLP varies by income, age, and gender—students certified to receive free or reduced-price lunches are more likely to participate than students not certified for meal benefits; elementary school students are more likely to participate than secondary school students; and boys are more likely to participate than girls (Fox et al., 2001; Gleason, 1995; Maurer, 1984; Akin, 1983).

To be eligible for Federal subsidies, NSLP meals must meet standards designed to ensure that lunches provide one-third of children's daily nutrient needs.[1] Research has shown that, with few exceptions, the meals offered in the NSLP provide students the opportunity to satisfy one-third of their daily needs for an array of essential vitamins and minerals (Burghardt et al., 1993; Wellisch et al., 1983).

In the early 1990s, USDA began a series of studies, conducted approximately every five years, to assess the nutrient composition of meals offered in the NSLP. The first School Nutrition Dietary Assessment Study (SNDA-I), conducted in school year 1991-92, found that participation in the NSLP was associated with increased intakes of several key vitamins and minerals, but was also associated with increased intakes of fat, saturated fat, cholesterol, and sodium, relative to recommendations in the *Dietary Guidelines for Americans* (DGAs) (Burghardt et al., 1993). (At that time SNDA-I was conducted, schools were not required to offer meals that were consistent with the DGAs).

Since SNDA-I, the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture, which administers the NSLP, has launched a number of initiatives to improve the quality of schools meals. A second SNDA study (SNDA-II) was conducted in school year 1998-99 in the early stages of the School Meals Initiative. SNDA-II found that the fat and saturated fat content of the average NSLP lunch had decreased since SNDA-I, without sacrificing vitamin and mineral content, but there was still room for improvement (Fox et al., 2001). The recently completed SNDA-III study, which covered school year 2004-05, found that improvements in the dietary quality of school meals observed in SNDA-II have been maintained or enhanced over time (Gordon et al., 2007). Nontheless, in many schools, the fat and sodium

[1] Current standards are based on the 1989 Recommended Dietary Allowances. Standards will be updated to incorporate the more recent Dietary Reference Intakes, based on recommendations provided by an Institute of Medicine panel.

content of NSLP lunches continued to exceed recommended levels.

In recent years, concerns about childhood obesity have heightened concerns about the quality of schools meals as well as the foods and beverages sold in schools outside of the school meal program. In 2008, FNS commissioned the Institute of Medicine (IOM) to provide recommendations to revise the meal patterns and nutrition standards for the NSLP and the School Breakfast Program (SBP). The effort will incorporate the most up-to-date scientific recommendations and enhance the ability of these programs to meet children's nutritional needs, foster healthy eating habits, and safeguard children's health.

Focus of the Research

This report provides information on the nutrient intakes, diet quality, and food choices of NSLP participants and nonparticipants. This report uses the most recently available data from the National Health and Nutrition Examination Survey (NHANES 1999-2004) to provide an up-to-date and comprehensive picture of the diets of students who participate in the NSLP—a reference point that can be used to target efforts to improve participants' diets and as a benchmark for monitoring participants' diets over time.

NSLP participants and nonparticipants are compared in two income groups—low-income children eligible to receive NSLP meals free or at a reduced price (F/RP); and higher-income children, whose household income exceeded the F/RP cut-off and could participate in the NSLP by paying full price for meals. The sample includes children ages 5 to 18 years who were enrolled in school, and had a complete 24-hour recall referencing a day when they were likely to have attended school (that is, the reference day for the recall was a weekday during a period when school was likely to be in session).[2]

This research was not designed to assess the impact of NSLP or in any way attribute differences observed between NSLP participants and nonparticipants to an effect of the program. Estimation of program impacts requires a randomized experiment or quasi-experimental design to control for selection bias (Hamilton and Rossi, 2002). A quasi-experimental study design was not feasible due to limitations of the NHANES data. In this report, data on nonparticipant children are presented strictly to provide context for data on NSLP participant children. For example, it is useful to understand the extent to which dietary patterns observed in the diets of NSLP participants mirror those observed in other populations groups.

The research presented in this report addresses four basic questions about the diets of NSLP participants: Do NSLP participants get enough of the right kinds of foods to eat (measured in terms of nutrient intakes and energy sources)? Are NSLP participants more likely to be overweight than nonparticipants (are they consuming too many calories)? How does the quality of lunches and overall diets consumed by NSLP participants compare to those of nonparticipants? And how do food choices differ for NSLP participants and nonparticipants (do different food choices help explain differences in diet quality)?

All of the analyses in this report separately compare low-income NSLP participants and non- participants, and higher-income NSLP participants and nonparticipants. Many analyses separately examine data for lunch meals and for total daily intakes.

Do NSLP Participants Get Enough of the Right Kinds of Food to Eat?

For this study, we addressed the question of whether NSLP participants get "enough of the right kinds of food" by examining intakes of 18 essential vitamins and minerals.[3] We also examined intakes

[2] NHANES confidentiality requirements prohibit release of individual identifying information. The determination that "school was likely to be in session" was based on non-public survey items analyzed in the CDC Research Data Center: the date of the dietary interview and the county of residence. Dates when school was in session were taken from the school calendar of the largest public school district in the county where survey respondents resided.

[3] Nutrient data presented do not include contributions from dietary supplements.

of macronutrients (protein, carbohydrates, and fat) as percentages of energy intakes, and the percentage of energy consumed from solid fats, alcoholic beverages, and added sugars.[4]

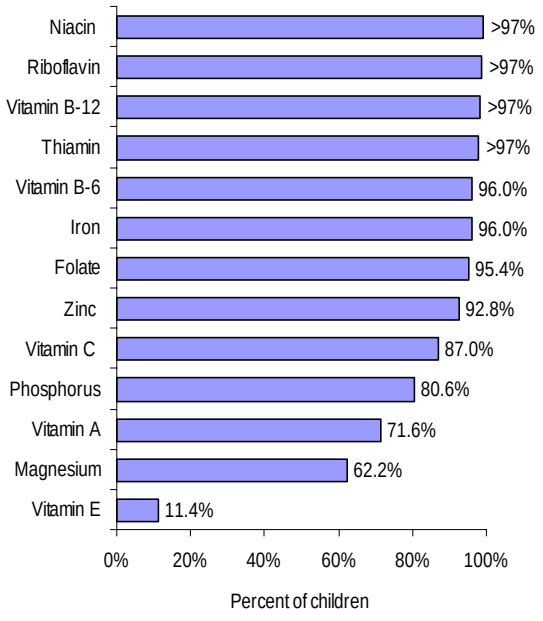
Vitamins and minerals with defined Estimated Average Requirements (EARs)

The prevalence of adequate usual daily intakes of vitamins and minerals is assessed by comparing the usual daily intakes of a population group to Estimated Average Requirements (EARs). The prevalence of adequate usual daily intakes is defined as the proportion of the group with usual daily intakes at or above the EAR. Thirteen of the 18 vitamins and minerals examined in this report have defined EARs.

During 1999-2004, more than 92 percent of school-age children had adequate usual daily intakes of eight of the 13 essential vitamins and minerals with defined EARs (Figure 1). However, for vitamins A, C, and E, as well as for magnesium, and phosphorus, more than 10 percent of school-age children had usual daily intakes that were inadequate.[5] The prevalence of inadequate intakes was greatest among teenagers, particularly teenage girls. In this subgroup, the prevalence of inadequate usual intakes was also high for vitamin B_6, folate, iron, and zinc.

[4] Analyses of vitamin, mineral, and macronutrient intakes are based on estimates of usual daily intakes (see Appendix A). Analyses of calories from SoFAAS are based on a single 24-hour dietary recall.

Figure 1—Percent of School Children Age 5–18 with Adequate Usual Intakes



Note: Individual estimate is not displayed when percentage is greater than 97. Estimates are age adjusted.

Among low-income children, NSLP participants were more likely than nonparticipants to have adequate usual daily intakes of vitamin A, vitamin B_6, vitamin B_{12}, folate, niacin, riboflavin, thiamin, iron, phosphorus, and zinc. The magnitude and substantive significance of differences between the two groups was greatest for vitamin A (68 vs. 55 percent), phosphorus (85 vs. 65 percent), and, for girls, iron (92 vs. 83 percent).

Among higher-income children, NSLP participants were more likely than nonparticipants to have adequate usual daily intakes of zinc. For all other vitamins and minerals examined, the prevalence of adequate usual intakes was comparable for NSLP participants and nonparticipants.

Calcium, Potassium, Fiber and Sodium

For calcium, potassium, and fiber it was not possible to draw firm conclusions about the adequacy of children's usual diets because EARs have not been defined. Populations with mean usual daily intakes that meet or exceed the Adequate Intake (AI) levels defined for these nutrients can be assumed to have high levels of nutrient adequacy. However, no conclusions can be drawn when mean usual daily intakes fall below the AI. For sodium, the major concern is the potential for excessive intakes so usual daily intakes were compared to the Tolerable Upper Intake Level (UL)—the maximum intake considered to be safe for long-term consumption. Results indicate that:

- For children 5-8 years, mean usual daily calcium intakes exceeded the AI, indicating that the prevalence of inadequate usual calcium intakes in this age group is likely to be low. For

[5] The prevalence of adequate usual daily intakes of vitamin E was especially low (7.5 percent), consistent with most recent studies of vitamin E intake. Devaney and colleagues have pointed out that vitamin E deficiency is rare in the U.S., despite low measured intakes, and that the EARs for vitamin E may need to be reassessed (Devaney et al., 2007).

older children, mean usual daily calcium intakes were less than the AI.

- Mean usual daily intakes of potassium and fiber were less than the AI for all age groups.[6]
- Mean usual daily intakes of sodium were more than twice the AI for all age groups. Overall, more than 90 percent of school-age children had usual sodium intakes that exceeded the UL.

Among low-income children, NSLP participants:

- had higher mean usual daily intakes of calcium and potassium than nonparticipants; and
- were more likely than nonparticipants to have usual daily sodium intakes that exceeded the UL.
- Among higher-income children, there were no significant differences between NSLP participants and nonparticipants in intakes of calcium, fiber, or sodium; but NSLP participants had higher mean usual daily intakes of potassium.

Macronutrients

The 2005 DGAs and *MyPyramid Food Guidance System* recommend a particular distribution of calories from energy-providing macronutrients—total fat, saturated fat, carbohydrate, and protein. Usual daily intakes of total fat, protein, and carbohydrate were compared to Acceptable Macronutrient Distribution Ranges (AMDRs) defined in the DRIs (IOM, 2006). Usual daily intakes of saturated fat were compared to the 2005 DGA recommendation (USDHHS/ USDA, 2005).

Results show that:

- Almost all school-age children had usual daily intakes of energy from protein and carbohydrate that were consistent with AMDRs.
- About three-quarters of school-age children had usual daily intakes of energy from fat that were consistent with the AMDR. Children whose usual intake was not consistent with the AMDR were more likely to consume too much rather than too little energy from fat.
- Only 15 percent of school-age children had usual daily intakes of energy from saturated fat that were consistent with the 2005 DGA recommendation.

Comparisons of usual intakes of NSLP participants and nonparticipants revealed:

- No differences between NSLP participants and nonparticipants, in either the low-income or higher-income groups, in usual daily intakes of energy from total fat, protein, or carbohydrate.
- NSLP participants were significantly less likely than nonparticipants to have usual daily intakes of saturated fat that were consistent with the 2005 DGA. This was true for both low-income and higher-income children. Differences were concentrated among girls and, among low-income children, among teenage girls (14-18 years) in particular.

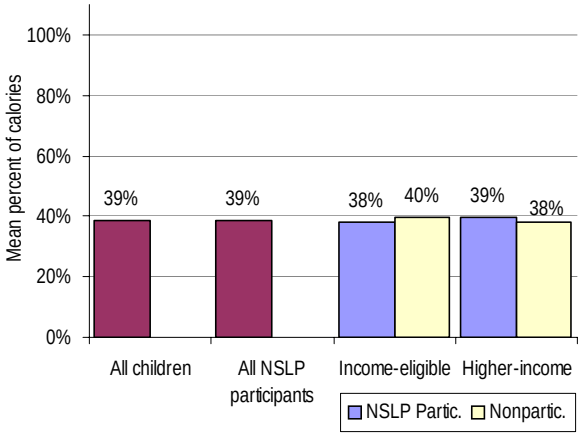
Discretionary calories from solid fats, alcoholic beverages, and added sugars (SoFAAS)

Dietary patterns recommended in the DGA and *MyPyramid Food Guidance System* include specific discretionary calorie allowances based on energy needs for age and gender groups. Discretionary calories are defined as calories that can be used flexibly after nutrient requirements are met (Britten, 2006). These allowances assume that individuals satisfy nutrient requirements with the fewest possible calories by eating foods in their most nutrient-dense form (fat-free or lowest-fat form, with no added sugars) (Basiotis et al., 2006). Discretionary calories may be used to consume additional amounts from the basic food groups or to consume less nutrient-dense foods that provide calories from solid fats, alcoholic beverages, added sugars (SoFAAS).

Discretionary calorie allowances vary for school-age children based on age and gender, from a low of 170 calories (13 percent of daily calorie needs) for 5-8-year olds to a high of 290 calories (13

[6] Mean usual intakes of fiber were equivalent to about half of the 14 grams of fiber per 1,000 calories standard used to establish the AIs. It has been suggested that the methods used to establish AIs for fiber may need to be reexamined (Devaney et al., 2007).

Figure 2—Percent of Energy from Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS)



Differences between NSLP participants and nonparticipants, within income group, are not statistically significant. Estimates are age adjusted.

percent of daily calorie needs) for 18-year-old males. On average, school-age children obtained about 39 percent of their total daily energy intake from SoFAAS, a level well above the discretionary calorie allowances included in the MyPyramid food intake patterns (Figure 2). Overall, there were no significant differences between NSLP participants and nonparticipants in the mean contribution of SoFAAS to total energy intakes. However, among higher-income children 5-8 years of age, NSLP participants obtained a significantly larger share of their total energy intake from SoFAAS than nonparticipants. This difference was concentrated among girls. Among lower-income boys, the pattern was reversed, with NSLP participants obtaining a significantly smaller share of total energy intake from SoFAAS than nonparticipants.

Are NSLP Participants More Likely to Be Overweight than Nonparticipants?

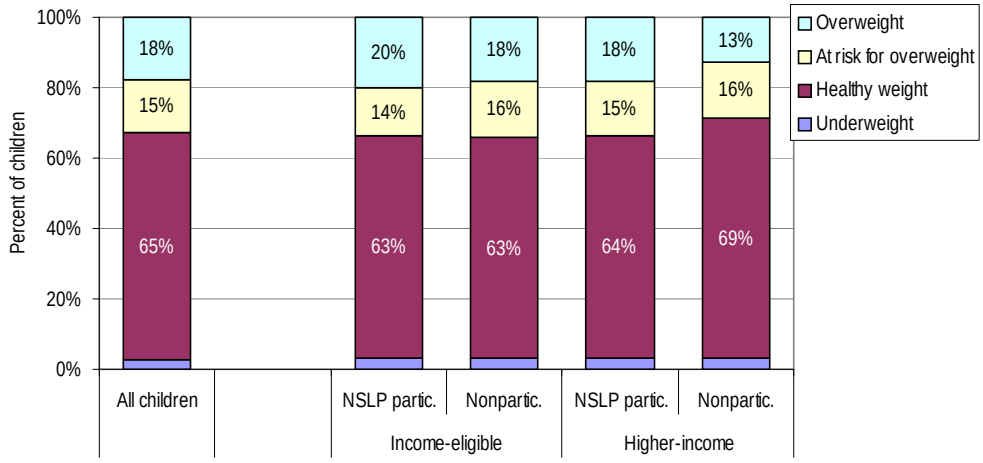
Children are determined to be underweight, healthy weight, at risk of overweight, or overweight based on comparison of their Body Mass Index (BMI) with gender-specific BMI-for-age charts developed by the Centers for Disease Control and Prevention. BMI is a measure of the relationship between weight and height. Children who are overweight have had long-term energy intakes that exceeded their energy requirements.

Using BMI to assess the appropriateness of usual energy intakes is recommended by the Institute of Medicine because of the difficulties associated with comparing daily energy intakes to estimated energy requirements without adequate information about physical activity (IOM, 2005b).[7]

The percentages of NSLP participants and nonparticipants by weight status are shown in Figure 3.

[7] Activity levels are not adequately measured by most surveys, including NHANES 1999-2002.

Figure 3—Percent of NSLP Participants and Nonparticipants By Weight Status



Differences between NSLP participants and nonparticipants, within income group, are not statistically significant. Estimates are age adjusted.

Eighteen percent of school-age children were overweight and another 15 percent were at risk of becoming overweight. Overall, there were no significant differences between NSLP participants or nonparticipants in the proportions of children in each BMI-for-age category. This was true for both low-income children and higher-income children and for most age and gender subgroups.

How Does Diet Quality Compare for NSLP Participants and Nonparticipants?

In this report, we used two measures to assess overall diet quality.

- We used the Healthy Eating Index (HEI)-2005, developed by the USDA Center for Nutrition Policy and Promotion (CNPP), to assess compliance with the diet-related recommendations of the 2005 DGA and the MyPyramid food guidance system.
- We used a composite measure of nutrient density to assess the nutrient content of foods relative to their energy content. We assessed nutrient density of overall diets and individual meals and snacks. "Nutrient-dense" foods are defined as "low-fat forms of foods in each food group and forms free of added sugar."

The Healthy Eating Index-2005 (HEI-2005)

The HEI-2005 consists of 12 component scores that measure consumption of food and nutrients relative to *MyPyramid* recommendations and the DGA. Eight components are food-based and assess intakes of *MyPyramid* food groups and subgroups. The four remaining components assess intakes of oils, saturated fat, sodium, and calories from SoFAAS.

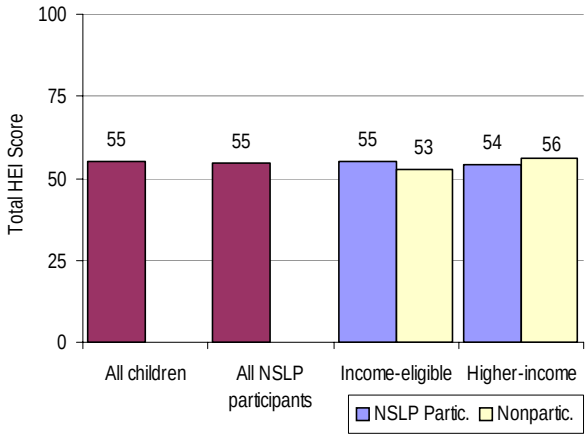
HEI-2005 component scores are assigned based on a density approach that compares intakes per 1,000 calories to a reference standard. This approach reflects the overarching recommendation of the DGA and *MyPyramid* that individuals should strive to meet food group and nutrient needs while maintaining energy balance. Scores for the food-based and oils components reward greater consumption, up to a maximum score of 5 or 10 points per component. Scores for saturated fat, sodium, and calories from SoFAAS reward low consumption. Scores on the 12 components are summed for the Total HEI-2005 Score, worth a maximum of 100 points.

Overall, school-age children scored 55 out of a possible 100 points on the Total HEI-2005 Score. There were no significant differences between NSLP participants and nonparticipants in either income group (Figure 4). These results indicate that the usual diets of school-age children, regardless of income and NSLP participation, fell considerably short of the diet recommended in the DGA and *MyPyramid*.

HEI-2005 component scores for all school-age children are shown in Figure 5, expressed as a percentage of the maximum score per component. Estimates of the HEI–2005 component scores point to the following key concerns in the diets of *all* school-age children:

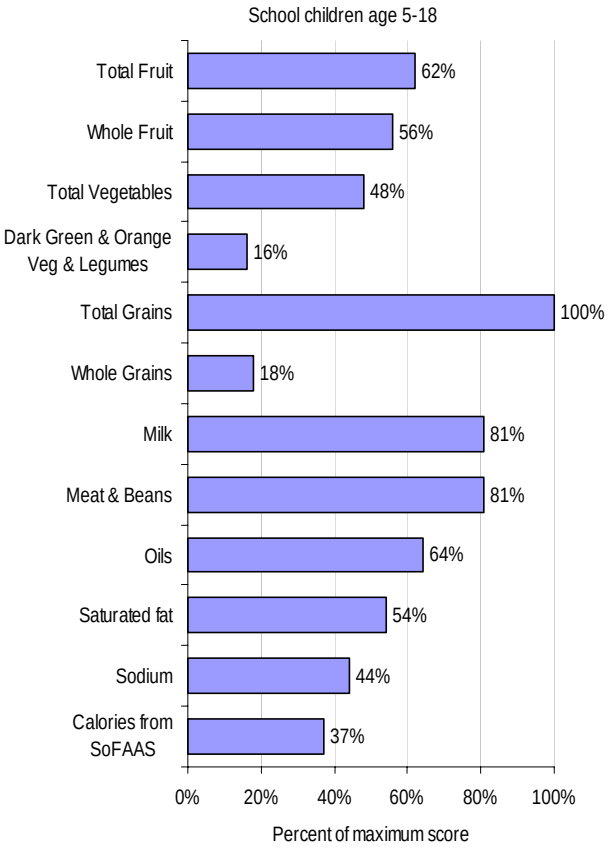
- Low intakes of vegetables and fruit, particularly whole fruits.
- Very low intakes of dark green and orange vegetables and legumes.
- Very low intakes of whole grains.
- High intakes of discretionary calories from SoFAAS. Excessive calories from SoFAAS may contribute to calorie intakes that exceed

Figure 4—Healthy Eating Index-2005 Total Scores



Differences between NSLP participants and nonparticipants within income groups are not statistically significant. Estimates are age adjusted.

Figure 5—Healthy Eating Index-2005 Component Scores



requirements (and, thereby, contribute to overweight and obesity).

- High intakes of sodium and saturated fat.

There were relatively few significant differences in HEI–2005 component scores for NSLP participants and nonparticipants. Differences observed for school-age children overall were:

- Total fruit—Among low-income children, NSLP participants had a significantly higher mean score than nonparticipants for the total fruit component (3.5 vs. 2.8). (The total fruit component includes 100% fruit juices).
- Whole fruit—Among higher-income children, NSLP participants had a significantly lower mean score on the HEI–2005 component for whole fruit than nonparticipants (2.4 vs. 3.3)
- Milk—NSLP participants had a significantly higher mean score than nonparticipants on the HEI–2005 component for milk. This was true for both low-income (8.8 vs. 7.3) and higher-income (8.7 vs. 7.6) children.
- Meat and Beans—NSLP participants in both income groups had a significantly higher mean score than nonparticipants on the HEI–2005 component for meat and beans. Mean scores were 8.4 vs. 7.7 for low-income children and 8.4 vs. 7.8 for higher-income children.

Nutrient density of overall diets, meals, and snacks

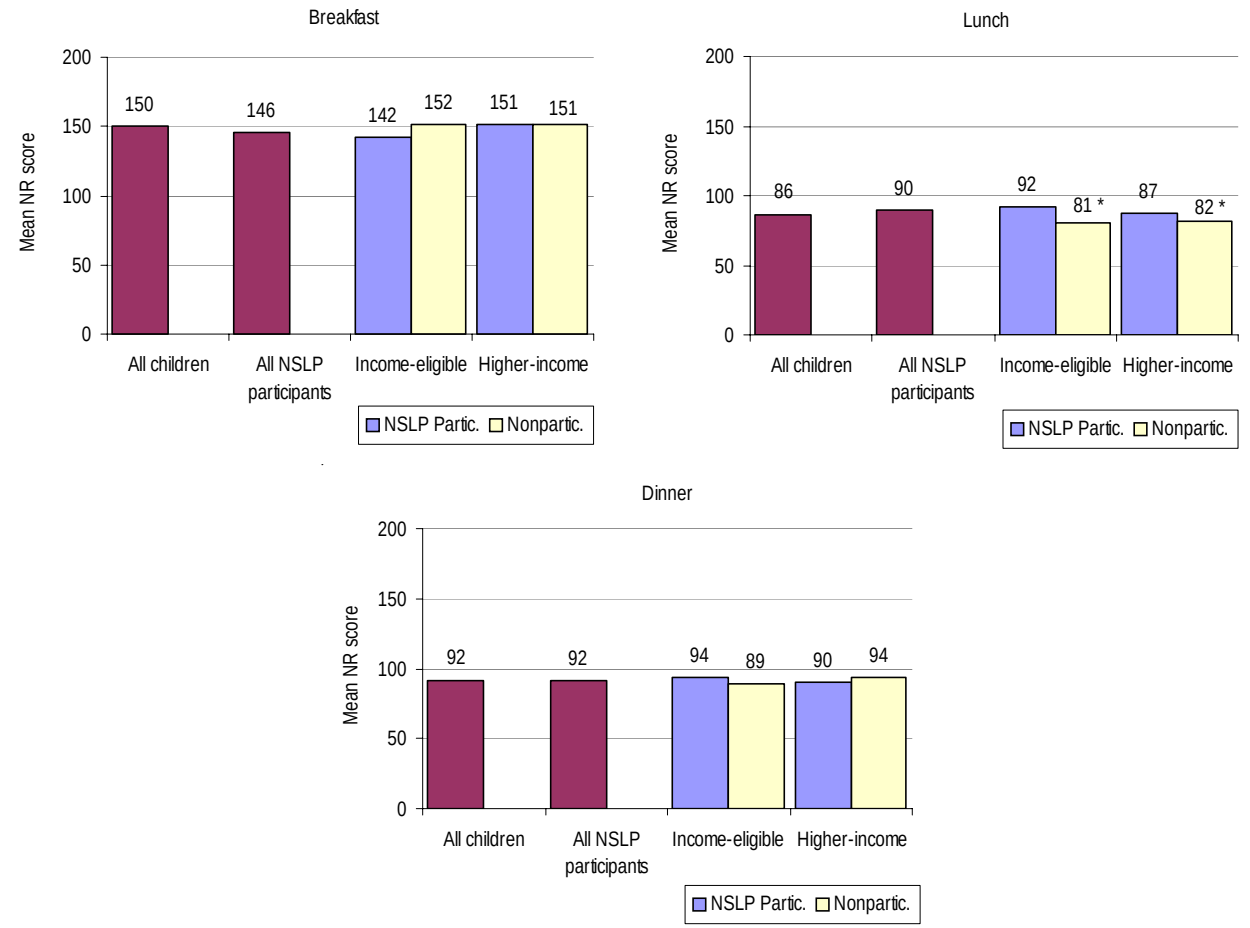
To assess nutrient density, we used a modified version of the Naturally-Nutrient-Rich (NNR) score, developed by Drewnowski (2005). The NNR is a nutrients-to-calories ratio that considers nutrients commonly included in efforts to define healthy diets. The NNR, as initially conceived, excludes fortified foods. For our analysis, we used a modified NNR—the NR (Nutrient-Rich) score—that includes fortified foods because these foods make important contributions to nutrient intakes. The NR score measures the contributions of 16 nutrients (see Chapter 4). The NR score is difficult to interpret on its own, but provides a metric for comparing foods, meals, or overall diets.[8]

On average, children's NR scores were notably higher for breakfast (150), than for lunch and dinner (86 and 92). This indicates that the mix of foods consumed at breakfast was more nutrient-dense—providing a higher concentration of nutrients per calorie—than the mix of foods consumed for lunch or dinner. NR scores for snacks were substantially lower than NR scores for any of the meals.

Overall, there were no statistically significant differences between NSLP participants and nonparticipants, in either the low-income or higher-income groups, in mean NR scores for breakfast, dinner, snacks, or all meals and snacks combined. However, lunches consumed by NSLP participants were more nutrient-dense than the lunches consumed by

[8] The NR score for a food is constructed as the weighted average of the contributions of 16 nutrients, with nutrient contributions measured as a percent of daily value (DV) contributed per 2000 kcal of the food. The NR score for a meal or the full complement of meals and snacks is similarly constructed, after aggregating the nutrient contributions of all foods consumed.

Figure 6—Mean Nutrient Rich (NR) Scores for NSLP Participants and Nonparticipants



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

nonparticipants. This was true for both low-income children (mean NR score of 92 vs. 81) and higher-income children (87 vs. 82) (Figure 6).

How Do Food Choices Differ for NSLP Participants and Nonparticipants?

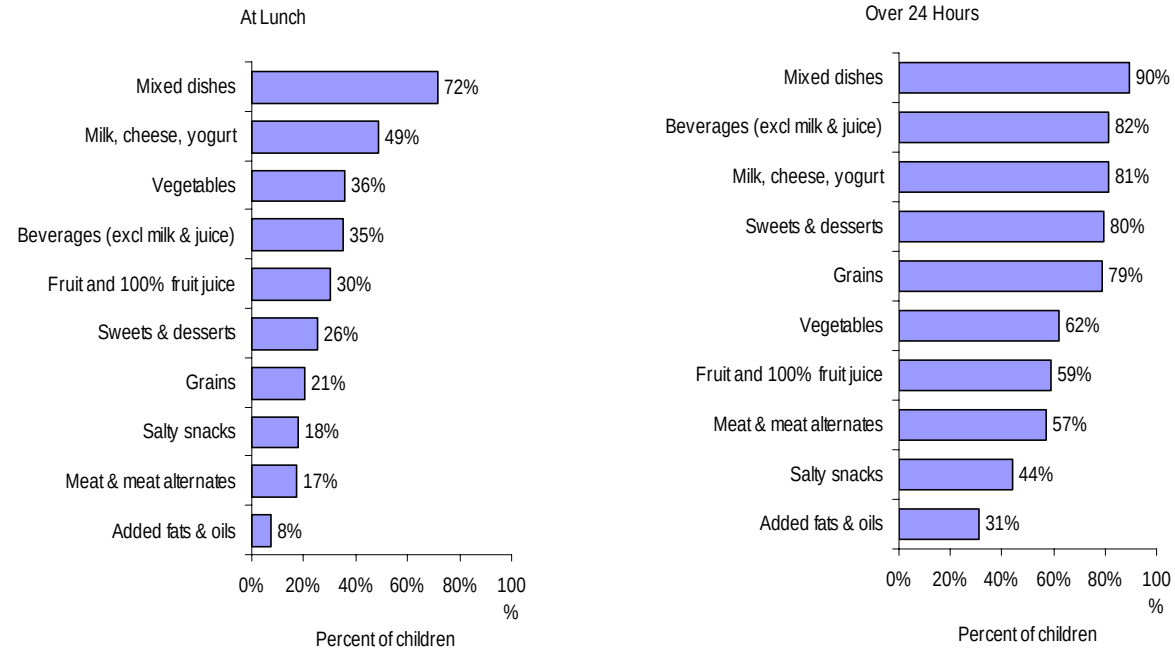
Analysis of food choices helps us to understand the avenues by which NSLP participants and nonparticipants obtain different levels of diet quality. It can also reveal dietary behaviors that can be targeted by nutrition education efforts. We used two different approaches to compare the broad range of food choices of NSLP participants and nonparticipants based on a single 24-hour recall:

- Types of foods consumed (supermarket aisle approach)—This approach looks at the percentage of NSLP participants and nonparticipants who consumed foods from broad food groups and subgroups.
- Nutritional quality approach—This approach examines the percentage of foods consumed by NSLP participants and nonparticipants children within three groups of food based on nutritional characteristics— foods suggested for frequent, selective, or occasional consumption.

Types of Foods Consumed

We examined the proportions of NSLP participants and nonparticipants consuming foods from each of 10 major food groups, at lunch and over 24 hours (food groups are shown in Figure 7). The main findings were:

Figure 7—Percent of School Children Eating Any Foods from 10 Broad Food Groups



Note: Estimates are age adjusted.

- NSLP participants and nonparticipants in both income groups were about equally likely to consume grains, meat and meat alternates, and sweets and desserts. This was true of food choices at lunch and over 24 hours.
- At lunch, NSLP participants in both income groups were more likely than nonparticipants to consume vegetables, fruit and fruit juice, milk and milk products, and mixed dishes. These differences persisted over 24 hours with the exception of the difference in fruit and fruit juice among higher-income children.
- At lunch, NSLP participants in both income groups were less likely than higher-income nonparticipants to consume salty snacks and beverages other than milk and 100% fruit juice. These differences persisted over 24 hours with the exception of the difference in beverage consumption among higher-income children.

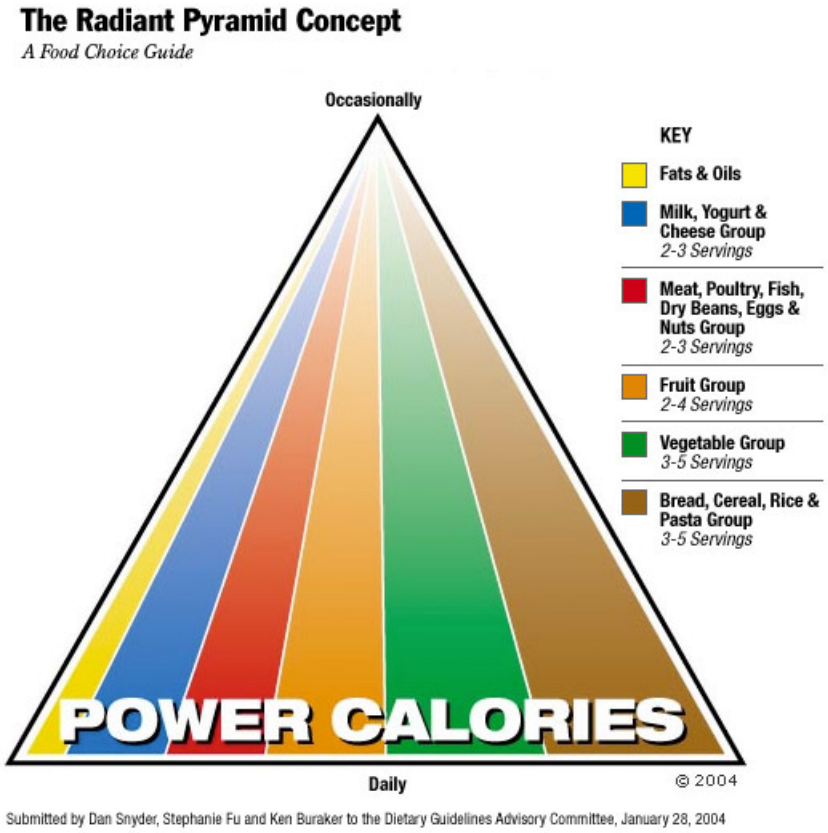
Nutritional Quality of Foods Consumed

Our second method for examining food choices was based on the radiant pyramid/power calories concept, as described by Zelman and Kennedy (2005) (Figure 8). The idea is that foods within a food group are ranked by nutrient density, with the most nutrient-dense food choices at the bottom of the pyramid to be enjoyed frequently; foods with lower nutrient density in the middle of the pyramid to be enjoyed selectively; and the least nutrient-dense foods at the top of the pyramid to be enjoyed only occasionally. We classified foods into the these three categories based on characteristics encouraged in the DGAs and MyPyramid Food Guidance System (for example, forms that are fat-free, low fat, and/or have no added sugar) and, for some foods, data on total fat content and calories from SoFAAS.

Nearly 70 percent of the foods consumed by school-age children over a 24-hour period were foods suggested for occasional consumption (top of the radiant pyramid), and only 13 percent were foods to consume frequently. Compared with nonparticipants, NSLP participants were (Figure 9):

- about equally likely to consume foods from the " consume occasionally" category at lunch and over 24 hours
- somewhat less likely to consume foods from the "consume frequently" category at lunch (9% vs. 12% and 9% vs. 13% for low-income and higher-income groups, respectively)

Figure 8—Radiant Pyramid Concept



- somewhat more likely to consume foods from the "consume selectively" category at lunch (21% vs. 14% and 19% vs. 13% for low-income and higher-income groups, respectively)

Differences between NSLP participants and nonparticipants in the distribution of food choices at lunch were more pronounced than when measured over 24 hours.

Conclusions and Implications

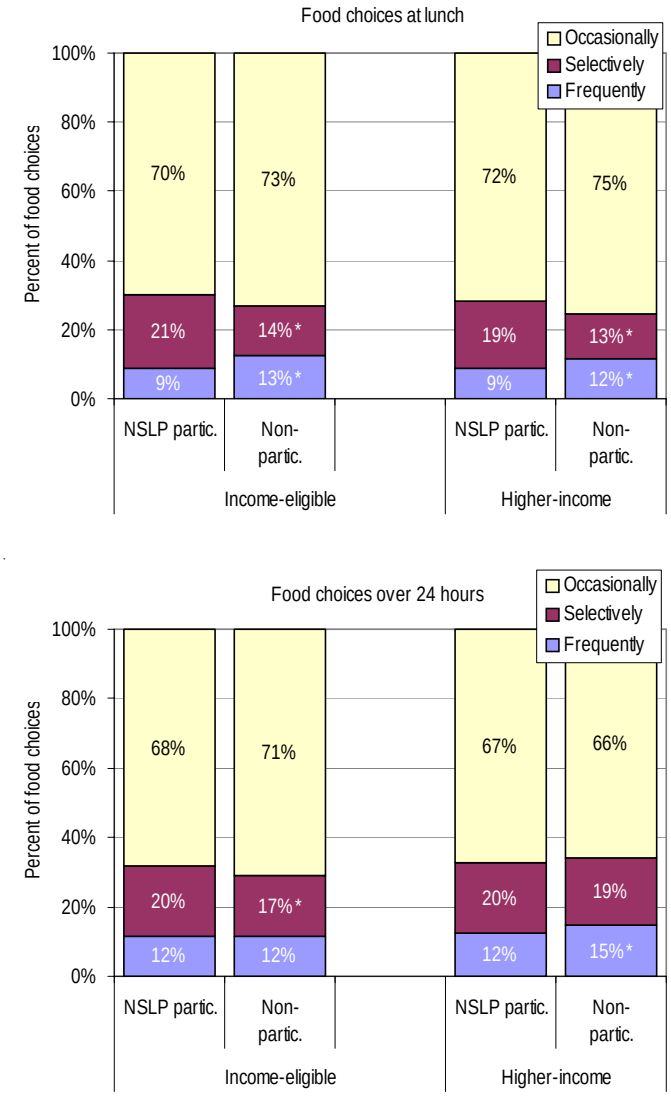
A primary conclusion from this study is that the diets of most school-age children in the U.S. are generally nutritionally adequate. Teenagers, particularly teenage girls, emerged as the subgroup at greatest risk for inadequate nutrient intakes. These children are a prime audience for nutrition education interventions to promote consumption of nutritionally balanced diets.

For school-age children overall, the issues of greatest concern are related to excessive consumption of discretionary calories from solid fats and added sugars, excessive intakes of saturated fat and sodium, and inadequate consumption of specific types of foods that are nutrient-dense and high in fiber, most notably whole fruits, dark green and deep yellow vegetables, legumes, and whole grains. Nutrition education efforts for this age group should target these concerns.

Another conclusion is that the usual diets of children who participated in the NSLP were better in some ways than the usual diets of children who did not participate and were worse in other ways. Some of the relationships between NSLP participation and children's dietary intakes varied for low-income and higher-income children.

Among the most important issues for policymakers, school food service providers, and nutrition educators are: (1) the increased prevalence of usual

Figure 9—Percent of Food Choices From Foods Recommended for Frequent, Selective, and Occasional Consumption



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

sodium intakes that exceed the UL among low-income NSLP participants, relative to nonparticipants, and (2) the increased prevalence of excessive usual intakes of saturated fat among NSLP participants (in both low-income and higher-income groups). Foods that were found to be leading contributors to children's intakes of both saturated fat and sodium intakes included sandwiches, hamburgers and cheeseburgers, and pizza with meat. Whole milk and ice cream were also among the top five contributors to saturated fat intakes. Specific strategies that may help decrease children's intakes of saturated fat and sodium include limiting use of cheese in sandwiches and burgers, using the low-fat meats, including ground turkey, for burgers, using vegetables, chicken, or other low-fat/low-sodium toppings for pizza, eliminating whole milk, and limiting use of ice cream.

Chapter 1
Introduction

The National School Lunch Program (NSLP) is the oldest food assistance program in the U.S. Department of Agriculture's (USDA) nutrition safety net. While the Food Stamp Program is the largest food assistance program in terms of benefits disbursed, the NSLP serves the most people. The NSLP operates through the Nation's schools. Almost 99 percent of all public schools and 83 percent of all public and private schools combined participate in the NSLP. All children in participating schools are eligible to receive NSLP lunches. Children from low-income families are eligible to receive lunches free or at a reduced-price; children from higher-income families can purchase lunch for full price (these are subsidized). Schools receive reimbursement for all lunches served, with higher reimbursements paid for meals served free or at a reduced-price.

The NSLP was established in 1946 to "safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other foods…."[1] A major impetus for the program was the prevalence of nutrition-related health problems identified during the screening of young men for military service in World War II. Consequently, to be eligible for reimbursement, NSLP meals must meet specific requirements designed to ensure that the lunches provide, on average, one-third of students' daily nutrient needs. Over time, the focus on nutrition has expanded to address concerns about nutrients that may be consumed in excess (fat, saturated fat, and sodium). Most recently, concerns about childhood obesity have heightened concerns about the quality of both schools meals and foods and beverages sold in schools outside of the school meal programs.

In 2008, USDA's Food and Nutrition Service (FNS), which administers the NSLP, commissioned the Institute of Medicine (IOM) to provide recommendations to revise the meal patterns and nutrition standards for the NSLP and School Breakfast Program (SBP). This effort will incorporate the most up-to-date scientific recommendations and enhance the ability of these programs to meet children's nutritional needs, foster healthy eating habits, and safeguard children's health.

Strategies for improving the diets of NSLP participants should be based on reliable data about the current dietary practices of NSLP participants. This report uses the most recently available data from the National Health and Nutrition Examination Survey (NHANES 1999–2004) to contribute to that foundation. The intent is to provide a reference point that can be used to target efforts to improve participants' diets and as a benchmark for monitoring participants' diets over time. The report examines the nutrient intakes, food choices, and diet quality of NSLP participants and nonparticipants. NSLP participants and nonparticipants are divided into two groups—those who were income-eligible for free or reduced-price meals (household income at or below 185 percent of poverty) and higher-income individuals, with incomes above this range. NSLP participants are defined as children who consumed a reimbursable lunch on the day dietary intake data were collected.

This research was not designed to assess the impact of the NSLP or in any way attribute differences observed between NSLP participants and nonparticipants to an effect of the program. Estimation of program impacts requires a randomized experiment or quasi-experimental design to control for selection bias (Hamilton and Rossi, 2002). A quasi-experimental study design was not feasible due to limitations of the NHANES data. In this report, data on nonparticipants are presented strictly to provide context for data on NSLP participants. For example, it is useful to understand the extent to which patterns observed in the diets of NSLP participants mirror those observed in other populations groups. For this reason, all data tabulations also present data for all children (regardless of participation status) and all NSLP participants (regardless of income status).

[1] National School Lunch Act of 1946, Public Law 79-396.

The report provides data on the adequacy of usual nutrient intakes of NSLP participants and nonparticipants measured relative to the most up-to-date reference standards. Diet quality is measured using the Healthy Eating Index–2005. Data are also presented on the appropriateness of long-run energy intakes, as measured by Body Mass Index. We provide context for these findings by examining food choices of NSLP participants and nonparticipants from a number of different perspectives:

- Meal and snacking patterns;
- Consumption of discretionary calories from solid fats, alcoholic beverages, and added sugars;
- Energy density and nutrient density of meals, snacks, and overall diets;
- Proportions of children consuming foods from major food groups (for example, grains, vegetables, and milk/milk products);
- Proportions of children consuming specific types of food within major food groups (for example, whole grains or skim milk);
- Average amounts of foods consumed from each of the major *MyPyramid* food groups and the relative contributions of specific types of food to intakes.

All of the above analyses (except meal and snack patterns) are presented for both lunch meals and full 24-hour intakes to provide a clear picture of the contribution of NSLP meals.

This introductory chapter provides an overview of the NSLP as well as a brief description of the data and methods used in this study. The five chapters that follow present findings on usual daily intakes of vitamins, minerals, and fiber (Chapter 2), energy intakes (Chapter 3), meal and snack patterns (Chapter 4), food choices (Chapter 5), and the Healthy Eating Index–2005 and sources of *MyPyramid* intakes (Chapter 6).[2]

[2] Chapter 3 includes an assessment of the appropriateness of long-run usual energy intakes, based on Body Mass Index (BMI) and the prevalence of overweight and obesity.

The National School Lunch Program

On average in fiscal year 2007, the NSLP served 30 million lunches per school day.[3] The program served more than 5 billion lunches overall, with more than half (59 percent) served to children from low-income families. Participation in the NSLP varies by income, age, and gender—students certified to receive free or reduced-price lunches are more likely to participate than students not certified for meal benefits; elementary school students are more likely to participate than secondary school students; and boys are more likely to participate than girls (Fox et al., 2001; Gleason, 1995; Maurer, 1984; Akin, 1983).

Nutrition standards

To be eligible for Federal subsidies, NSLP meals must meet defined standards designed to ensure that lunches provide one-third of children's daily nutrient needs.[4] Research has shown that, with few exceptions, the meals offered in the NSLP provide students the opportunity to satisfy one-third of students' daily needs for an array of essential vitamins and minerals (Burghardt et al., 1993; Wellisch et al., 1983). In the early 1990s, however, the first School Nutrition Dietary Assessment Study (SNDA-I) found that NSLP meals were high in fat, saturated fat, and sodium, and low in carbohydrate, relative to the recommendations included in the *Dietary Guidelines for Americans* (Burghardt et al., 1993). At the time the SNDA-I data were collected (the 1991-92 school year), schools were not required to offer meals that were consistent with these guidelines.

In response to the SNDA-I findings, USDA made a commitment to implement the *Dietary Guidelines* in the NSLP. The School Meals Initiative for Healthy Children (SMI), launched in 1995, and the subsequent Healthy Meals for Healthy Americans Act, included revised nutrition standards for school meals and a major restructuring of menu planning requirements. The nutrition standards maintained

[3] FNS administrative data: http://www.fns.usda.gov/pd/slsummar.htm. Accessed May 2008.

[4] Current standards are based on the 1989 Recommended Dietary Allowances. Standards will be updated to incorporate the more recent Dietary Reference Intakes, based on recommendations provided by an Institute of Medicine panel.

the longstanding goal of providing one- third of students' daily calorie and nutrient needs and incorporated goals for fat and saturated fat content that were consistent with the *Dietary Guidelines* recommendations.[5]

The NSLP does not include a nutrition education component, per se, but USDA operates the Team Nutrition program, which provides training and technical assistance for Child Nutrition food service professionals, and develops messages and materials to be used in nutrition education for children and parents. Team Nutrition also encourages school administrators to implement school policies and foster school environments that support healthy eating and physical activity.[6,7]

The National Health and Nutrition Examination Survey

This report is based on data from the National Health and Nutrition Examination Survey (NHANES, 1999–2004), supplemented by data from the *MyPyramid Equivalents Database* which is compiled by USDA's Agricultural Research Service (ARS).

NHANES is conducted by the National Center for Health Statistics (NCHS) and is designed to provide national estimates of the health and nutrition status of the civilian, non-institutionalized population in the 50 United States. The survey includes interviews, physical examinations, and laboratory tests. Beginning in 1999, NHANES is a continuous annual survey with data released in public data files every two years. Most of the analyses in this report are based on six years of survey data from NHANES 1999–2004.

NHANES dietary interview data

This study relies primarily on data from the NHANES 24-hour dietary recall interview, which collects quantitative data on foods and beverages consumed during the preceding 24 hours. The NHANES dietary interview is conducted in-person using a computer-assisted dietary interview (CADI) system with a "multiple pass" approach to facilitate respondent recall of all foods and beverages consumed in the past 24 hours.[8,9]

In survey years 1999–2002, NHANES conducted a single 24-hour recall for each respondent. Beginning in 2003, NHANES conducts a second follow-up dietary interview, by telephone, 3-10 days after the initial dietary interview. The "second day recall" provides data needed to estimate the distribution of usual dietary intakes which, in turn, are used to estimate the percentage of the population with adequate usual intakes.

Beginning in 2003, NHANES dietary recall data are processed using a separate nutrient database program known as Survey Net, which incorporates data on nutrient values from USDA's Food and Nutrient Database for Dietary Studies (FNDDS). The NHANES public data release includes a food level file (containing one record for each food item reported by each respondent) and a total nutrient file (containing one record per respondent with total nutrient intakes for the day).

NHANES interview and examination data

In addition to dietary recall data, this study uses data collected through the NHANES household

[5] Goals for sodium and cholesterol content are not included in SMI nutrition standards. NSLP regulations (210.10(b)), however, include recommendations to reduce sodium and cholesterol levels and the requirement to monitor these nutrients.

[6] USDA/FNS, Team Nutrition Policy Statement: http://www.fns.usda.gov/tn/TN_PolicyStatement.pdf. Accessed April 2008.

[7] Beginning in the 2006–07 school year, school districts that participate in the NSLP are required to have a local school wellness policy [Public Law 108-265]. Wellness policies must include a) goals for nutrition education, physical activity, and other school-based activities designed to promote wellness; b) nutrition guidelines for all foods available on school campus; c) guidelines for reimburseable school meals that are no less restrictive than USDA regulations and guidance; and d) a plan for measuring implementation of the wellness policy. The data presented in this report were collected in 1999–2004, prior to the implementation of this rule.

[8] In 1999 and 2000 a small subsample of respondents completed dietary interviews via telephone as part of a methodological study (the Dietary Interview Mode Evaluation Study (DIMES)) to test the operational feasibility of the telephone interview mode.

[9] The multiple passes include: a) quick list of foods, without interviewer interruption; b) reporting of the time, place, and eating occasion for each food; c) specific probes about food details; and d) a final review of reported foods in chronological order.

interview, examination survey, and physical examination. This includes information on personal characteristics, dietary supplement use, and body measurements (height and weight). These data are described in Appendix A.

MyPyramid Equivalents Database for USDA Survey Food Codes

Data from the *MyPyramid Equivalents Database* were used to estimate scores on the Healthy Eating Index–2005 (HEI–2005) and to assess sources of MyPyramid food group intakes. The HEI–2005 was developed by the USDA Center for Nutrition Policy and Promotion (Guenther, et al., in press). HEI–2005 is a measure of diet quality with 12 component scores that assess intakes of food groups and selected nutrients relative to dietary patterns recommended in the MyPyramid Food Guidance System (USDA, CNPP, 2005) and the 2005 Dietary Guidelines for Americans (USDHHS/USDA, 2005).

MyPyramid, which replaced the Food Guide Pyramid that was introduced in 1992, provides recommendations for the types and quantities of foods individuals age 2 and older should eat from different food groups (grains, vegetables, fruits, milk, meat and beans), tailored to individuals' age, gender, and activity level. MyPyramid also specifies discretionary calorie allowances based on energy needs for age and gender groups. Discretionary calories are defined as calories that can be used flexibly after nutrient requirements are met by foods consumed in the most nutrient-dense form (fat-free or lowest fat form, with no added sugars) (Britten, 2006).

The *MyPyramid Equivalents Database Version 1.0* contains files corresponding to the 1999–2002 NHANES individual food files (one record per food) and NHANES total nutrient files (one record per person, with total daily intake). MyPyramid data are expressed in cups or 'cup equivalents' for vegetables, fruit, and milk products; in ounces or 'ounce equivalents' for grains, and meat and beans; in grams for discretionary fats, teaspoons for added sugar, and in drinks for alcohol.

MyPyramid data are available for single day intakes for respondents age 2 and above, corresponding to NHANES survey years 1999–2002. Data corresponding to NHANES 2003-04 were not available at the time of this study. As a result, all analyses of HEI–2005 and sources of MyPyramid food group intakes in this report are for the 4-year period 1999–2002.

NHANES Samples for Tabulation

This report contains tabulations of dietary measures for NSLP participants and nonparticipants. The sample is limited to school-age children (5 to 18 years), attending kindergarten through high school, with a complete 24-hour recall that was collected on a weekday and during a period when school was in session. The intention is to capture dietary behavior when students are attending school.[10] Among all children attending K-12 and with complete dietary recalls, 41 percent had an intake day when school was in session (consistent with the fact that schools are in session 180 days of the year, or approximately 50 percent of all days). The methods used to identify time periods when school was in session are described in Appendix A.

NSLP participants are defined as children who ate a reimbursable NSLP lunch on the intake day. Children could not be identified with certainty as NSLP participants or nonparticipants. The NHANES survey includes questions about whether the school serves school lunch and how many times per week the respondent usually gets a complete school lunch, but NHANES does not ask if the respondent got a complete school lunch on the intake day. As a result, we imputed NSLP participation based on information about the types of foods reported by children as lunch foods.[11]

Nonparticipants were subdivided into those who were income-eligible for free and reduced-price meals (household income at or below 185 percent of poverty) and those whose income exceeded the

[10] Some recalls may reflect days when children were not in school due to illness, snow days, or other absences.

[11] The methods for identifying participants are described in Appendix A, and are similar to previous studies (Gleason and Suitor, 2001).

eligibility standard (income above 185 percent of poverty).

Tabulations present data for all children, all NSLP participants, NSLP participants and nonparticipants who were income-eligible for free or reduced-price lunches, and higher-income NSLP participants and nonparticipants. Data are provided for three age groups: 5-8 years, 9-13 years, and 14-18 years. In addition, most tables provide separate estimates by gender.

Sample sizes and weighted population counts for school children and groups of NSLP participants and nonparticipants are shown in Table 1-1. The total population count of all school children interviewed while school was in session is 21.3 million, which is 45 percent of the total K-12 public school student enrollment of 46.8 million in school year 2001-02 as reported by the National Center for Education Statistics (NCES, 2008).[12]

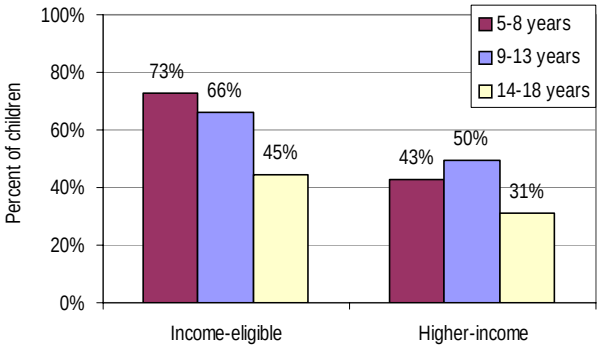
Characteristics of NSLP participants and nonparticipants

Table 1-2 presents demographic data for school children overall, NSLP participants overall, and NSLP participants and nonparticipants in the two income groups.

NSLP participants in both income groups are younger than nonparticipants, reflecting participation rates that decline with age (Figure 1-1). Participation is highest among income-eligible 5-8 year-olds and 9-13 year-olds (73 and 66 percent), with participation declining to 45 percent among income-eligible 14-18 year-olds. Among higher-income children, participation increases from the youngest to middle age group (43 to 50 percent) and declines to 31 percent among 14-18 year-olds.

Among low-income children, at the level of analysis in Table 1-2 there is no statistically significant difference in the distribution of NSLP participants and nonparticipants by race or family income, although NSLP participants are more likely than nonparticipants to be foreign-born. Among higher-income children, NSLP participants are less likely to be white, more likely to be black, and have lower income.

Figure 1-1—Percent of Children Participating in the NSLP, By Age and Income Group



Seventy-six percent of all children and 83 percent of NSLP participants reported that the school they attend serves a complete breakfast every day; this is a measure of the prevalence of the School Breakfast Program. NSLP participants in both income groups were more likely than nonparticipants to attend a school that serves breakfast. NSLP participants were also more likely to report that they usually get a school breakfast 5 days per week.

General Analytic Approach[13]

This report provides a description of the nutrient intakes and food choices of NSLP participants and nonparticipants in two income groups. Descriptive statistics are provided with tests of statistical significance to indicate differences between NSLP participants and nonparticipants. *This research was not designed to assess program impacts or in any way attribute differences observed between NSLP participants and nonparticipants to an effect of the program.*

An important consideration in comparing estimates for NSLP participants and nonparticipants is that the age composition of these groups is different. NSLP participants tend to be younger than

[12] NHANES conducted dietary recalls seven days of the week, and dietary recall weights were recalibrated to provide approximately equal weight to each day. Therefore, since most school calendars contain 180 school days, our sample of children with recalls reflecting school days is expected to reflect about half of all school-age children.

[13] A detailed description of data and methods appears in Appendix A.

Table 1-1—School-age Children with Complete Dietary Recalls During Periods When School Was in Session, 1999–2004: Sample Sizes and Weighted Population Counts

	All Income Groups		Income-eligible for Free/RP Meals		Higher-income	
	All Children	All NSLP Participants	NSLP Participants	Nonparticipants	NSLP Participants	Nonparticipants
	Sample size					
Both sexes						
5–8 years	779	473	321	161	152	129
9–13 years	1,360	794	512	315	282	224
14–18 years	1,407	474	304	474	170	408
Total	3,546	1,741	1,137	950	604	761
Boys						
5–8 years	386	238	167	78	71	60
9–13 years	660	405	257	147	148	102
14–18 years	748	292	180	231	112	202
Total	1,794	935	604	456	331	364
Girls						
5–8 years	393	235	154	83	81	69
9–13 years	700	389	255	168	134	122
14–18 years	659	182	124	243	58	206
Total	1,752	806	533	494	273	397
	Weighted population counts					
Both sexes						
5–8 years	6,253,773	3,533,926	2,261,657	860,600	1,272,269	1,697,184
9–13 years	8,191,229	4,683,803	2,787,781	1,455,632	1,896,022	1,938,256
14–18 years	6,830,627	2,410,143	1,248,488	1,605,421	1,161,655	2,599,339
Total	21,275,629	10,627,872	6,297,926	3,921,653	4,329,946	6,234,779
Boys						
5–8 years	3,159,589	1,712,777	1,107,106	474,901	605,671	855,665
9–13 years	4,297,978	2,569,269	1,487,907	816,201	1,081,362	889,151
14–18 years	3,737,596	1,606,092	784,640	755,315	821,452	1,266,878
Total	11,195,163	5,888,138	3,379,653	2,046,417	2,508,485	3,011,694
Girls						
5–8 years	3,094,184	1,821,151	1,154,552	385,699	666,599	841,520
9–13 years	3,893,251	2,114,535	1,299,874	639,431	814,661	1,049,105
14–18 years	3,093,030	804,051	463,848	850,107	340,203	1,332,461
Total	10,080,465	4,739,737	2,918,274	1,875,237	1,821,463	3,223,086

Notes: Weighted population is based on NHANES examination weights, recalibrated to account for nonresponse to the dietary recall and to proportionately weight weekday and weekend recalls (See Moshfegh et al., 2005). NHANES is weighted by year 2000 U.S. Census population.

"All Children" includes those with missing NSLP participation or income. NSLP participants are defined as children who received a reimburseable NSLP lunch on the intake day.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session (see Appendix A). Excludes pregnant and breastfeeding girls.

Table 1-2—Demographic Characteristics of NSLP Participants and Nonparticipants

	All Children		All NSLP Participants		Income-eligible for Free/RP Meals[1]				Higher-income[1]			
					NSLP Participants		Nonparticipants		NSLP Participants		Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Age												
5–8 years old	29.4	*(1.19)*	33.2	*(1.79)*	35.9	*(2.51)*	† 21.9	*(2.26)*	29.4	*(3.60)*	† 27.2	*(2.44)*
9–13 years old	38.5	*(1.13)*	44.1	*(1.80)*	44.3	*(2.50)*	37.1	*(3.39)*	43.8	*(3.52)*	31.1	*(2.21)*
14–18 years old	32.1	*(1.33)*	22.7	*(1.42)*	19.8	*(1.43)*	40.9	*(3.23)*	26.8	*(3.29)*	41.7	*(2.90)*
Race/Ethnicity												
White, Non-Hispanic	56.2	*(2.68)*	53.2	*(3.26)*	41.4	*(4.45)*	36.4	*(5.34)*	69.0	*(2.98)*	† 74.9	*(2.41)*
Black, Non-Hispanic	17.5	*(1.93)*	20.8	*(2.46)*	24.8	*(3.48)*	22.5	*(2.61)*	15.5	*(1.93)*	7.4	*(1.26)*
Mexican American	15.6	*(2.02)*	15.7	*(2.32)*	20.4	*(2.97)*	28.4	*(3.91)*	9.3	*(1.92)*	7.5	*(1.40)*
Other Hispanic	4.3	*(0.97)*	4.2	*(1.01)*	4.8 u	*(1.45)*	6.6	*(1.68)*	3.6 u	*(1.13)*	3.0 u	*(1.13)*
Other race	6.4	*(1.10)*	6.1	*(1.54)*	8.6	*(2.43)*	6.1 u	*(2.24)*	2.6 u	*(0.94)*	7.2	*(1.84)*
Country of Birth												
U.S.	93.3	*(0.77)*	92.8	*(1.15)*	90.1	*(1.79)*	† 92.3	*(1.25)*	96.1	*(1.06)*	95.8	*(0.91)*
Mexico	2.2	*(0.37)*	2.3	*(0.52)*	3.5	*(0.83)*	4.9	*(0.88)*	0.7 u	*(0.29)*	0.5 u	*(0.14)*
Elsewhere	4.3	*(0.74)*	4.8	*(1.08)*	6.2	*(1.78)*	2.5	*(0.84)*	3.2 u	*(1.06)*	3.7	*(0.91)*
Poverty												
Not reported	6.5	*(1.04)*	5.3	*(1.02)*	7.2	*(1.82)*	6.0	*(1.57)*	2.9 u	*(0.91)*	† 2.5 u	*(0.82)*
< 50%	8.3	*(1.12)*	11.0	*(1.81)*	19.0	*(2.68)*	15.1	*(2.11)*	-	*(0.00)*	-	*(0.00)*
51–100%	16.6	*(1.33)*	19.2	*(2.09)*	32.8	*(3.91)*	35.0	*(3.91)*	-	*(0.00)*	-	*(0.00)*
101–130%	9.4	*(1.15)*	10.0	*(1.64)*	17.3	*(2.57)*	22.4	*(3.70)*	-	*(0.00)*	-	*(0.00)*
131–185%	10.7	*(0.99)*	13.7	*(1.30)*	23.8	*(2.14)*	21.6	*(2.56)*	-	*(0.00)*	-	*(0.00)*
186–250%	10.2	*(1.10)*	11.9	*(1.65)*	-	*(0.00)*	-	*(0.00)*	28.5	*(3.09)*	15.0	*(2.18)*
> 250%	38.4	*(1.72)*	28.8	*(1.93)*	-	*(0.00)*	-	*(0.00)*	68.6	*(3.06)*	82.5	*(2.31)*
Attends school that serves breakfast												
Yes	76.2	*(2.08)*	83.3	*(2.22)*	88.8	*(2.46)*	† 78.1	*(3.45)*	76.5	*(2.89)*	† 62.3	*(3.78)*
No	21.5	*(2.06)*	15.0	*(2.13)*	10.6	*(2.41)*	19.5	*(3.48)*	20.6	*(2.86)*	34.5	*(3.82)*
Don't know	2.3	*(0.31)*	1.7	*(0.51)*	0.6 u	*(0.31)*	2.4	*(0.76)*	2.9 u	*(1.02)*	3.1	*(0.83)*
Number of times per week usually get breakfast												
0 days per wk	66.9	*(2.09)*	56.2	*(2.77)*	42.7	*(3.14)*	† 60.9	*(3.15)*	75.2	*(3.89)*	† 90.2	*(1.70)*
1 to 4 days per wk	10.8	*(1.15)*	12.3	*(1.56)*	14.5	*(1.83)*	13.6	*(1.84)*	10.1	*(1.94)*	6.1	*(1.09)*
5 days per week	22.3	*(1.45)*	31.5	*(1.99)*	42.8	*(2.71)*	25.5	*(2.58)*	14.7	*(2.77)*	3.8	*(1.10)*
Sample size	3,546		1,741		1,137		950		604		761	

[1] Significant differences in distributions are noted by †. Differences in distributions of NSLP participants and nonparticipants within income groups were tested using chi-square tests.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. - Denotes value is exactly 0.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes girls who were pregnant or breastfeeding. Percents by race, country of birth, poverty status, and school breakfast are age adjusted to account for different age distributions of NSLP participants and nonparticipants.

nonparticipant groups (see Table 1-2). Thus, we present age-adjusted estimates to eliminate between-group differences that are due solely to differences in the age distributions of the groups. Data for "All ages (5-18)" are "built-up" from estimates for the three smaller age groups, standardized according to the age distribution of the U.S. population in the year 2000.[14]

It is important to understand that age-adjusted estimates do not represent the *true* or raw estimates for a given population or subgroup. Rather, the age-adjusted estimates should be viewed as constructs or indices that provide information on the relative comparability of two or more populations (in this case, NSLP participants and two different groups of nonparticipants) on a particular measure (U.S. DHHS, 2000).

Statistical tests

The statistical significance of differences between NSLP participants and nonparticipants, within income groups, was tested using t-tests or chi-square tests. Nonetheless, because of the large number of t-tests conducted, caution must be exercised in interpreting results. In general, findings discussed in the text are limited to those with strong statistical significance (1 percent level or better) or those that are part of an obvious trend or pattern in the data.

Text discussions generally focus on differences between NSLP participants and nonparticipants. Reference may be made to differences by gender when the differences are noteworthy. The statistical significance of these secondary comparisons has not been tested, however, and this fact is noted in the text. Statistical tests were not performed on these second-level differences because of the expansive number of statistical tests performed in the main analysis and because these comparisons are not the focus of the report.

Additional information about the analytic approach, including use of NHANES sampling weights, calculation of standard errors, age standardization, and guidelines used to flag point estimates deemed to be statistically unreliable, is provided in Appendix A. Individual point estimates may be deemed statistically unreliable because of small sample size or a large coefficient of variation. In keeping with NHANES reporting guidelines, such estimates are reported in detailed tables and are clearly flagged. Between-group differences may be statistically significant even when one point estimate is statistically unreliable.

The chapters that follow summarize key findings. Graphics are used to illustrate observed differences between NSLP participants and nonparticipants. Differences that are statistically significant at the 5 percent level or better are indicated on the graphs. Detailed tables provided in Appendices B and C differentiate three levels of statistical significance ($p < .001$, .01, and .05).

As noted previously, this research was not designed to measure program impacts. Thus, significant differences that do appear between NSLP participants and nonparticipants cannot be attributed to participation in the NSLP. At the same time, the absence of a significant difference cannot be interpreted as evidence that participation in the NSLP has no effect. Accurate assessment of NSLP impacts requires specially designed studies or, at a minimum, complex analytical models that require a variety of measures that are not available in the NHANES data.

[14] Age standardization is applied to estimates for the following age groups: 5–8 years, 9–13 years, and 14–18 years.

Chapter 2
Usual Daily Intakes of Vitamins, Minerals, and Fiber

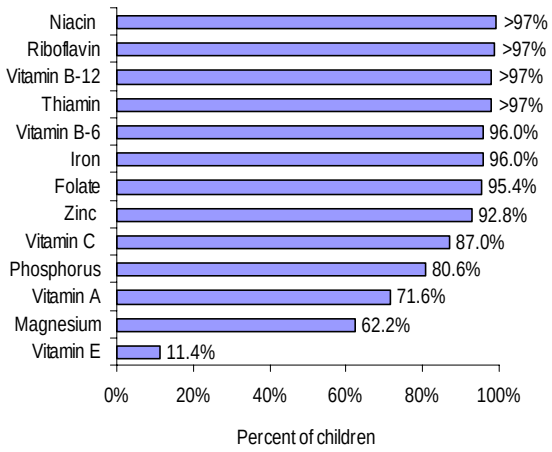
To assess the nutritional adequacy of diets consumed by NSLP participants and nonparticipants, we compared usual daily intakes of vitamins, minerals, and fiber to the Dietary Reference Intakes (DRIs) (IOM 1997–2005).[1] The DRIs, developed by the Food and Nutrition Board of the Institute of Medicine (IOM), are the most up-to-date scientific standards for assessing diets of individuals and population groups. The DRIs define different standards for different types of nutrients (see box). The sample is limited to school children with intakes on a weekday when school was likely to be in session, with the intention of characterizing usual intakes on school days.

Vitamins and Minerals with Defined Estimated Average Requirements

Estimated Average Requirements (EARs) are specified for all of the nine vitamins examined in this analysis and for four of the minerals (iron, magnesium, phosphorus, and zinc.) Among all school-age children, the prevalence of adequate usual daily intakes (usual daily intakes equal to or greater than the EAR) was over 90 percent for eight of these 13 vitamins and minerals (Figure 2-1 and Table 2-1). The prevalence of nutrient ad-

[1] The nutrient intake data presented do not include contributions from dietary supplements.

Figure 2-1—Percent of School Children Age 5–18 with Adequate Usual Intakes



Note: Individual estimate is not displayed when percentage is greater than 97. Estimates are age adjusted.

ESTIMATION OF USUAL NUTRIENT INTAKES

Data

- NHANES 1999–2002: Single 24-hour recalls per person
- NHANES 2003–2004: Two separate 24-hour recalls per person

Methods*

- Estimate variance components (average day-to-day variation per person) for each nutrient and subgroup using NHANES 2003–04
- Adjust NHANES 1999–2004 single 24-hour recalls using esimated variance components

* See Appendix A.

DIETARY REFERENCE INTAKES

Estimated Average Requirement (EAR): The usual daily intake level that is estimated to meet the requirement of half the healthy individuals in a life stage and gender group. The proportion of a group with usual daily intakes greater than or equal to the EAR is an estimate of the prevalence of adequate daily intakes in that population group. *[Used to assess usual daily intakes of most vitamins and minerals.]*

Adequate Intake (AI): The usual daily intake level of apparently healthy people who are maintaining a defined nutritional state or criterion of adequacy. AIs are used when scientific data are insufficient to establish an EAR. When a population group's mean usual daily intake exceeds the AI, the prevalence of inadequate usual daily intakes is likely to be low. However, mean usual daily intakes that fall below the AI do not indicate that the prevalence of inadequacy is high. [*Used to assess usual daily intakes of calcium, potassium, sodium, and fiber*].

Tolerable Upper Intake Level (UL): The highest usual daily intake level that is likely to pose no risk of adverse health effects to individuals in the specified life stage group. As usual daily intake increases above the UL, the risk of adverse effects increases. [*Used to assess usual daily intakes of sodium*. ULs for other nutrients are based on intakes from both food and supplements, and are not examined in this report.]

See Appendix A for DRI values.

Table 2-1—Prevalence of Adequate Usual Daily Intakes of Vitamins, Minerals, and Fiber

	All ages (5–18)					5–8 years				
	All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]		All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]	
		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Vitamins										
Percent > EAR										
Vitamin A	71.6	68.0	* 55.3	76.4	79.9	>97	>97	94.6 u	>97	>97
Vitamin C	87.0	88.6	83.4	83.8	86.2	>97	>97	95.9 u	>97	95.7 u
Vitamin B_6	96.0	96.6	* 91.4	>97	96.8	>97	>97	>97	>97	>97
Vitamin B_{12}	>97	>97	** 94.4	>97	>97	>97	>97	>97	>97	>97
Vitamin E	11.4	8.8 u	10.3 u	14.8 u	15.7 u	25.5	24.4 u	27.7 u	30.2 u	26.5 u
Folate	95.4	95.8	* 90.4	>97	96.7	>97	>97	>97	>97	>97
Niacin	>97	>97	* 97.4	>97	>97	>97	>97	>97	>97	>97
Riboflavin	>97	>97	** 95.9	>97	>97	>97	>97	>97	>97	>97
Thiamin	>97	>97	*** 93.7	>97	>97	>97	>97	>97	>97	>97
Minerals and Fiber										
Percent > EAR										
Iron	96.0	96.1	*** 91.4	>97	>97	>97	>97	>97	>97	>97
Magnesium	62.2	61.7	52.6	64.8	66.1	>97	>97	>97	>97	>97
Phosphorus	80.6	85.4	*** 65.2	87.8	81.7	>97	>97	>97	>97	>97
Zinc	92.8	95.4	** 84.5	>97	* 92.3	>97	>97	>97	>97	>97
Mean % AI										
Calcium	92.8	97.2	*** 77.0	100.9	91.5	128.3	135.3	* 111.1	131.9	121.2
Potassium	55.1	58.2	*** 47.6	59.7	* 53.0	61.2	66.4	** 53.3	63.4	57.7
Sodium	229.1	234.5	** 204.0	248.8	230.8	243.2	246.5	230.1	252.9	240.2
Dietary Fiber	47.4	47.5	42.4	49.0	49.2	51.6	52.6	47.5	52.3	52.4
Percent > UL										
Sodium	91.9	95.1	*** 81.6	95.4	92.2	>97	>97	91.6 u	>97	95.4 u

See footnotes at end of table.

equacy was lowest for vitamin E (11 percent), followed by magnesium (62 percent), vitamin A (72 percent), phosphorus (81 percent), and vitamin C (87 percent).[2] For many nutrients, the prevalence of adequate usual daily intakes decreased with age and was notably lower for teenagers (14-18 years) than for younger children. Teenage girls had the lowest prevalence of nutrient adequacy (see detailed tables in Appendix B).[3]

Among low-income children (those eligible for free or reduced-price meal benefits) NSLP participants were significantly more likely than nonparticipants to have adequate usual daily intakes of vitamin A, vitamin B_6, vitamin B_{12}, folate, niacin, riboflavin, thiamin, iron, phosphorus, and zinc (Figure 2-2 and Table 2-1). These findings were largely attributable to differences among teenagers, particularly girls. Overall, the magnitude of differences between the two groups was greatest for vitamin A (68 vs. 55 percent) and phosphorus (85 vs. 65 percent) and, among girls, for iron (92 vs. 83 percent).

Among higher-income children, there was only one significant difference between NSLP participants and nonparticipants in the prevalence of adequate nutrient intakes—NSLP participants in this income group were more likely than nonparticipants to

[2] The low prevalence of adequate intakes of vitamin E is consistent with most recent studies of vitamin E intake. Devaney and colleagues have pointed out that vitamin E deficiency is rare in the U.S., despite low measured intakes, and have suggested that the EARs for vitamin E may need to be reassessed (Devaney et al., 2007).

[3] Appendix B tables provide detailed data including means, standard errors, and distributions by age group and gender.

Table 2-1—Prevalence of Adequate Usual Daily Intakes of Vitamins, Minerals, and Fiber —Continued

	9–13 years					14–18 years				
	All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]		All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]	
		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Vitamins										
Percent > EAR										
Vitamin A	71.2	71.5	52.4	78.6	77.8	45.3	33.6 u	18.9	50.9	63.9
Vitamin C	92.5	96.5 u	88.1	88.9	87.9	71.0	70.6	66.2	64.0	75.0
Vitamin B_6	>97	>97	96.8 u	>97	>97	88.9	90.7	* 77.5	94.7 u	91.2
Vitamin B_{12}	>97	>97	>97	>97	>97	94.6	>97	** 85.2	>97	95.6
Vitamin E	7.2	<3	<3	13.2 u	18.4 u	<3	<3	<3	<3	<3
Folate	>97	>97	>97	>97	>97	86.4	87.6	72.5	91.5 u	90.1
Niacin	>97	>97	>97	>97	>97	>97	>97	* 93.6	>97	>97
Riboflavin	>97	>97	>97	>97	>97	96.5	>97	** 88.6	>97	>97
Thiamin	>97	>97	>97	>97	>97	93.4	>97	*** 82.0	95.8 u	95.5 u
Minerals and Fiber										
Percent > EAR										
Iron	>97	>97	>97	>97	>97	92.4	93.9 u	*** 80.9	>97	95.1
Magnesium	70.3	71.8	48.7	74.7	77.2	16.2	13.1 u	11.1 u	19.5 u	21.3
Phosphorus	72.4	76.7	* 48.6	81.2	72.5	69.5	79.8	*** 47.5	82.2	72.7
Zinc	94.3	96.2	85.3	96.2 u	92.2	84.1	90.0	** 68.1	95.6 u	* 84.7
Mean % AI										
Calcium	76.6	79.9	* 63.9	85.1	74.0	73.9	76.7	** 56.2	86.0	79.6
Potassium	51.9	54.8	* 44.4	58.1	** 47.5	52.2	53.5	45.0	57.6	54.1
Sodium	213.6	219.4	189.0	229.2	212.6	231.0	238.0	* 193.3	264.9	240.1
Dietary Fiber	48.2	49.7	42.1	50.3	48.7	42.5	40.0	37.6	44.5	46.5
Percent > UL										
Sodium	90.8	93.6	* 79.4	92.3	92.1 u	87.8	93.9 u	* 73.9	95.0 u	89.2

Note: Estimate is not displayed when percentage is <3 or >97.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day. See Appendix A for methods used to identify NSLP participants. See Appendix B for standard errors of estimates and percentile distributions.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted. Sample sizes are shown in Table B-1.

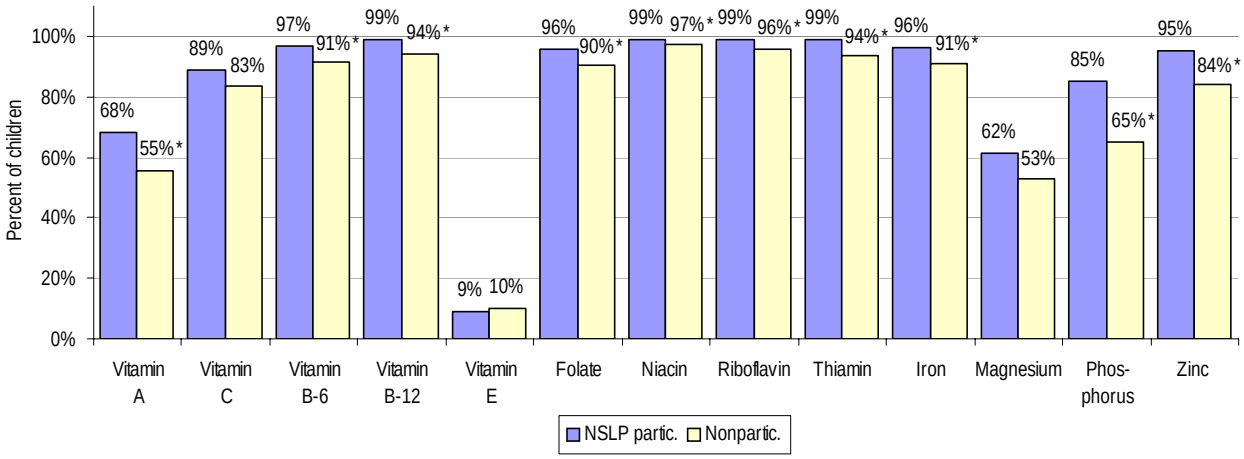
have adequate usual daily intakes of zinc (>97 vs. 92 percent) (Table 2-1).

Nutrients Assessed Using Adequate Intake Levels

EARs are not defined for calcium, potassium, sodium, or fiber so it is not possible to assess the adequacy of usual daily intakes. Populations with mean usual daily intakes that meet or exceed Adequate Intake (AI) levels defined for these nutrients can be assumed to have high levels of adequacy. However, no firm conclusions can be drawn about levels of adequacy when mean usual daily intakes fall below the AI.

Because excessive sodium intakes may increase risk of hypertension, sodium intakes are also assessed relative to the Tolerable Upper Intake Level (UL). Individuals with usual daily intakes that exceed the UL may be at increased risk of developing hypertension.

Figure 2-2—Percent of Low-Income School Children (Age 5–18) with Adequate Usual Daily Intakes of Vitamins and Minerals



* Denotes statistically significant difference from NSLP participants at the .05 level or better. Estimates are age adjusted.

Calcium

On average, children's usual daily intakes of calcium were less than 100 percent of the AI (Table 2-1). This was true for children overall and for all NSLP participants, but findings varied by age and gender. Mean usual daily calcium intakes of children 5-8 years exceeded the AI, indicating that the prevalence of adequate intakes was likely to have been high in this group. In all age groups, mean usual calcium intakes were higher for boys than for girls (statistical significance not tested) (Table B-32).

Among low-income children, NSLP participants had significantly higher usual daily intakes of calcium, on average, than nonparticipants (Figure 2-3 and Table 2-1). This was true for all three age groups and for both boys and girls. Among higher-income children, there were no significant differences between NSLP participants and nonparticipants in mean usual daily intakes of calcium.

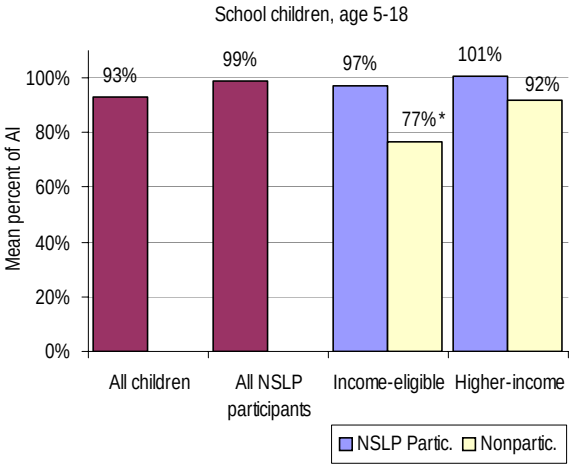
Potassium

Children's mean usual daily intakes of potassium were less than 100 percent of the AI (Table 2-1). This was true for all three age groups and for both boys and girls. NSLP participants had higher usual daily intakes of potassium, on average, than nonparticipants—among both low-income and higher-income children (Figure 2-4). The magnitude of the difference between participants and nonparticipants was larger among low-income children (58 percent of the AI vs. 48 percent) than higher-income children (60 percent vs. 53 percent).

Sodium

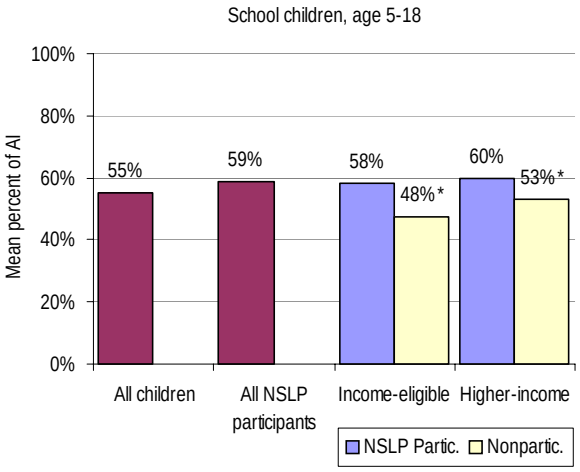
Mean usual daily intakes of sodium were more than twice the AI for all groups of children (Table 2-1). Overall, more than 90 percent of school-age children had usual daily sodium intakes that exceeded the UL. Among low-income children, NSLP participants were significantly more likely than nonparticipants to have usual sodium intakes that exceeded the UL (95 vs. 82 percent) (Figure 2-5). This difference was largely attributable to

Figure 2-3—Mean Usual Daily Intakes of Calcium as a Percent of Adequate Intake (AI)



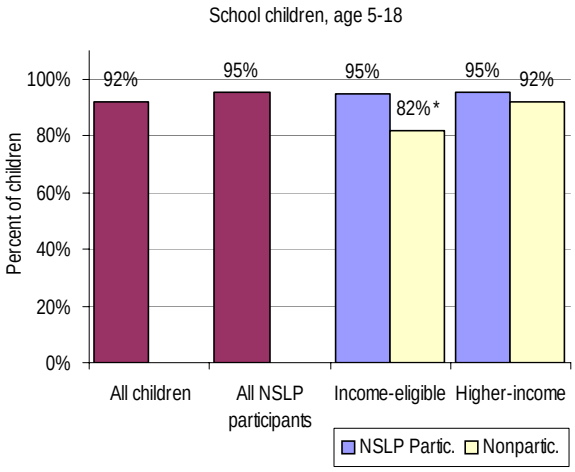
* Denotes statistically significant difference from NSLP participants at the .05 level or better. Estimates are age adjusted.

Figure 2-4—Mean Usual Daily Intakes of Potassium as a Percent of Adequate Intake (AI)



* Denotes statistically significant difference from NSLP participants at the .05 level or better. Estimates are age adjusted.

Figure 2-5—Percent of School Children with Usual Daily Intakes of Sodium Above the Upper Tolerable Intake Level (UL)



* Denotes statistically significant difference from NSLP participants at the .05 level or better. Estimates are age adjusted.

differences among girls, particularly girls 9-13 years of age (Table B-48). Among higher-income children, there was no significant difference between NSLP participants and nonparticipants in the prevalence of sodium intakes above the UL.

Fiber

Usual daily fiber intakes were examined in two ways—(1) mean intakes expressed as a percentage of the AI, and (2) mean intakes expressed on a gram-per-calorie basis. The standard used to establish AIs for fiber was 14 grams per 1,000 calories, based on the median energy intake of specific age-and-gender subgroups, as estimated from the 1994-96, 98 Continuing Survey of Food Intakes by Individuals (CSFII) (IOM, 2005b).

Usual daily fiber intakes of all groups of children were low, relative to the AI (Table 2-1). On a gram-per-1,000 calorie basis, children's usual daily fiber intakes averaged 6.5 gm—less than half of the 14 gm. assumed in setting the AI. Even the 95th percentile of the distribution of usual fiber intake was less than the AI (Table B-58).[4] This pattern has been reported by others (Fox and Cole, 2004; Devaney et al., 2007; and Devaney et al., 2005). Part of the discrepancy is due to the fact that the AIs are defined for *total* fiber, but food composition databases are limited to information on *dietary* fiber. However, the magnitude of this discrepancy is relatively small compared to the gap between usual intakes and the AIs. For this reason, some have suggested that the methods used to establish the AIs for fiber may need to be reexamined, especially for children and adolescents (Devaney et al., 2007).[5]

There were no significant differences between NSLP participants and nonparticipants in either income group in mean usual daily intake of fiber.

Use of Dietary Supplements

NHANES 1999–2004 collected detailed data about the use of dietary supplements. Respondents were first asked whether they used any dietary supplements during the past 30 days.[6] Respondents were handed a card that defined 13 types of supplements including single and multiple vitamin or mineral products; antacid taken as a calcium supplement;

[4] It is estimated that adults consume about 5.1 more grams per day of fiber than estimated from current food composition databases (IOM, 2005b).

[5] The data used to establish AIs are drawn from studies of coronary heart disease risk among adults. Moreover, the AIs for children are 2 to 3 times higher than the standard previously used to assess fiber intake in this age group (Devaney et al., 2007).

[6] The term "respondent" is used for all age groups for ease of discussion. Children age 12–18 completed 24-hour recalls independently. Data for children under age 6 were collected from a proxy, and children 6 to 11 years old were asked to provide their own data assisted by an adult household member.

Table 2-2—Prevalence of Dietary Supplement Use in Past Month

	All ages (5–18)					5–8 years old				
		Income-eligible for Free/RP Meals[1]		Higher-income[1]			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	3,538	1,134	949	603	759	776	318	161	152	129
Used supplements last month	28.7	19.4	22.8	33.6	40.2	39.8	25.2	35.1	46.6	56.2
Type of supplements[2]										
None	71.0	80.0	77.1	66.1	59.6	59.6	72.7	64.9	53.4	43.8
Single vitamin or mineral	7.8	5.0	5.6	9.4	11.5	8.0	3.6 u	3.0 u	11.5 u	13.2
Mult. vitamin or vitamin/ mineral combo	23.0	15.4	17.3	27.4	32.7	35.3	22.5	33.0	42.2	47.8
Other	7.8	<3	5.6 u	9.4	11.5	<3	3.6 u	3.0 u	<3	13.2 u

	9–13 years old					14–18 years old				
		Income-eligible for Free/RP Meals[1]		Higher-income[1]			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	1,359	512	314	282	224	1,403	304	474	169	406
Used supplements last month	25.6	17.2	19.4	33.3	36.3	22.9	16.8	16.3	23.5	31.2
Type of supplements[2]										
None	74.3	82.8	80.3	66.7	63.7	76.8	83.2	83.7	75.9	68.2
Single vitamin or mineral	7.7	3.8 u	8.9 u	9.8	10.8	7.8	7.4	4.4 u	7.3 u	10.9
Mult. vitamin or vitamin/ mineral combo	20.2	14.2	12.0	25.5	31.2	15.9	11.1 u	10.1	17.4	22.2
Other	7.7	<3	8.9 u	9.8	10.8 u	7.8	<3	4.4 u	7.3 u	* 10.9

Note: Estimate is not displayed when percentage is <3 or >97.
1 T-tests were used to identify statistically significant differences in "Used supplements last month" between NSLP participants and nonparticipants within income groups. None of the differences are statistically significant. Standard errors of estimates are shown in Appendix C.
2 Significance test not done because categories are not mutually exclusive for persons who take multiple supplements.
u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes girls who were pregnant or breastfeeding. Results for "All ages (5-18)" are age adjusted to account for different age distributions of NSLP participants and nonparticipants. Standard errors of estimates are shown in Appendix C.

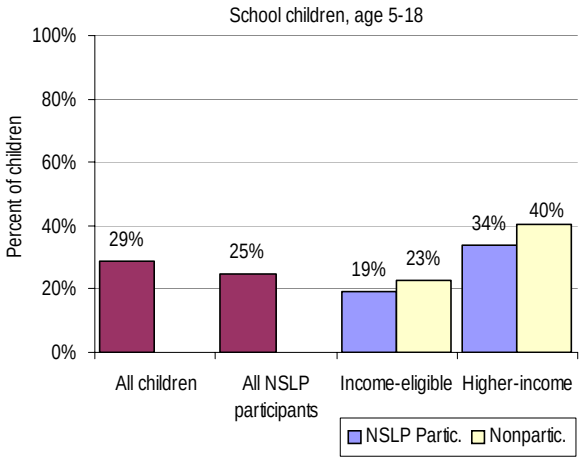
fiber taken as a dietary supplement; botanicals, herbs, and herbal medicine products; amino acids; and fish oils.[7] Respondents who reported supplement use were asked to show the actual bottles or jars to interviewers so the type of supplement and associated dosage information could be recorded.

Because data on dietary intake and supplement use were collected for different reference periods (preceding 24 hours and preceding month, respectively) combining the two data sets is not straightforward.[8] Consequently, NHANES 1999–2004 dietary intake data do not include contributions from dietary supplements. For this reason, estimates of the proportions of individuals with adequate usual daily intakes may be understated. Data about the prevalence and patterns of dietary supplement use can provide useful insights into the potential influence of supplements on the adequacy of usual daily intakes.

Overall, less than one third (29 percent) of all school-age children reported using one or more dietary supplements in the preceding month (Table 2-2). Supplement use was consistently lower among lower-income children than higher-income children (statistical significance not tested). In both groups, the prevalence of supplement use decreased as age increased. There were no statistically significant differences between NSLP participants and nonparticipants in either income group (Figure 2-6).

The most commonly reported type of supplement was a vitamin/mineral combination (Table 2-2). Twenty-three percent of all school-age children reported a vitamin/mineral combination (81 percent of those using supplements).

Figure 2-6—Prevalence of Dietary Supplement Use in Past Month



Differences between NSLP partiipants and nonparticipants within income groups are not statistically significant. Estimates are age-adjusted.

Summary

Data from NHANES 1999–2004 were analyzed to examine the prevalence of adequate usual daily intakes of 13 vitamins and minerals with defined EARs. The prevalence of adequate intakes cannot be assessed for calcium, potassium, sodium, and fiber, so mean usual daily intakes were assessed relative to AIs. Mean usual intakes that meet or exceed the AI suggest a high prevalence of adequacy; however, no firm conclusions can be drawn about mean usual intakes that are less than the AI. Usual sodium intakes were assessed relative to the maximum intake level defined in the UL.

Key findings include:

- Over 90 percent of school-age children had adequate usual daily intakes of eight of the 13 essential vitamins and minerals examined.
- Children's usual intakes of Vitamins A, C, E, magnesium, and phosphorus need improvement. The need for improvement is greatest among teenagers, particularly teenage girls. Among teenage girls, usual intakes of vitamin B_6, folate, iron, and zinc also need improvement.
- For children 5-8 years, mean usual daily calcium intakes exceeded the AI, indicating that

[7] NHANES Documentation: Dietary Supplement Data, 1999-2000, 2001–02, and 2003–04.

[8] Carriquiry (2003) recommends collecting information about supplement use (past 30 days), combined with information about supplement intakes collected during the 24-hour recall. This approach is currently being used in collecting data for NHANES 2007–08.

usual calcium intakes in this age group are likely to be adequate. For older children, usual daily calcium intakes were less than the AI.

- Mean usual daily intakes of potassium and fiber were less than the AI.
- Overall, more than 90 percent of children had usual sodium intakes that exceed the UL.
- Usual daily fiber intakes were low, relative to the AI.

Among low-income children, NSLP participants:

- were more likely than nonparticipants to have adequate usual daily intakes of vitamin A, vitamin $B_{6,}$ vitamin B_{12}, folate, niacin, riboflavin, thiamin, iron, phosphorus, and zinc. Differences were most meaningful for vitamin A and phosphorus (for the other nutrients, the prevalence of adequate intakes was high, overall).

- had higher mean usual daily intakes of calcium and potassium

- were more likely than nonparticipants to have usual daily sodium intakes that exceeded the UL

Among higher-income children, NSLP participants were more likely than nonparticipants to have adequate usual daily intakes of zinc. NSLP participants also had a higher mean usual daily intake of potassium than nonparticipants.

It is not possible to estimate the contribution of dietary supplements to usual daily intakes using the NHANES data. Nonetheless, NHANES data indicate that supplements were used by 29 percent of school-age children. Supplement use was lower among low-income children, relative to higher-income children, and decreased with age. There were no differences between NSLP participants and nonparticipants in use of dietary supplements.

Chapter 3
Energy Intakes

In this chapter, we examine energy (calorie) intakes of NLSP participants and nonparticipants. Measures used to assess energy intakes include mean daily energy intakes; usual daily intakes of calorie-providing macronutrients (total fat, saturated fat, carbohydrate, and protein); intakes of discretionary calories from solid fats, alcoholic beverages, and added sugars; and energy density of foods consumed over 24 hours.[1] Intakes of calorie-providing macronutrients are measured relative to DRI standards.

Estimates of mean intakes are based on a single 24-hour recall for each child, measuring intake on a weekday when school was likely to be in session. Estimates of the percentages of children with intakes above and below DRI standards are based on usual intake distributions derived from the 24-hour recalls and using information from "second day recalls" to control for within person day-to-day variance (See Appendix A for a description of methods).

We conclude the chapter with measures of Body Mass Index (BMI)-for-age. The Institute of Medicine recommends that BMI data be used to assess of the appropriateness of usual daily energy intakes (IOM, 2005a).[2] Because energy consumed in excess of requirements is stored as body fat, the BMI provides a reliable indicator of the extent to which long-run (usual) energy intakes were consistent with or exceeded energy requirements.

MEASURES OF ENERGY INTAKES

Measure	Data
Estimates based on 24-hr intakes:	
1. Mean daily energy intakes	NHANES 1999–2004
2. Percent of energy from SoFAAS (solid fats, alcoholic beverages, and added sugars)	MyPyramid 1999–2002
3. Energy density of daily intakes	NHANES 1999–2004
4. Weight status (Body Mass Index) as indicator of long-run adequacy of energy intakes	NHANES 1999–2004
Estimates based on usual intakes[a]:	
5. Percentage of children with adequate intakes of energy from: • Total fat, protein, carbohydrates (relative to AMDRs) • Saturated fat (relative to DGA)	NHANES 1999–2004

[a] See Chapter 1 and Appendix A for a description of procedures used to estimate the distribution of usual nutrient intakes, and thereby estimate the percentages of the population with usual intakes above and below DRI reference standards.

Mean Daily Energy Intakes

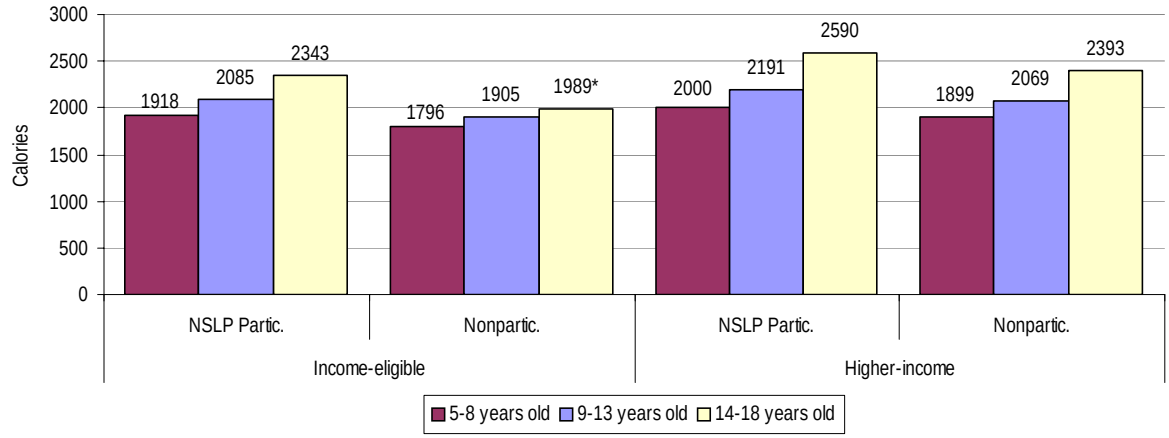
Mean daily energy intakes are shown in Figure 3-1. Among low-income children ages 14-18, NSLP participants had significantly higher daily intakes of energy, on average, than nonparticipants (1989 calories vs. 2343 calories). This difference was concentrated among among girls (Table B-2). There were no statistically significant differences in mean energy intakes of participants and nonparticipants in other age groups. Among higher-income children, there were no significant differences in the mean daily energy intakes of NSLP participants and nonparticipants.

It is difficult to assess the appropriateness of energy intakes (whether they meet or exceed requirements) because energy requirements vary depending on age, gender, and activity level (Table 3-1). Activity levels are not adequately measured by most surveys, including NHANES 1999-2002. For this reason, the IOM recommends that measures of BMI be used to assess the appropriateness of

[1] Usual daily intakes of energy and macronutrients (expressed as a percentage of energy intake) were estimated using the same methods described in Chapter 2 for estimating usual intake distributions.

[2] BMI is recommended for assessing usual energy intakes because (1) energy intakes are often underreported, (2) an individual's estimated energy requirement (EER) is strongly influenced by physical activity, which is not measured precisely in most surveys (including NHANES), and (3) the EER is an estimate of energy requirement but actual energy requirements vary among individuals (IOM, 2005a).

Figure 3-1—Mean Daily Energy (Calorie) Intakes



* Denotes statistically significant difference from NSLP participants at the .05 level or better. Estimates are age adjusted.

Table 3-1—Estimated Energy Requirements for Age/Gender Groups by Activity Level

Age	Sedentary	Moderately Active	Active
Girls			
5-8	1,200-1,400	1,400-1,600	1,600-1,800
9-13	1,400-1,600	1,600-2,000	1,800-2,200
14-18	1,800	2,000	2,400
Boys			
5-8	1,200-1,400	1,400-1,600	1,600-2,000
9-13	1,600-2,000	1,800-2,200	2,000-2,600
14-18	2,000-2,400	2,400-2,800	2,800-3,200

Source: http://www.mypyramid.gov/downloads/MyPyramid_Calorie_Levels.pdf

energy intakes (IOM, 2005a). Data on BMI-for-age are presented later in this chapter.

Usual Daily Intakes of Energy from Macronutrients

To gain insights into the sources of energy in the diets of NSLP participants and nonparticipants, we examined energy intakes for macronutrients relative to Acceptable Macronutrient Distribution Ranges (AMDRs) defined in the Dietary Reference Intakes (DRIs) (total fat, carbohydrate, and protein). AMDRs define a range of usual daily intakes that is associated with reduced risk of chronic disease while providing adequate intakes of essential nutrients (IOM, 2005a). AMDRs are expressed as a percentage of total energy intake. If an individual's usual daily intake is above or below the AMDR, risks of chronic disease and/or insufficient intake of essential nutrients are increased. We also examined intakes of saturated fat, relative to the 2005 *Dietary Guidelines for Americans* recommendation (IOM, 2005a and USDHHS/USDA, 2005) and discretionary calories from solid fats, alcoholic beverages, and added sugars.

For school-age children, the AMDR for total fat is 25 to 25 percent of total energy (IOM, 2005a). Overall, three-quarters of school-age children had usual daily intakes of energy from fat that were consistent with the AMDR (Table 3-2). Children whose usual daily intakes of energy from fat were not consistent with the AMDR were more likely to exceed the recommended range than fall below it. This general pattern was observed for all three age groups. Although there were differences in the proportions of NSLP participants and nonparticipants with usual daily intakes of energy from fat that were consistent with the AMDR, none of these differences was statistically significant due to very large standard errors of estimates.

Almost all school-age children had usual daily intakes of energy from protein and carbohydrate that were consistent with the AMDRs of 10 to 30 percent and 45 to 65 percent of total energy, respectively (Table 3-2). There were no significant differences between NSLP participants and nonparticipants in this regard.

The DRIs recommend that intake of saturated fat be kept as low as possible (while consuming a

Table 3-2—Usual Daily Intakes of Macronutrients Compared to Standards

	All ages (5–18)					5–8 years				
	All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]		All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]	
		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
	Percent of Children									
Total fat										
% < AMDR	<3	<3	<3	<3	<3	<3	<3	<3	<3	3.8 u
% within AMDR	75.6	74.9	72.9	70.2	78.4	78.7	80.8	67.8	68.6	84.8 u
% > AMDR	22.8	24.2	25.3	28.4	19.0	19.4	17.7	30.5 u	29.3 u	11.4 u
Protein										
% < AMDR	<3	<3	3.3 u	<3	<3	<3	<3	<3	<3	<3
% within AMDR	>97	>97	96.7	>97	>97	>97	>97	>97	>97	>97
% > AMDR	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Carbohydrate										
% < AMDR	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
% within AMDR	>97	>97	96.5	>97	>97	>97	>97	>97	96.6 u	>97
% > AMDR	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Saturated fat,										
% < DGA	15.0	6.4 u	** 20.2	10.1 u	* 26.9	12.9	5.4 u	14.2 u	12.3 u	30.0 u

	9–13 years					14–18 years				
	All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]		All Children	Income-eligible for Free/RP Meals[1]		Higher-income[1]	
		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.		NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
	Percent of Children									
Total fat										
% < AMDR	<3	<3	<3	<3	<3	<3	<3	<3	<3	3.5 u
% within AMDR	77.6	77.6	81.2	68.1	81.1	70.3	66.3	69.6	74.1	69.1
% > AMDR	21.7	21.4 u	17.2 u	31.7 u	18.1 u	27.5	33.5	28.5	24.2 u	27.3
Protein										
% < AMDR	<3	<3	<3	<3	<3	3.6	<3	7.1 u	<3	4.0 u
% within AMDR	>97	>97	>97	>97	>97	96.4	>97	92.9	>97	96.0 u
% > AMDR	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Carbohydrate										
% < AMDR	<3	<3	<3	<3	<3	<3	5.6 u	3.8 u	<3	<3
% within AMDR	>97	>97	>97	>97	>97	95.6	94.3 u	94.2	>97	94.7
% > AMDR	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Saturated fat,										
% < DGA	10.9	8.8 u	15.2 u	5.2 u	21.7 u	21.2	4.8 u	*** 31.4	12.8 u	29.2

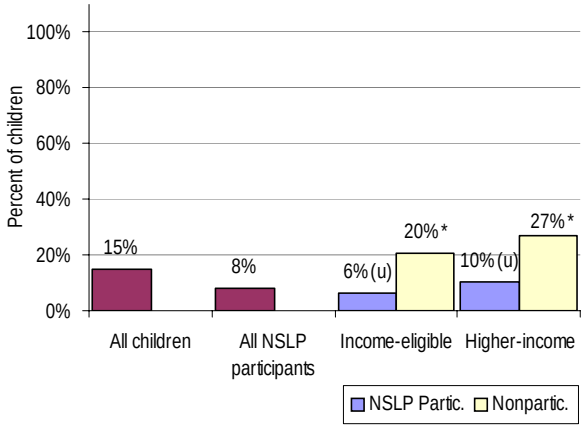
Note: Estimate is not displayed when percentage is <3 or >97.

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day. See Appendix A for methods used to identify NSLP participants. See Appendix B for standard errors of estimates and percentile distributions.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted. Sample sizes are shown in Table B-1.

nutritionally adequate diet) but do not define a specific standard (IOM, 2005a). The 2005 DGA recommends that saturated fat account for less than 10 percent of total energy intake (USDHHS/USDA, 2005). Overall, only 15 percent of school-age children had usual daily intakes of energy from saturated fat that were consistent with this standard (Table 3-2). The percentage of NSLP participants whose usual daily intakes met this benchmark was almost 50 percent lower (8 percent). Among both low-income and higher-income children, NSLP participants were significantly less likely than nonparticipants to have usual daily intakes of saturated fat that were consistent with the *Dietary Guidelines* (Figure 3-2). This difference was concentrated among girls and, among low-income children, among teenage girls (14-18 years) in particular (Table B-66).

Figure 3-2—Percent of Children with Usual Intakes of Saturated Fat Consistent with *Dietary Guidelines* Recommendation



* Denotes statistically significant difference from NSLP participants at the .05 level or better. Estimates are age adjusted.

u Denotes unreliable estimates due to large coefficient of variation. Statistically significant differences indicate the direction, but not the magnitude, of between-group differences.

24-Hour Intakes of Energy from Solid Fats, Alcoholic Beverages, and Added Sugars

Dietary patterns recommended in the *Dietary Guidelines for Americans* and *MyPyramid* food guidance system include specific discretionary calorie allowances based on energy needs for age and gender groups. Discretionary calories are defined as calories that can be used flexibly after nutrient requirements are met (Britten, 2006).[3] The allowances are based on estimated energy needs for specific age/gender subgroups and the calories provided by the most nutrient-dense form (fat-free or lowest fat form, with no added sugars) of the various foods needed to meet recommended nutrient intakes (Basiotis et al., 2006).

Table 3-3 shows discretionary calorie allowances for sedentary individuals by age group. The most generous allowance for discretionary calories in the *MyPyramid* food intake patterns (based on age, gender, and level of physical activity) is 20 percent of total energy needs (for physically active boys age 14 to 18) (Britten, 2006).

A method for assessing discretionary energy intake was introduced by USDA's Center for Nutrition Policy and Promotion (CNPP) (Basiotis et al., 2006). CNPP measured discretionary calories from SoFAAS (solid fats, alcoholic beverages, and added sugars) using data from the NHANES Individual Foods Files (total energy and grams of alcohol) and *MyPyramid* Equivalents Database (grams of discretionary solid fat and teaspoons of added sugar). Following CNPP, we used these measures to compute the total number of calories provided by SoFAAS for NSLP participants and nonparticipants based on 24-hour intakes (see Appendix A). Total calories from SoFAAS should be viewed as a lower-bound estimate of discretionary calorie intake

Table 3-3—Estimated Discretionary Calorie Allowances for Sedentary Individuals

Gender / age group	Estimated daily calorie needs	Estimated discretionary calorie allowance	Discretionary calories as percent of total
Girls			
5–8 yrs	1300	170	13.1
9–13 yrs	1600	130	8.1
14–18 yrs	1800	195	10.8
Boys			
5–8 yrs	1300	170	13.1
9–13 yrs	1800	195	10.8
14–18 yrs	2200	290	13.2

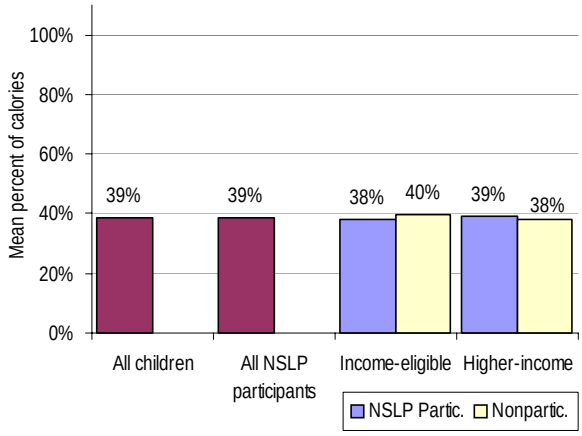
Source: www.MyPyramid.gov/pyramid/discretionary_calories_ amount.html

[3] Individuals may satisfy nutrient requirements with the fewest calories by eating nutrient-dense foods. Calories remaining in their estimated energy requirement are discretionary.

because discretionary calories may also come from additional amounts of the nutrient-dense foods recommended in the *MyPyramid* food intake patterns.

On average, school-age children obtained about 39 percent of their total energy intake from SoFAAS (Table C-3) For both low-income and higher-income children overall, there were no significant differences between NSLP participants and nonparticipants in the mean contribution of SoFAAS to total energy intakes (Figure 3-3) However, some differences between NSLP participants and nonparticipants were noted among the youngest children (5-8 years). Among higher-income children in this age group, NSLP participants obtained a significantly larger share of their total energy intake from SoFAAS than nonparticipants (39 vs. 35 percent). This difference was concentrated among girls. Among lower-income boys, the pattern was reversed, with NSLP participants obtaining a significantly smaller share of total energy intake from SoFAAS than nonparticipants.

Figure 3-3—Percent of Energy from Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS)



Differences between NSLP participants and nonparticipants, within income group, are not statistically significant. Estimates are age adjusted.

Energy Density

The *Dietary Guidelines* stresses the importance of consuming foods so that individuals stay within their energy needs. In developing the 2005 edition of the *Guidelines*, the *Dietary Guidelines* Advisory Committee concluded that, while the available scientific data were insufficient to determine the contribution of energy dense foods to unhealthy weight gain and obesity, there was suggestive evidence that consuming energy dense meals may contribute to excessive caloric intake and that, conversely, eating foods of low energy density may be a helpful strategy for keeping energy intakes consistent with energy needs (USDHHS/USDA, 2005).

The energy density of a food is equivalent to the available food energy per unit weight (i.e., calories per gram). The energy density of individual foods depends on the composition of the food: the relative concentration of energy-providing nutrients (fat, carbohydrate, protein), alcohol (which provides almost as many calories per gm as fat), and water. Water content may be the single most influential characteristic in determining energy density (Drewnowski, 2005). For example, whole grains and cereal, which have low water content, are energy dense, while fruits, vegetables, and milk, which have high water content, are energy dilute. Beverages, which are mostly water, may have comparable energy densities despite important differences in nutrient content. For example, orange juice, 1% milk, and regular cola all provide roughly 0.43 kcal per gm (Drewnowski and Specter, 2004).

Assessing the energy density of combinations of foods (food eaten for specific meals or the total diet) is not straightforward. There is no scientific consensus about which of several potential approaches should be used. We estimated energy density using a method that considers only foods—solid items and liquid/soft items that are typically

[4] Ledikwe et al. (2005) compared eight approaches to estimating the energy density of the total diet: one approach included only foods, and seven included foods and various combinations of beverages. They concluded that assessment of energy intake should include, at a minimum, a measure that is based on foods only. Measures that include all beverages or all energy-providing beverages should be avoided because they may result in meaningless measures of energy density. The reason for this is that unless drinking water is included, energy density will be overstated for persons who consume primarily (unmeasured) water. Dietary surveys (including NHANES 1999–2002) generally do not collect information on water intake.

consumed as foods, such as soups and ice cream—and excludes all beverages.[4]

Overall, the foods consumed by school-age children provided about 2 calories per gram (Figure 3-4 and Table C-4). For children overall and NSLP participants overall, the energy density of foods increased as age increased (Figure 3-4 and Table C-4) (statistical significance not tested). There were no statistically significant differences between NSLP participants and nonparticipants in the energy density of foods consumed over 24 hours.

Body Mass Index as an Indicator of the Appropriateness of Usual Daily Energy Intakes

BMI is a measure of the relationship between weight and height and is the commonly accepted index for classifying adiposity (fatness) (Kuczmarski and Flegal, 2000).[5] Children can be assigned to one of four weight categories based on their BMI-for-age, using reference growth charts developed by the Centers for Disease Control and Prevention (CDC) (Table 3-4). The CDC growth charts provide statistical criteria for classifying children as overweight or at risk of overweight, based on how a child compares to the reference population that was used to develop the charts (see footnote to Table 3-4). Overweight is defined as having BMI-for-age at or above the 95th percentile of the growth curves; this implies that, if the distribution of BMI in the current population matches the distribution in the reference population, then we will observe an overweight prevalence of 6 percent. Overweight prevalence in excess of 6 percent signals a shift in the population distribution of BMI.

A BMI-for-age in the healthy range indicates that usual daily energy intake is consistent with requirements. A BMI below the healthy range indicates inadequate usual daily energy intake; and a BMI-for-age in the overweight range indicates that usual daily energy intake exceeds requirements.

Less than five percent of all school-age children were underweight based on BMI-for-age (less than the 5th percentile) (Figure 3-5 and Table C-5). At the other end of the spectrum, 18 percent of school-age children were overweight (BMI-for-age e" 95th percentile) and another 15 percent were at risk of becoming overweight (BMI-for-age e" 85th and < 95th percentile).

Overall, there were no statistically significant differences between NSLP participants and nonparticipants in the prevalence of healthy weight, based on BMI-for-age, or the prevalence of underweight, overweight, or risk of overweight (Figure 3-5). This was true for both low-income and higher-income children. A few isolated differences between NSLP participants and nonparticipants were observed in the analyses by age group (Table C-5).

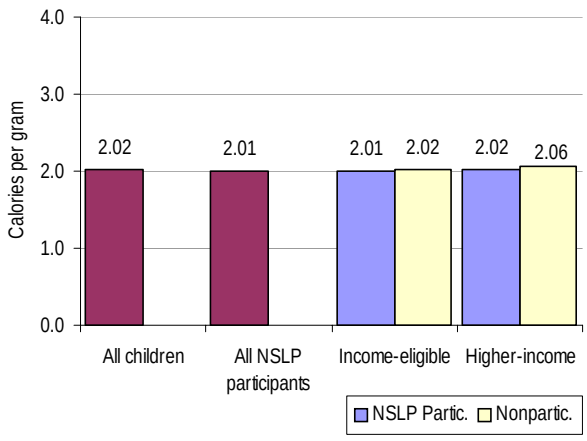
Table 3-4—Children's Weight Categories Based on BMI-for-Age

Weight category	Relative to percentiles of the CDC BMI-for-age growth chart[a]
Underweight	Less than 5th percentile
Healthy weight	At or above 5th and less than 85th
At risk of overweight	At or above 85th and less than 95th
Overweight	At or above 95th percentile

[a] The CDC growth charts for children age 6 and over were based on pooled data from four national U.S. health examination surveys: NHES (1963-65, 1966-70), NHANES I (1971-74), and NHANES II (1976-80); data from NHANES III were also used for children up to 5 years old (Kuczmarski, et al., 2000).

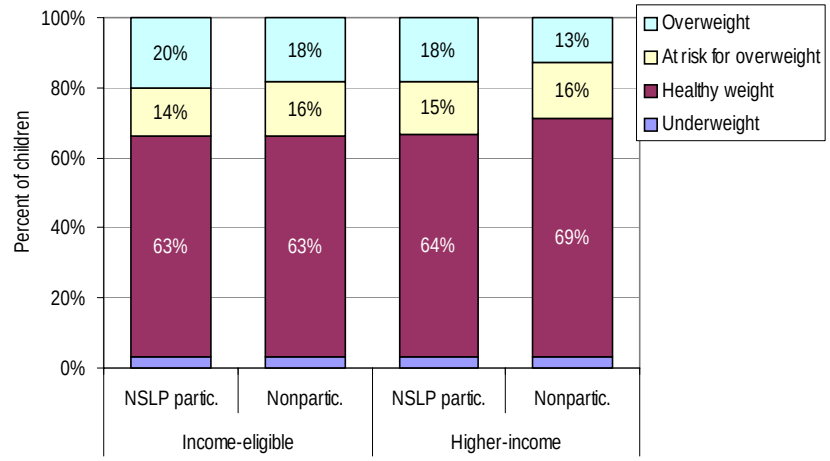
[5] BMI = Weight (kg) ÷ Height (m)^2

Figure 3-4—Mean Energy Density of Foods



Differences between NSLP participants and nonparticipants, within income group, are not statistically significant. Estimates are age adjusted.

Figure 3-5—Distribution of Body Weight for NSLP Participants and Nonparticipants



Differences between NSLP participants and nonparticipants, within income group, are not statistically significant. Estimates are age adjusted.

Summary

Data from NHANES 1999–2004 show that, among low-income school-age children, NSLP participants had significantly higher mean usual daily energy intakes than nonparticipants. This difference was concentrated among teenagers (14-18 years) and among girls. It is difficult to assess the appropriateness of reported energy intakes (whether they meet or exceed requirements) because energy requirements vary depending on age, gender, and activity level.

BMI-for-age provides the most reliable indicator of the appropriateness of usual energy intakes. BMI-for-age can be used to identify children who have healthy weights as well as those who are underweight, overweight, or at risk of becoming overweight. Eighteen percent of school-age children were overweight and another 15 percent were at risk of becoming overweight. Overall, there were no significant differences between NSLP participants or nonparticipants in the proportions of children in each BMI-for-age category. This was true for both low-income children and higher-income children and most age and gender subgroups.

The lack of congruency between findings for mean usual daily energy intakes and BMI-for-age distributions suggests either different levels of physical activity between groups or different levels of misreporting on dietary recalls. It is beyond the scope of this research to identify the source of the inconsistency.

Sources of energy

About three-quarters of school-age children had usual daily intakes of energy from fat that were consistent with the AMDR. Children whose usual intake was not consistent with the AMDR were more likely to consume too much rather than too little energy from fat. Almost all school-age children had usual daily intakes of energy from protein and carbohydrate that were consistent with AMDRs. There were no significant differences between NSLP participants and nonparticipants, in either income group, in usual daily intakes of energy from fat, protein, or carbohydrate.

Only 15 percent of school-age children had usual daily intakes of energy from saturated fat that were consistent with the 2005 DGA recommendation. Among both low-income and higher-income children, NSLP participants were significantly less likely than nonparticipants to have usual daily intakes of saturated fat that were consistent with the DGAs. This difference was concentrated among girls and, among low-income children, among teenage girls (14-18 years) in particular.

On average, school-age children obtained about 39 percent of their total daily energy intake from SoFAAS. Overall, there were no significant differences between NSLP participants and nonparticipants in the mean contribution of SoFAAS to total energy intakes. However, among higher-income children 5-8 years of age, NSLP participants obtained a significantly larger share of their total energy intake from SoFAAS than nonparticipants. This difference was concentrated among girls. Among lower-income boys, the pattern was reversed, with NSLP participants obtaining a significantly smaller share of total energy intake from SoFAAS than nonparticipants.

Energy density

There were no statistically significant differences between NSLP participants and nonparticipants in the energy density of the foods consumed over 24 hours.

Chapter 4
Meal and Snack Patterns

In this chapter, we examine meal and snack patterns of NSLP participants and nonparticipants, based on 24-recalls for weekdays when school was likely to be in session. We look first at the proportion of NSLP participants and nonparticipants who consumed specific meals and at the average number of snacks consumed per day.[1] We then assess the quality of the meals and snacks consumed by NSLP participants and nonparticipants using the three measures listed in the box to the right. Energy density and the percentage of energy contributed by SoFAAS were described in Chapter 3. Nutrient density assesses nutrient content relative to energy content, or the amount of nutrients received per calorie consumed. All of the analyses presented in this chapter are based on the single 24-hour recall completed by NHANES respondents, and represent average dietary behaviors for each group.[2]

MEAL AND SNACK PATTERNS

Data

- NHANES 1999–2004: Single 24-hour recall per person

Measures

- Number of meals and snacks eaten
- Nutritional quality of each meal and all snacks
  a) Energy density
  b) Percentage of energy from SoFAAS (solid fats and added sugars)
  c) Nutrient density

Meals Eaten

In the NHANES 24-hour dietary recall, respondents reported an eating occasion for each food and beverage. We used these data to determine the proportions of individuals who ate each of the three main meals (breakfast, lunch, and dinner), the proportion who ate all three main meals, and the total number of snacks eaten.[3,4]

Overall, 69 percent of all school-age children reported eating breakfast, lunch, and dinner (Figure 4-1 and Table 4-1). The proportion of children who consumed all three meals decreased with age, from 85 percent for children 5-8 years, to 70 percent for children 9-13 years, and 55 percent for children 14-18 years. In all three age groups, breakfast was the meal that was most often skipped.[5]

Among low-income children, overall and in each age group, NSLP participants were significantly more likely than nonparticipants to have consumed all three meals. This pattern was observed for both boys and girls and differences between NSLP participants and nonparticipants were significant for older children (9-13 years) and teenagers (14-18 years) of both genders (Table C-6).

[1] Tables and figures in this chapter focus on estimates for all school children. Results by age group and gender are included in Appendix C, and cited in this chapter where appropriate.

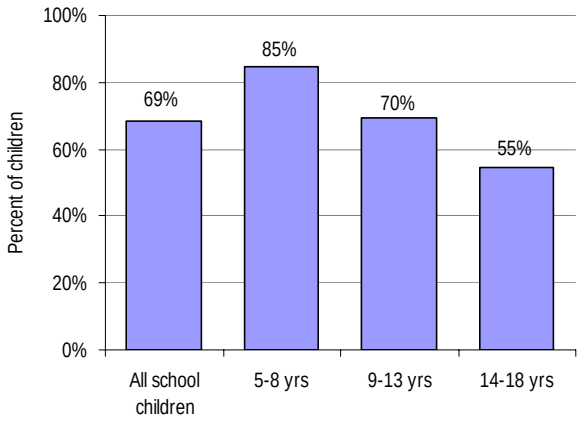
[2] This chapter does not present estimates of "usual intake," as was done in Chapter 2, because the focus is on mean intakes. Usual intake distributions are needed to examine the percentage of the population above or below a cutoff, but not needed to estimate mean intakes.

[3] Prior to being publicly released, the meal code data were "cleaned" for consistency with respect to meals reported at unusual times.

[4] In the NHANES Individual Food Intake File, every food and beverage is coded with one of 16 meal codes corresponding to English and Spanish meal names. Appendix A lists all NHANES meal codes that were recoded. For snacks, we counted the number of distinct snacks, based on time of day, rather than the number of individual foods reported as snacks.

[5] Meals were self-reported and some between-group difference may be due to differences in associating foods with meals versus snacks.

Figure 4-1—Percent of Children Who Reported All Three Main Meals on the Intake Day



Estimates for "All school children" are age adjusted.

Table 4-1—Percent of School Children Reporting Different Meals and Average Number of Snacks Reported

	All ages (5–18)					5–8 years				
		Income-eligible for Free/RP Meals[1]		Higher-income[1]			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	3,546	1,137	950	604	761	779	321	161	152	129
Percent eating										
Breakfast	78.9	74.9	69.3	80.6	* 86.7	91.8	90.1	89.5 u	90.5 u	95.6 u
Lunch	91.7	100.0	*** 77.2	100.0	*** 90.9	97.0	100.0	*** 83.1 u	100.0	98.7 u
Dinner	91.7	91.4	86.8	94.0	93.9	93.8	93.5 u	87.6	95.1 u	96.1 u
All three	68.6	70.2	*** 49.2	75.7	76.0	84.5	84.5	* 69.0	86.8	90.3 u
Average number of snacks	2.1	1.9	2.2	2.0	2.2	2.2	2.1	2.3	2.2	2.3

	9–13 years					14–18 years				
		Income-eligible for Free/RP Meals[1]		Higher-income[1]			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	1,360	512	315	282	224	1,407	304	474	170	408
Percent eating										
Breakfast	76.8	75.6	64.6	79.0	85.7	70.5	62.0	57.7	74.4	80.6
Lunch	94.7	100.0	*** 79.7	100.0	*** 95.0 u	84.2	100.0	*** 69.9	100.0	*** 80.2
Dinner	93.1	91.8	89.7	94.1	96.2 u	88.7	89.2	83.1	93.2 u	89.8
All three	69.6	72.3	** 48.4	73.8	78.8	54.7	56.4	** 34.2	68.8	61.4
Average number of snacks	2.0	1.8	* 2.2	1.9	2.2	2.1	1.9	2.1	2.1	2.2

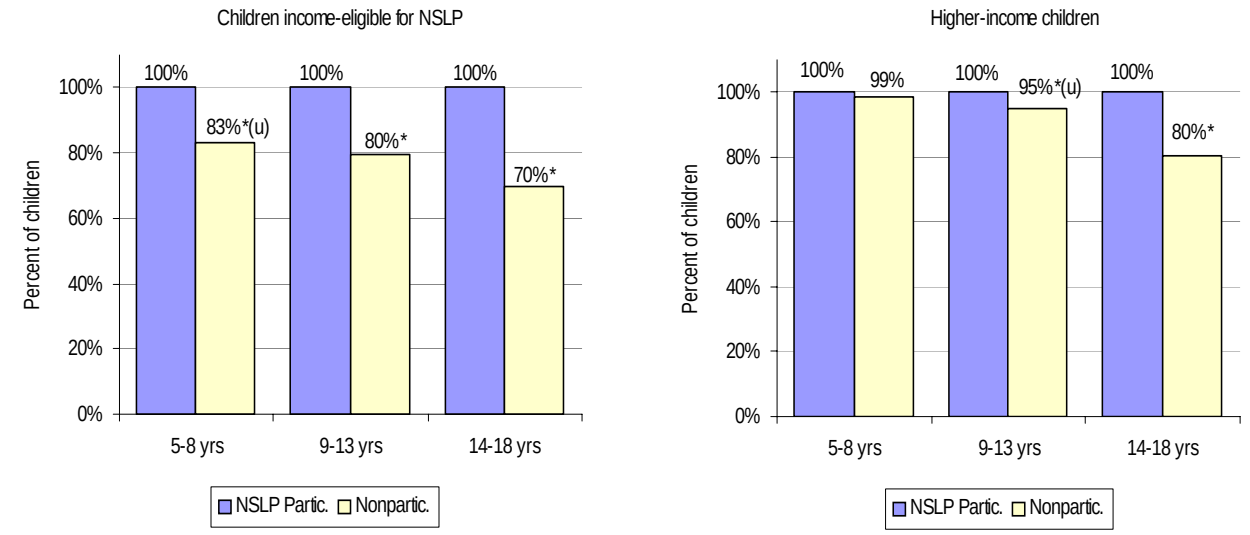
Note: Estimate is not displayed when percentage is <3 or >97.
1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5–18)' are age adjusted.

By definition, NSLP participants consumed a lunch on the day of the 24-hour recall. With the exception of higher-income children 5-8 years of age, NSLP participants in each age and income group were more likely than their nonparticipant counterparts to have consumed a lunch (Figure 4-2). The magnitude of the difference was greater among low-income children than higher-income children, and was greatest among low-income teenagers (14-18 years) (100 vs. 70 percent). Findings were similar for boys and girls (Table C-7).

More than three-quarters of all school-age children (79 percent) reported a breakfast (Table C-8). This was low, relative to the proportions who reported lunch and dinner (92 percent for each), and reflects the fact that breakfast was the meal that was most often skipped. Among higher-income children, NSLP participants were significantly less likely than nonparticipants to have consumed a breakfast (81 vs. 87 percent) (Table 4-

Figure 4-2—Percent of Children Who Reported Lunch on the Intake Day, By Age Group



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better.
u Denotes unreliable estimates due to large coefficient of variation. Statistically significant differences indicate the direction, but not the magnitude, of between-group differences.

1). This difference was largely due to a difference among girls (73 vs. 86 percent) (Table C-8).

Ninety-two percent of all school-age children reported eating dinner (Table 4-1). There were no significant differences between NSLP participants and nonparticipants, overall or by age group, in the proportion of children who reported eating dinner.

Snacks Eaten

School-age children reported, on average, 2.1 snacks on the day of the 24-hour recall (Table 4-1). The mean number of reported snacks was comparable for most NSLP participants and nonparticipants in both income groups. However, among older children (9-13 years) in the low-income group, NSLP participants reported fewer snacks than nonparticipants (an average of 1.8 vs. 2.2). This pattern was observed for both boys and girls, but the difference was statistically significant only for girls (Table C-10).

Energy Density of Foods Consumed at Meals and Snacks

As noted in Chapter 3, the 2005 *Dietary Guidelines* Advisory Committee determined that there was suggestive evidence that consuming energy-dense meals may contribute to excessive caloric intake and that, conversely, eating foods of low energy density may be a helpful strategy to maintain energy balance (USDHHS/ USDA, 2005).

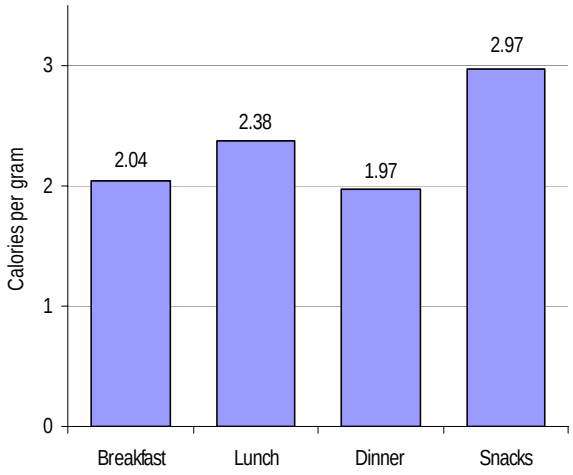
Energy density is measured by calories per 100 grams of solid food. Beverages are not included in the analyses. The mean energy density of foods consumed at breakfast (or other meals) is measured across children who consumed foods at that meal, and similarly for other meals.

Across all school-age children, mean energy density was consistently highest for snacks and lowest for dinners (2.97 vs. 1.97 calories per gram) (Figure 4-3 and Table C-11). These results indicate that the mix of foods children consumed as snacks provided a higher concentration of energy per gram than foods consumed for breakfast.[6] Among the three main meals, mean energy density was highest for lunch (2.38) and lowest for dinner (1.97).

In both low-income and higher-income groups, the mean energy density of foods consumed at lunch was significantly lower for NSLP participants than for nonparticipants (2.23 vs. 2.47 and 2.28 vs. 2.54, respectively) (Figure 4-4). Thus, NSLP

[6] See Chapter 3 for a description of the energy density measure used in this analysis.

Figure 4-3—Energy Density of Meals and Snacks



Energy density is measured by calories per 100 grams of solid food. Beverages are not included in the analyses. Estimates are age adjusted.

participants received fewer calories per gram of food consumed than nonparticipants. This pattern was noted for both boys and girls and, for all age groups combined, the between-group differences were significant for girls in the low-income group and for both boys and girls in the higher-income group (Table C-11). Analyses by age group showed similar patterns but not all of the differences reached statistical significance.

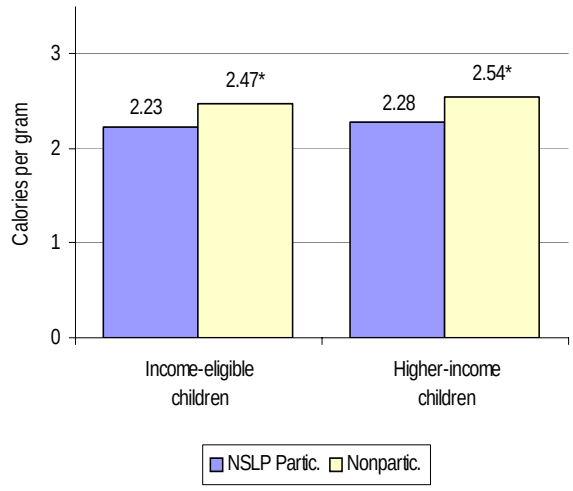
There was no consistent pattern of differences between NSLP participants and nonparticipants in the energy density of foods consumed at breakfast. It is possible that low-income NSLP participants are be more likely than higher-income participants to consume breakfast at school, but this could not be determined from the NHANES data.

Among low-income children overall, the energy density of breakfast foods consumed by NSLP participants was significantly higher, on average, than the energy density of breakfast foods consumed by nonparticipants (2.11 vs. 1.81) (Figure 4-5). Findings varied by age group and gender, and the observed difference was concentrated among older children (9-13 years) and teenagers (14-18 years (Table C-11).[7]

Among higher-income girls, the opposite pattern was observed, with the energy density of breakfast foods consumed by NSLP participants being significantly lower in energy density than the breakfast foods consumed by participants (1.95 vs. 2.29) (Table C-11). This pattern was observed for girls in all age groups, but the difference between NSLP participants and nonparticipants was statisti-

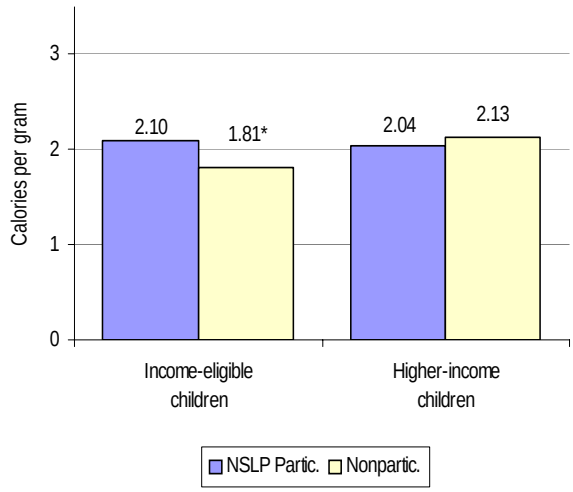
[7] Among both low-income and higher-income children, NSLP participants were more likely than nonparticipants to report that they usually get breakfast at school (see Table 1-2).

Figure 4-4—Energy Density of Foods Consumed at Lunch



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Figure 4-5—Energy Density of Foods Consumed at Breakfast



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

cally significant only for the youngest girls (5-8 years).

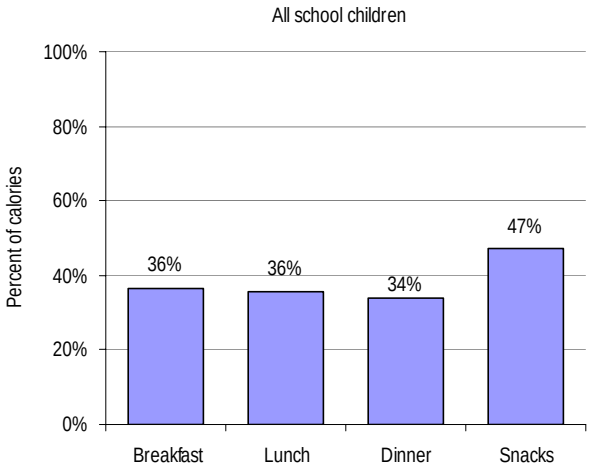
Finally, with regard to the energy density of snack foods, the only significant difference observed between NSLP participants and nonparticipants was for higher-income girls (Table C-11). In this subgroup, the snack foods consumed by NSLP participants were significantly more energy dense than the snack foods consumed by nonparticipants (3.33 vs. 2.94). This pattern was observed for all three age groups, but between-group differences were not statistically significant in the subgroup analyses.

Energy from Solid Fats, Alcoholic Beverages, and Added Sugars in Meals and Snacks

In Chapter 3, we found that, overall, there were no statistically significant differences between NSLP participants and nonparticipants in the proportion of total energy contributed by SoFAAS. Some significant differences were noted for particular subgroups based on income, age, and gender, but there was no consistent pattern. In this analysis, we look at the contribution of SoFAAS to specific meals and to overall snack intake.

Across all school-age children, the percentage of energy from SoFAAS was notably higher from snacks than for any of the meals (47 vs. 34-36 percent) (Figure 4-6 and Table C-12). There were no significant differences between NSLP participants and nonparticipants, overall or for any subgroup, in the percentage of snack calories provided by SoFAAS.

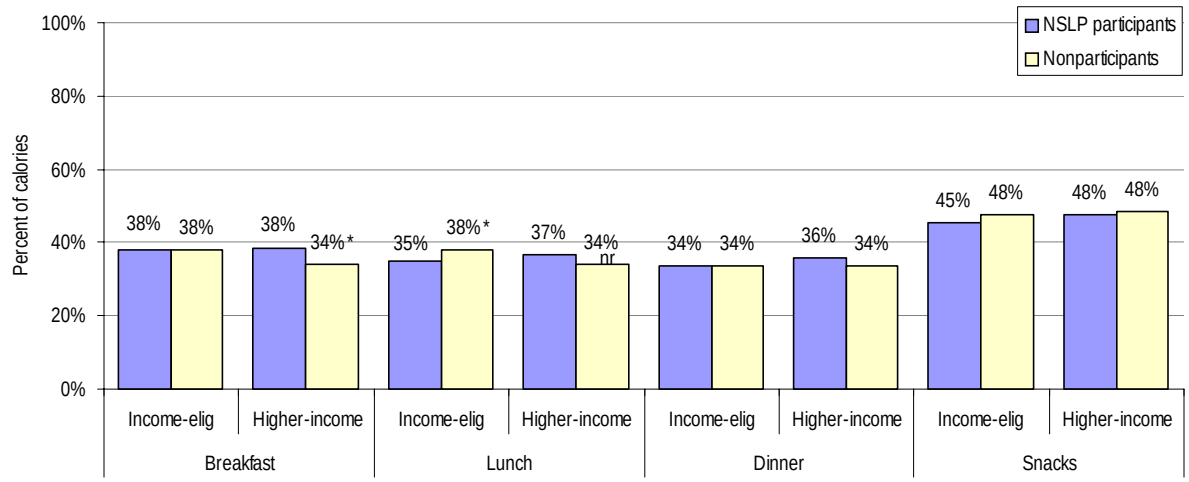
Figure 4-6—Percentage of Energy from Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS)



Estimates are age adjusted.

Low-income NSLP participants obtained a significantly smaller share of their lunch energy from SoFAAS than low-income nonparticipants (35 vs. 38 percent) (Figure 4-7). This pattern was observed for all age-and-gender subgroups; however the difference between NSLP participants and

Figure 4-7—Percentage of Energy from SoFAAS: NSLP Participants and Nonparticipants



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

nonparticipants was statistically significant only for boys overall and boys 5-8 years of age (Table C-12). Among higher-income children, there were no statistically significant differences between NSLP participants and nonparticipants in the percentage of lunch energy provided by SoFAAS.

For breakfast, the difference between NSLP participants and nonparticipants went in the opposite direction and involved higher-income rather than low-income children. Among higher-incmoe children, NSLP participants obtained a significantly larger share of their breakfast energy from SoFASS than nonparticipants (38 vs. 34 percent). This pattern was noted for the youngest children (5-8 years) and for teenagers (14-18 years), but the difference was statistically significant only for teenagers (both genders combined and boys only) (Table C-12).

There were no significant differences between NSLP participants and nonparticipants in the percentage of energy from SoFAAS in snacks and only one isolated difference for dinners (Table C-12).

Nutrient Density of Meals and Snacks

We examined the nutritional quality of individual meals and snacks and of all meals and snacks combined, using a measure of nutrient density. Nutrient density measures assess the nutrient contribution of a food relative to its energy contribution. This concept has been around for more than 30 years, and has recently received renewed attention because the *Dietary Guidelines for Americans* and *MyPyramid* recommendations emphasize the need for individuals to choose "nutrient-dense" foods to meet nutrient requirements without exceeding energy requirements. "Nutrient-dense" foods are defined as "low-fat forms of foods in each food group and forms free of added sugar."

There is a pressing need to develop a standard definition of nutrient density that can be understood by individuals and used by researchers. Among the several existing approaches, the Naturally-Nutrient-Rich (NNR) score is viewed by some to hold the most promise (Drewnowski, 2005; Zelman and Kennedy, 2005). The NNR is a nutrients-to-calories ratio that considers nutrients commonly included in efforts to define healthy diets (Drewnowski, 2005). The NNR, as initially conceived, excludes fortified foods.

For our analysis, we used a modified NNR—the NR (Nutrient-Rich) score—that is not limited to naturally occurring nutrients. We include fortified foods in the analysis because these foods make important contributions to nutrient intakes (Subar et al., 1998a and 1998b). The NR scores presented in this report consider the 16 nutrients shown in Table 4-2.[8]

The NR score for a food is constructed as the weighted average of the contributions of the16 nutrients, measured as the percent of daily value (DV) contributed per 2000 calories of the food (DVs are shown in Table 4-2; derivation of the NR score is described in Appendix A). The NR score for a meal or the full complement of meals and snacks is similarly constructed, after aggregating the nutrient contributions of all foods consumed.

[8] The nutrients are the same as those used in the most recent version of the NNR (as described by Drewnowski (2005)), with the following exceptions. Vitamin D was not included because it was not available in the NHANES data and monounsaturated fat was not included because there is no DRI. Additional nutrients available in the NHANES data with defined DRIs were added (magnesium and the essential fatty acids linoleic acid and alpha-linolenic acid).

Table 4-2—Nutrients and Recommended Daily Values (DVs) Used to Calculate Nutrient-Rich Scores[a]

Nutrient	Value	Nutrient	Value
Calcium	1300 mg	Vitamin B_{12}	2.4 μg
Folate	400 μg	Vitamin C	90 mg
Iron	18 mg	Vitamin E	15 mg
Magnesium	420 mg	Zinc	11 mg
Potassium	4.7 g	Dietary Fiber	38 g
Riboflavin	1.3 mg	Linoleic acid	17 g
Thiamin	1.2 mg	α-Linolenic acid	1. 6 g
Vitamin A (RAE)	900 mg	Protein	56 g

[a] Daily values are the maximum RDA or AI specified for an age group,

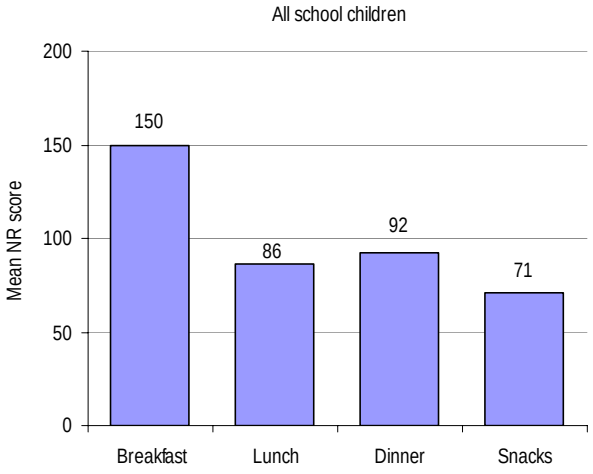
The NR score provides a method of assessing multiple key nutrients simultaneously. However, the NR score is not designed to assess nutrient adequacy and mean NR scores must be interpreted with caution. Higher NR scores indicate a higher concentration of nutrients per calorie but, because the score is normalized to 2,000 calories, it does not provide an absolute measure of nutrient intake relative to DVs. Furthermore, the score weights all nutrients equally. A person consuming 2000 percent DV of one nutrient will have a higher NR score from that single nutrient than a person consuming exactly 100 percent DV of all nutrients. Finally, NR scores do not account negatively for excessive concentrations of nutrients such as saturated fat, cholesterol, and sodium, which should be consumed in moderation.

Nutrient-rich (NR) scores for individual meals

On average, children's NR scores were notably higher for breakfast (150) than for lunch and dinner (86 and 92) (Figure 4-8). This indicates that the mix of foods consumed at breakfast were more nutrient-dense—providing a higher concentration of nutrients per calorie—than the mix of foods consumed for lunch or dinner.

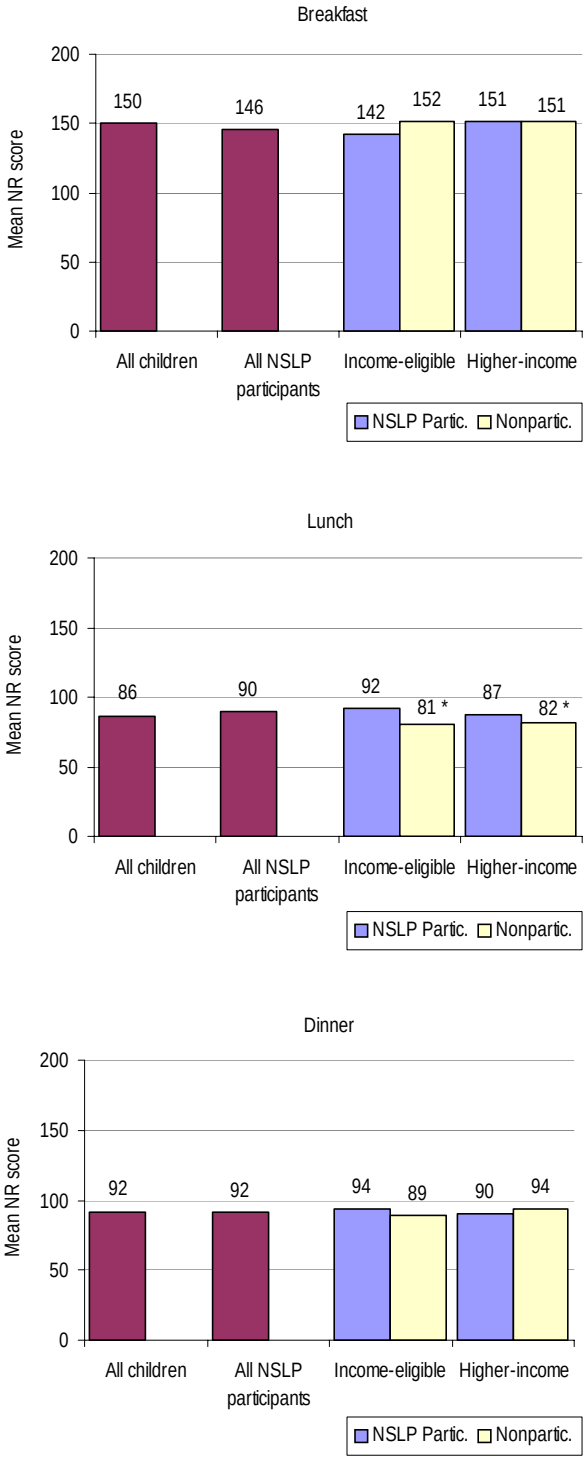
Overall, the lunches consumed by NSLP participants were more nutrient-dense than the lunches consumed by nonparticipants (Figure 4-9). This was true for both low-income children (mean NR score of 92 vs. 81) and higher-income children (87

Figure 4-8—Mean Nutrient Rich (NR) Scores for Meals and Snacks



Estimates are age adjusted.

Figure 4-9—Mean Nutrient Rich (NR) Scores for NSLP Participants and Nonparticipants



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

vs. 82). This pattern was observed for all subgroups except higher-income teenage girls and many of the differences between NSLP participants and nonparticipants were statistically significant (Table C-14).

There were no differences between NSLP participants and nonparticipants overall in mean NR scores for breakfast or dinner (Figure 4-9). However, some significant differences did emerge in the subgroup analyses. Among children 5-8 years, lower-income NSLP participants had a significantly higher mean NR score for breakfast, relative to nonparticipants (168 vs. 144). Among children 9-13 years, the finding was reversed, with NSLP participants having a lower mean NR score for breakfast than nonparticipants (140 vs. 177). Finally, among children 5-8 years, female NSLP participants (both low-income and higher-income) had significantly lower mean NR scores for dinner than nonparticipants (83-87 vs. 103-104).

NR scores for snacks

NR scores for snacks were substantially lower than NR scores for any of the meals (Figure 4-9). There were no significant differences between NSLP participants and nonparticipants in NR scores for snacks.

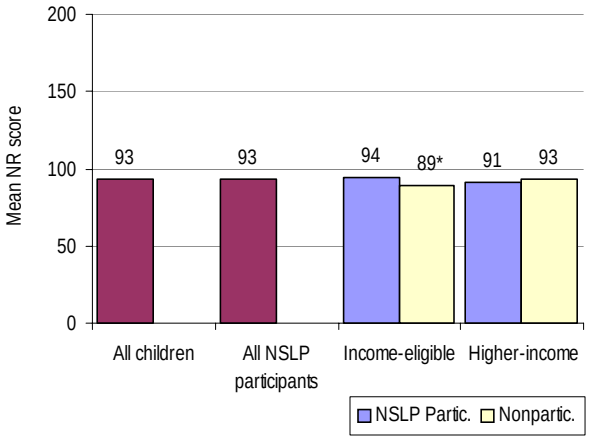
NR scores for all meals and snacks combined

Among low-income children, the mean NR score for total daily intakes was significantly higher for NSLP participants than for nonparticipants (95 vs. 89) (Figure 4-10). This was true for both boys and girls (Table C-13). This pattern was observed in all age and gender subgroups of low-income children, and the difference was statistically significant for children 5-8 years and 9-13 years, overall, and for boys 5-8-years. There were not significant differences in total mean NR scores of higher-income NSLP participants and nonparticipants.

Summary

Overall, 69 percent of all school-age children reported eating breakfast, lunch, and dinner on the day of the dietary recall. The proportion of children who consumed all three main meals decreased with age, and, in all three age groups, breakfast was the meal that was most often skipped. Children consumed an average of 2.1 snacks.

Figure 4-10—Mean Nutrient Rich (NR) Scores for All Meals and Snacks Combined



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Significant differences in the meal and snack patterns of NSLP participants and nonparticipants overall (all age groups combined) included the following:

- Among low-income children, NSLP participants were significantly more likely than nonparticipants to have consumed all three main meals.
- Among higher-income children, NSLP participants were significantly less likely than nonparticipants to have consumed breakfast.
- For both low-income and higher-income children. NSLP participants (who consumed a lunch by definition) were more likely than their nonparticipant counterparts to have consumed a lunch. The magnitude of the difference was greater among low-income children than higher-income children.

Nutritional quality of meals and snacks

The nutritional quality of meals and snacks was examined in terms of the energy density of foods (calories per gm); percentage of energy obtained from solid fats, alcoholic beverages, and added sugars (SoFAAS); and nutrient density, measured

by the Nutrient-Rich (NR) score (a weighted average of the contributions of 16 essential nutrients, relative to their energy contributions).

Energy density

Across all school-age children, mean energy density was consistently highest for snacks and lowest for dinners (2.97 vs. 1.97 calories per gram). Among the three main meals, mean energy density was highest for lunch (2.38) and lowest for dinner (1.97).

Differences between NSLP participants and nonparticipants included:

- For both low-income and higher-income NSLP participants, the mean energy density of foods consumed at lunch was significantly lower than for nonparticipants (2.23 vs. 2.47 and 2.28 vs. 2.54, respectively).

- Low-income NSLP participants consumed breakfast foods with significantly higher energy density, on average, than the energy density of breakfast foods consumed by nonparticipants (2.11 vs. 1.81)

Energy from solid fats, alcoholic beverages, and added sugars (SoFAAS) in meals and snacks

For all school-age children, the percentage of energy from SoFAAS was notably higher for snacks than for any of the meals (47 vs. 34–36 percent). NSLP participants and nonparticipants did not differ in the percentages of snack calories from SoFAAS.

Differences between NSLP participants and nonparticipants included:

- Low-income NSLP participants obtained a significantly smaller share of their lunch energy from SoFAAS, compared with low-income nonparticipants (35 vs. 38 percent).

- Higher-income NSLP participants obtained a significantly larger share of their breakfast energy from SoFASS, compared with higher-income nonparticipants (38 vs. 34 percent).

Nutrient density of meals and snacks

Nutrient density measures assess the nutrient contribution of a food relative to its energy contribution. Our analysis used the NRscore, which provides a method of assessing multiple key nutrients simultaneously.

On average, children's NR scores were notably higher for breakfast (ranging from 148 to 158 across subgroups), than for lunch and dinner (79 to 99). This indicates that the mix of foods consumed at breakfast was more nutrient-dense—providing a higher concentration of nutrients per calorie—than the mix of foods consumed for lunch or dinner. NR scores for snacks were substantially lower than NR scores for any of the meals.

Overall, there were no statistically significant differences between NSLP participants and nonparticipants, in either the low-income or higher-income groups, in mean NR scores for breakfast, dinner, snacks, or all meals and snacks combined. However, lunches consumed by NSLP participants were more nutrient-dense than the lunches consumed by nonparticipants. This was true for both low-income children (mean NR score of 92 vs. 81) and higher-income children (87 vs. 82).

Chapter 5
Food Choices

In this chapter, we examine the food choices of NSLP participants and nonparticipants, as reported in 24-hr recalls for weekdays when school was likely to be in session. This information provides context for findings from previous chapters, and for efforts to influence NSLP participants' food choices and improve their overall diets.

We examined food choices using two methods. First, a "supermarket aisle" approach compares proportions of NSLP participants and nonparticipants who consumed foods from 10 major food groups (fruits, vegetables, milk products, meat, etc.), and subgroups within the major groups (whole milk, 2% milk, cheese, and yogurt in the milk group). This analysis provides a comprehensive picture of the food choices of NSLP participants and nonparticipants, and the differences across groups. Some differences in food choices may have important implications for diet quality, while others have less importance or no implications.

The second approach examines food choices across food categories defined by relative nutritional quality. We categorized foods into three groups—foods to be consumed frequently, occasionally, and selectively—based on food descriptions, nutrient content, and the dietary advice provided in the *Dietary Guidelines for Americans (DGA)* or *MyPyramid*. These data provide a picture of the relative quality of the foods chosen by NSLP participants and nonparticipants.

Because the NSLP provides foods to children in reimbursable lunches, we examined food choices at lunch as well as over 24 hours. Thus, the results provide information about the extent to which food choices at lunch vary between NSLP participants and nonparticipants and whether any observed differences persist over 24 hours. Lunch foods consumed by NSLP participants were not necessarily provided by the program. Children may have consumed foods from non-reimbursable sources such as vending machines or a la carte sales or brought some items from home.

FOOD CHOICE ANALYSES

Data

- NHANES 1999-2004: Single 24-hour recall per person

Measures

1. Proportion of children consuming foods from food groups defined by a "supermarket aisle approach": 10 broad food groups and 165 subgroups are defined to correspond to supermarket groupings.
2. Percent of food choices from foods categorized by nutritional quality as:
   - *Food to consume frequently* — high relative nutrient density and low SoFAAS.
   - *Food to consume selectively* — high relative nutrient density and moderate amounts of SoFAAS.
   - *Food to consume occasionally* — low nutrient density and/or high amounts of SoFAAS.

Food Choices—Supermarket Aisle Approach

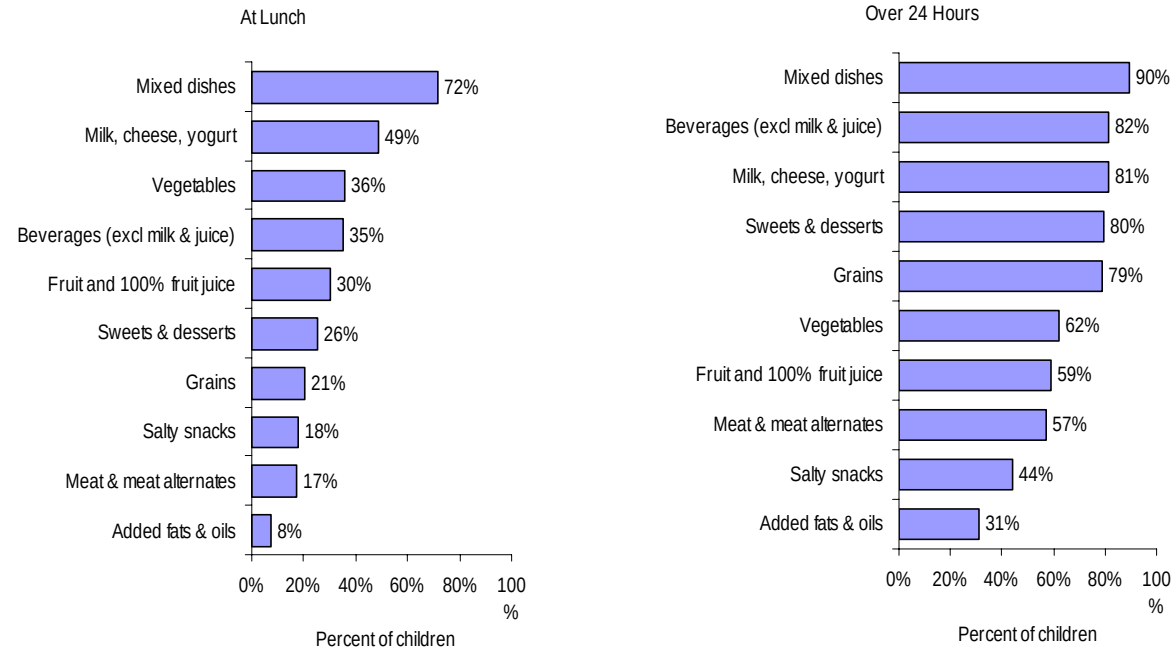
To describe food choices using a supermarket aisle approach, we assigned all foods in the NHANES data to one of 10 major food groups. The 10 food groups are shown in Figure 5-1, in order by the percentages of school children who consumed one or more foods in each group at lunch and over 24 hours.

Mixed dishes were the most common food group, consumed by 72 percent of children at lunch, and by 90 percent of children over the entire day. After mixed dishes, the ranking of food groups differs for lunch and the 24-hour period.

Within the major food groups, we identified 165 subgroups to capture the different types of food available within each group (Table 5-1). We then compared the proportions of NSLP participants and nonparticipants who consumed any foods in each of the subgroups. (Food subgroups consumed by fewer than 5 percent of all school children are not included in tables or discussed in the text.)

The data reported throughout this section are the percentages of children who consumed one or more foods in a given food group, in any amount,

Figure 5-1—Percent of School Children Eating Any Foods from 10 Broad Food Groups



Note: Estimates are age adjusted.

Table 5-1—Food Subgroups Used to Classify Types of Food Eaten by NSLP Participants and Nonparticipants

Grains	**Vegetables**	Cooked potatoes–not fried	Canned/frozen peaches
Bread	Raw lettuce/greens	Cooked potatoes–fried	Canned/frozen pineapple
Rolls	Raw carrots	Vegetable juice	Other canned/frozen
English muffins	Raw tomatoes		Non-citrus juice
Bagels	Raw cabbage/coleslaw	**Fruit & 100% fruit juice**	Citrus juice
Biscuits, scones, croissants	Other raw (high nutrients)[a]	Fresh orange	Dried fruit
Muffins	Other raw (low nutrients)[a]	Fresh other citrus	
Cornbread	Salads (w/greens)	Fresh apple	**Milk, cheese, yogurt**
Corn tortillas	Cooked green beans	Fresh banana	Unflavored whole milk
Flour tortillas	Cooked corn	Fresh melon	Unflavored 2% milk
Taco shells	Cooked peas	Fresh watermelon	Unflavored 1% milk
Crackers	Cooked carrots	Fresh grapes	Unflavored skim milk
Breakfast/granola bar	Cooked broccoli	Fresh peach/nectarine	Unflavored milk–% fat nfs
Pancakes, waffles, French toast	Cooked tomatoes	Fresh pear	Flavored whole milk
	Cooked mixed	Fresh berries	Flavored 2% milk
Cold cereal	Cooked starchy	Other fresh fruit	Flavored 1% milk
Hot cereal	Other cooked deep yellow	Avocado/guacamole	Flavored skim milk
Rice	Other cooked dark green	Lemon/lime in any form	Flavored milk–% fat nfs
Pasta	Other cooked (high nutrients)[a]	Canned or frozen in syrup	Soymilk
	Other cooked (low nutrients)[a]	Canned or frozen, no syrup	Dry or evaporated milk
	Other fried	Applesauce,Canned/frozen	Yogurt
			Cheese

[a] "Other raw" and "Other cooked" vegetables include all vegetables not categorized separately. Within these two groups, vegetables in the top quartile of the distribution of Vitamins A or C per 100 grams were categorized as "high in nutrients"; all others are "low in nutrients."
Raw vegetables, high in nutrients include peppers (sweet and hot), broccoli, cauliflower, green peas, seaweed, and snowpeas.
Raw vegetables, low in nutrients include onions, cucumbers, celery, radishes, and mushrooms.
Cooked vegetables, high in nutrients include cabbage, peppers, asparagus, cauliflower, brussel sprouts, snowpeas, and squash.
Cooked vegetables, low in nutrients include artichokes, onions, mushrooms, eggplant, beets, and yellow string beans.

on the day referenced in 24-hour recall. Results are based on foods reported as discrete food items. That is, mixed dishes and soups, salads, sandwiches, and other combination foods were not broken down into their various components (for example, a soup may contain vegetables, chicken, and pasta; a sandwich might contain bread, meat, cheese, and vegetables).[1]

The chapter is organized by major food group. Each section describes the proportions of NSLP participants and nonparticipants who consumed one or more foods from the major food group, and the differences in the proportions of children choosing any foods from the subgroups. The discussion in the text is limited to differences at the population level (all school children). Appendix Tables C-15 and C-16 provide detailed data for each age group by gender.

[1] Appendix A discusses the reporting of combination foods in the NHANES food files.

Grains

Overall, 21 percent of all school children reported eating a grain or a grain-based food at lunch that was not part of a mixed dish or combination item such as sandwiches, macaroni and cheese, or pizza (Figure 5-1). Over 24 hours, 79 percent of children consumed a grain item. There were no significant differences between NSLP participants and nonparticipants in the proportions who ate a separate grain food at lunch or over 24 hours (Figure 5-2).

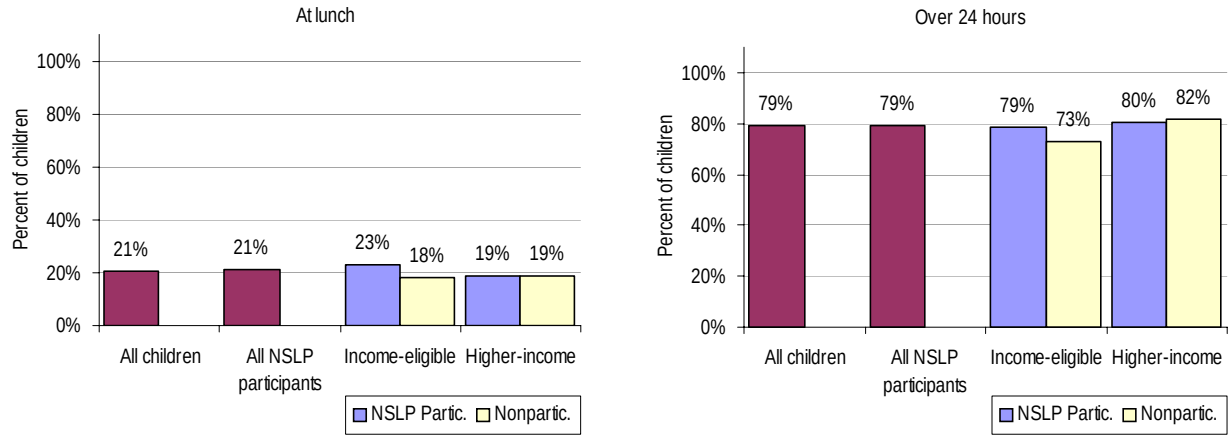
Consumption of whole grains was low. Only 3 percent of school children ate one or more whole grain foods at lunch, and 23 percent ate a whole grain item over the 24-hour period. (Tables C-15 and C-16).[2] Among higher-income children, NSLP participants were less likely than nonparticipants to

[2] The *MyPyramid Equivalents Database* indicates the number of whole grain ounce equivalents and non-whole grain ounce equivalents for each food in the NHANES individual food file. We coded foods as either whole grain or non-whole grain according to the category with the greater number of ounce equivalents.

Table 5-1—Food Subgroups Used to Classify Types of Food Eaten by NSLP Participants and Nonparticipants —Continued

Meat and meat alternates	**Mixed dishes**	Meat soup	Candy
Beef	Tomato sauce & meat (no pasta)	Bean soup	Ice cream
Ground beef	Chili con carne	Grain soups	Pudding
Pork	Meat mixtures with red meat	Vegetable mixtures (inc. soup)	Ice/popsicles
Ham	Meat mixtures with chicken or turkey		Sweet rolls
Lamb and misc. meats	Meat mixtures with fish	**Beverages (excl. milk and 100% fruit juice)**	Cake/cupcakes
Chicken	Hamburgers/cheeseburgers	Coffee	Cookies
Turkey	Sandwiches (excl. hamburger)	Tea	Pies/cobblers
Organ meats	Hot dogs	Beer	Pastries
Hot dogs	Luncheon meat	Wine	Doughnuts
Cold cuts	Beef, pork, ham	Liquor	
Fish	Chicken, turkey	Water	**Salty snacks**
Shellfish	Cheese (no meat)	Regular soda	Corn-based salty snacks
Bacon/sausage	Fish	Sugar-free soda	Pretzels/party mix
Eggs	Peanut butter	Noncarbonated sweetened drinks	Popcorn
Beans (dry, cooked)	Breakfast sandwiches	Noncarbonated low-calorie and sugar- free drinks	Potato chips
Baked/refried beans	Pizza (no meat)		
Soy products	Pizza with meat		**Added Fats and Oils**
Protein/meal enhancement	Mexican entrees	**Sweets and desserts**	Butter
Nuts	Macaroni & cheese	Sugar and sugar substitutes	Margarine
Peanut/almond butter	Pasta dishes, Italian style	Syrups/sweet toppings	Other added fats
Seeds	Rice dishes	Jelly	Other added oils
	Other grain mixtures	Jello	Salad dressing
			Mayonnaise
			Gravy

Figure 5-2—Percent of School Children Consuming Any Grains

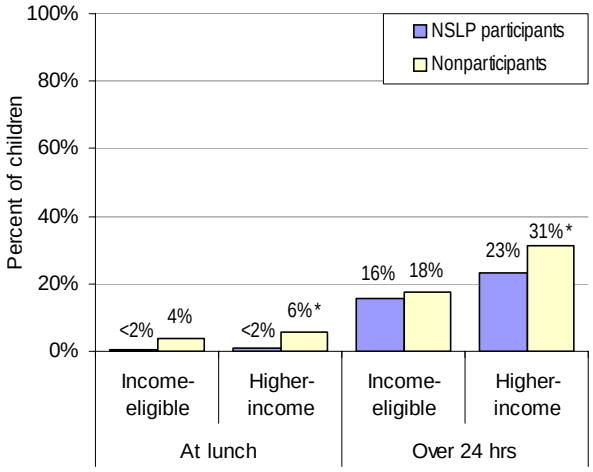


* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

consume whole grains, both at lunch and throughout the day (Figure 5-3). For low-income children, there were no significant differences in whole grain consumption for NSLP participants and nonparticipants.

At lunch, rolls were the most common grain food consumed by NSLP participants, whereas bread and crackers were most common among low-income and higher-income nonparticipants, respectively (Table C-15). Aside from rolls, bread, and crackers, no other grain foods were consumed by at least 5 percent of children at lunch. The between-group difference in the consumption of rolls (both income groups) persisted over 24 hours, while the between-group difference in consumption of bread did not.

Figure 5-3—Percent of School Children Consuming Any Whole Grains



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

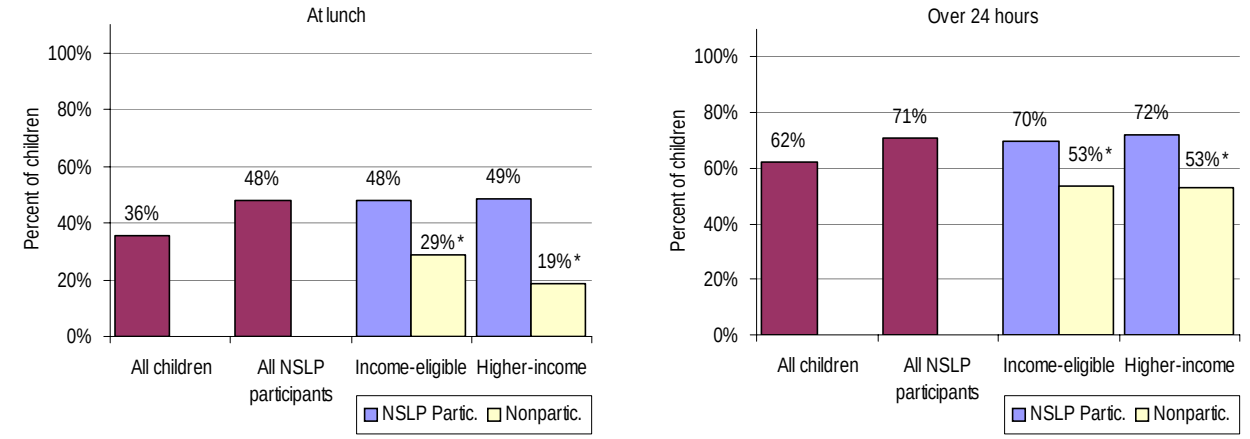
Many types of grain foods were consumed by children over 24 hours (Table C-16). The most common were cold cereal, bread, crackers, and rice; there were no significant differences between NSLP participants and nonparticipants in the proportions consuming these items. Among higher-income children, nonparticipants were more likely than participants to consume bagels, flour tortillas, and breakfast/granola bars (Table C-16). Among low-income children, nonparticipants were more likely than participants to consume corn tortillas, and participants were more likely to consume pancakes, waffles, and French toast.

Vegetables

Overall, 36 percent of school children consumed one or more discrete servings of vegetables at lunch (reported separately, not as part of a salad, mixed dish, or other combination item). NSLP participants were more likely than nonparticipants to consume vegetables at lunch. The magnitude of the difference was large and was observed in both the low-income (48 vs. 29 percent) and higher-income (49 vs. 19 percent) groups (Figure 5-4).

At lunch, cooked potatoes were the most common vegetable consumed by both NSLP participants and nonparticipants (Table C-15). Low-income NSLP

Figure 5-4—Percent of School Children Consuming Any Vegetables



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

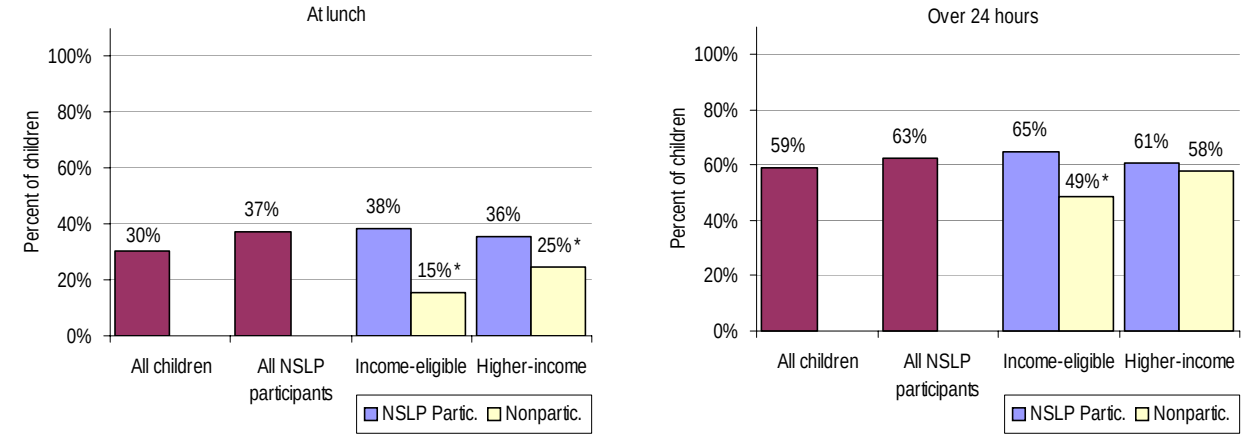
participants were twice as likely to consume potatoes as nonparticipants (26 vs. 13 percent), while higher-income participants were three times as likely (32 vs. 9 percent). Other cooked vegetables and salads were also more likely to be consumed by NSLP participants than nonparticipants.

The difference in vegetable consumption between NSLP participants and nonparticipants persisted over 24 hours. In both low-income and higher-income groups, about 70 percent of NSLP participants consumed a vegetable, compared with 53 percent of nonparticipants (Figure 5-4). The between-group difference in consumption of cooked potatoes also persisted over 24-hours, with over 40 percent of NSLP participants consuming cooked potatoes and just under 30 percent of nonparticipants (Table C-16). Over the 24-hour period, there were no significant differences between NSLP participants and nonparticipants in consumption of raw vegetables or salads.

Fruit

Fewer than one-third (30 percent) of school children reported eating fruit or 100% fruit juice at lunch (Figure 5-5). In both income groups, NSLP participants were more likely than nonparticipants to have consumed fruit or juice at lunch (38 vs. 15 percent, and 36 vs. 25 percent).

Figure 5-5—Percent of School Children Consuming Any Fruit and 100% Fruit Juice



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Among low-income children, NSLP participants were more likely than nonparticipants to consume all categories of fruit (fresh, canned or frozen, and juice). Among higher-income children, NSLP participants were more likely than nonparticipants to consume canned or frozen fruit, but there were no significant between group differences for consumption of fresh fruit and juice.

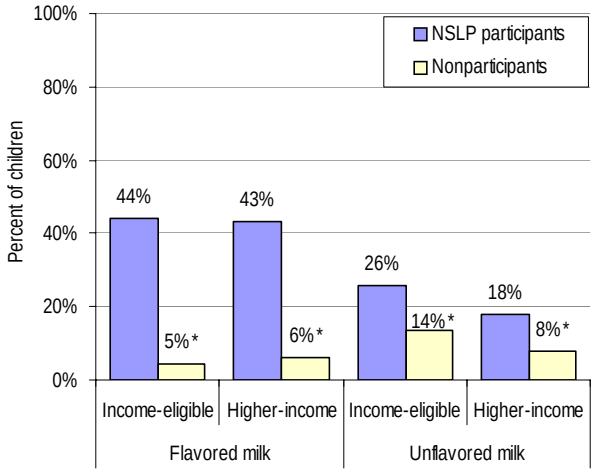
The difference in total fruit consumption between NSLP participants and nonparticipants persisted over 24 hours for low-income children but not for higher-income children (Figure 5-5). For the higher-income group, the only between-group difference that persisted observed over 24 hours the higher percentage of NSLP participants consuming canned or frozen fruit (Table C-16).

Milk and milk products

Overall, 49 percent of all school children and 69 percent of NSLP participants reported consuming milk or milk products at lunch (Figure 5-6). In both income groups, NSLP participants were more likely than nonparticipants to consume milk products (72 vs. 24 percent, and 65 vs. 25 percent).

At lunch, flavored and unflavored milk were consumed by 44 and 22 percent of NSLP participants, respectively (Table C-15). Nonparticipants in both income groups were more likely to consume unflavored milk than flavored milk (significance not tested), but consumed both at rates far below that of NSLP participants (Figure 5-7).

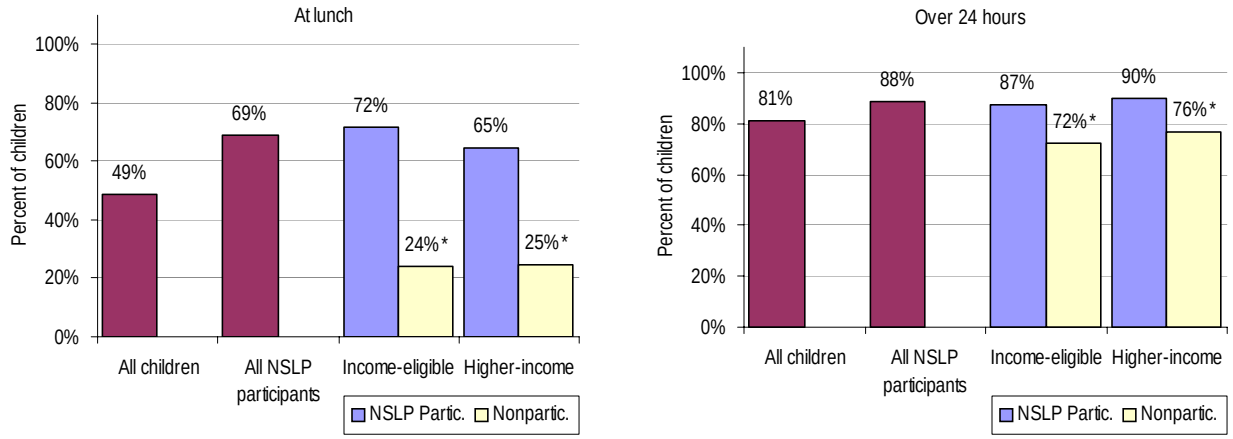
Figure 5-7—Percent of School Children Consuming Milk at Lunch



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

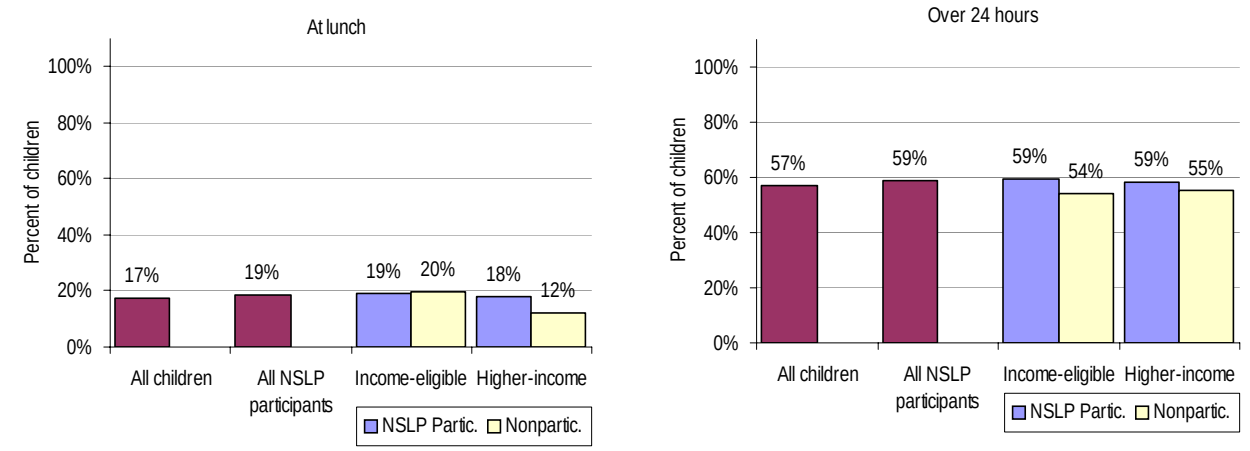
The difference in total milk consumption between NSLP participants and nonparticipants persisted over 24 hours for both low-income and higher-income children (Figure 5-6). The between-group differences over 24 hours were primarily due to higher consumption of flavored milk by NSLP participants. There were no significant differences between NSLP participants and nonparticipants in consumption of unflavored milk over 24 hours (about 60 percent for all groups) and consumption of cheese over 24 hours. The only milk product consumed by more nonparticipants than participants was yogurt; consumed by 12 percent of

Figure 5-6—Percent of School Children Consuming Any Milk and Milk Products



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Figure 5-8—Percent of School Children Consuming Any Meat and Meat Alternates



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

higher-income nonparticipants and 4 percent of higher-income participants.

Meats and meat alternates

At lunch, 17 percent of school children reported eating a meat or meat alternate that was not part of a mixed dish (Figure 5-7).[3] There were no significant differences between NSLP participants and nonparticipants. Chicken was consumed by 9 percent of children at lunch, and was the only individual meat product reported by at least 5 percent of children.

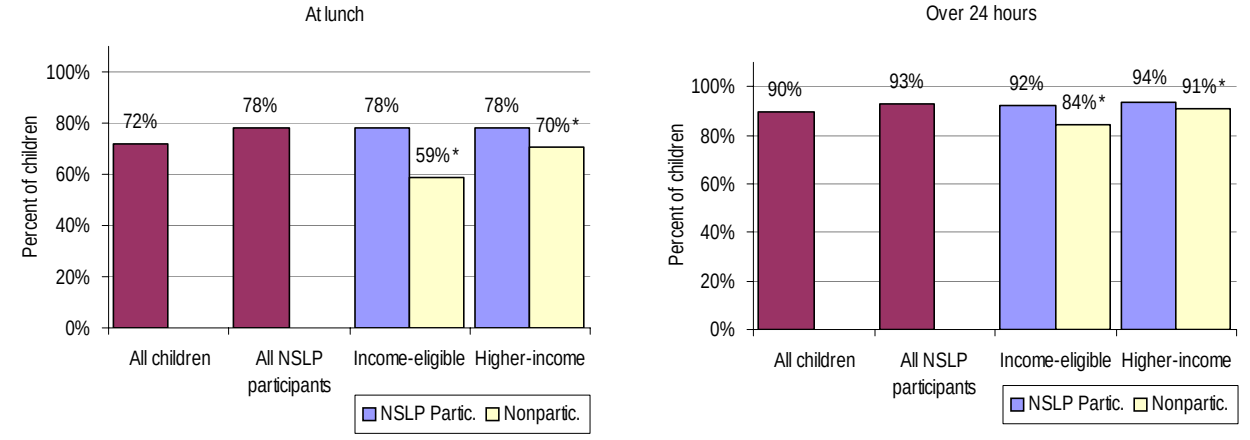
Over 24 hours, 57 percent of school children reported eating a meat or meat alternate that was not part of a mixed dish. There were no significant differences between NSLP participants and nonparticipants in the percent reporting meat, or in the percents reporting specific types of meat. The most common meat products consumed by school children were chicken (24 percent), beef (8 percent), and eggs (8 percent) (Table C-16).

Mixed dishes

Mixed dishes were reported to have been consumed by 72 percent of children at lunch (Figure 5-8). In both income groups, NSLP participants were more likely than nonparticipants to consume mixed dishes at lunch (78 vs. 59 percent, and 78 vs. 70 percent).

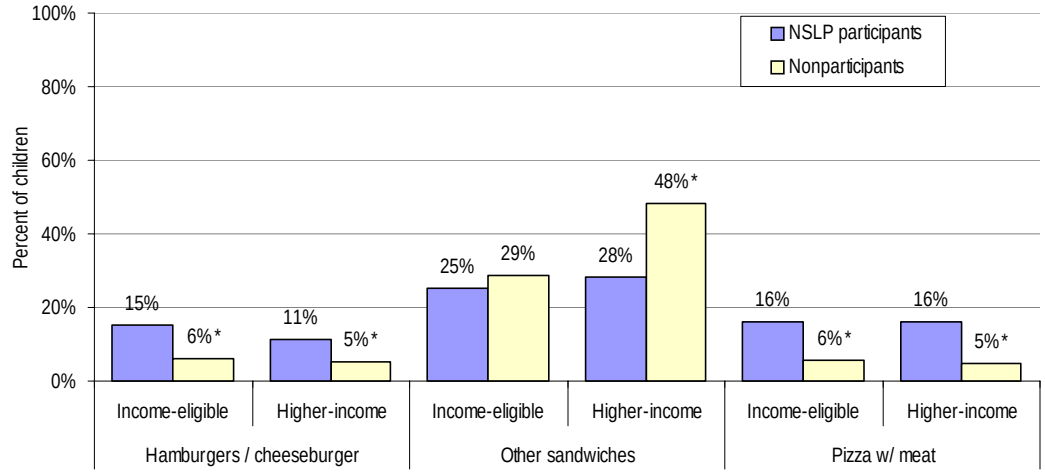
[3] Findings for cold cuts were comparable in analyses that considered sandwich component separately (data not shown). Sandwiches are considered mixed dishes and are discussed in the next section.

Figure 5-9—Percent of School Children Consuming Any Mixed Dishes



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Figure 5-10—Percent of School Children Consuming Types of Mixed Dishes At Lunch



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

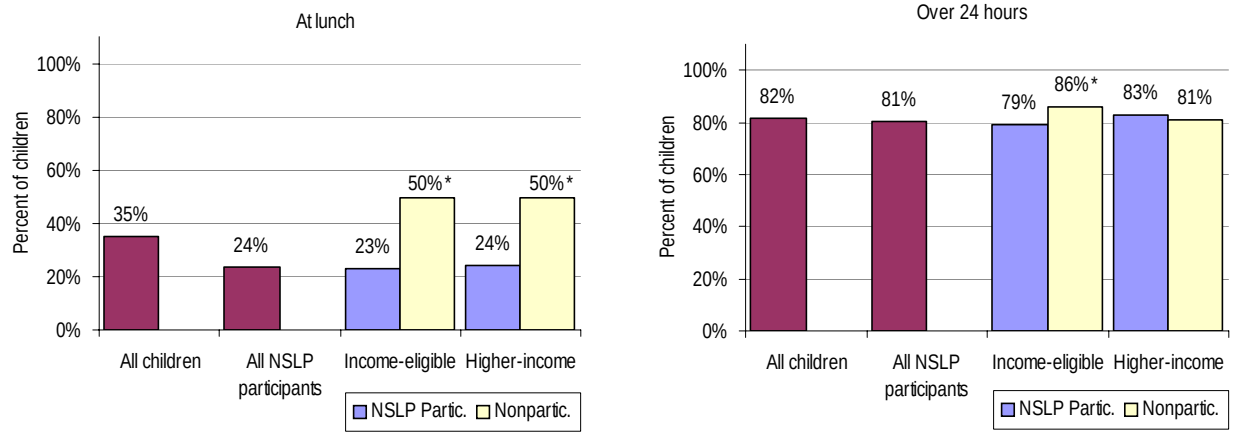
Sandwiches (not including hamburgers/cheeseburgers) were the most commonly reported type of mixed dish at lunch, followed by pizza with meat (Table C-15). Among both low-income and higher-income children, NSLP participants were more likely than nonparticipants to consume hamburgers/cheeseburgers and pizza. Low-income participants and nonparticipants were about equally likely to consume sandwiches, whereas higher-income nonparticipants were more likely than participants consume sandwiches (Figure 5-10).

Over 24 hours, 90 percent of children consumed at least one mixed dish. Differences between NSLP participants and nonparticipants in consumption of hamburgers/cheeseburgers, pizza, and sandwiches were also observed over the 24-hour period.

Beverages, excluding milk and 100% fruit juice

About one-third of all children reported drinking a beverage other than milk or 100% fruit juice at lunch (Figure 5-11). In both income groups, NSLP participants were about half as likely as nonparticipants to consume these beverages. Regular (not sugar-free) soft drinks and noncarbonated sweetened beverages were the only beverages, other than milk and juice, consumed by at least 5 percent of all children at lunch (Table C-15).[4]

Figure 5-11—Percent of School Children Consuming Any Beverages Other than Milk and 100% Fruit Juice



Note: Includes all beverages except milk, 100% fruit juice, and water.
* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Over 24 hours, 80 percent of children reported drinking a beverage other than milk or juice. The difference between NSLP participants and nonparticipants, observed at lunch, persisted over 24 hours only for low-income children. Among higher-income children, there was no difference in the proportions of NSLP participants and nonparticipants consuming beverages, although NSLP participants were less likely than nonparticipants to consume sugar-free soft drinks (34 vs. 9 percent) (Table C-16).

Sweets and desserts

Overall, one-fourth of children reported eating at least one type of sweet or dessert at lunch and there were no significant differences between NSLP participants and nonparticipants (Figure 5-12). Cookies were the most common type of sweet, reported by 10 percent of children. Both low-income and higher-income nonparticipants were about twice as likely as NSLP participants to consume candy (5 vs. 2 percent and 11 vs. 6 percent) (Table C-15).

Over the 24-hour period, 80 percent of children reported eating at least one type of sweet or dessert, with no significant differences between NSLP participants and nonparticipants. Over 24 hours, the most common sweets were candy (38 percent of children), cookies (32 percent), and ice cream (19 percent) (Table C-16). The between-group difference in candy consumption was observed only for higher-income children over 24 hours. There were no other significant differences between NSLP participants and nonparticipants for subgroups of sweets and desserts.

Salty snacks

Overall, 18 percent of children reported eating a salty snack food at lunch; 44 percent reported a eating a salty snack over 24 hours (Figure 5-13). Both low-income and higher-income NSLP participants were less likely than nonparticipants to consume salty snacks over both time periods.

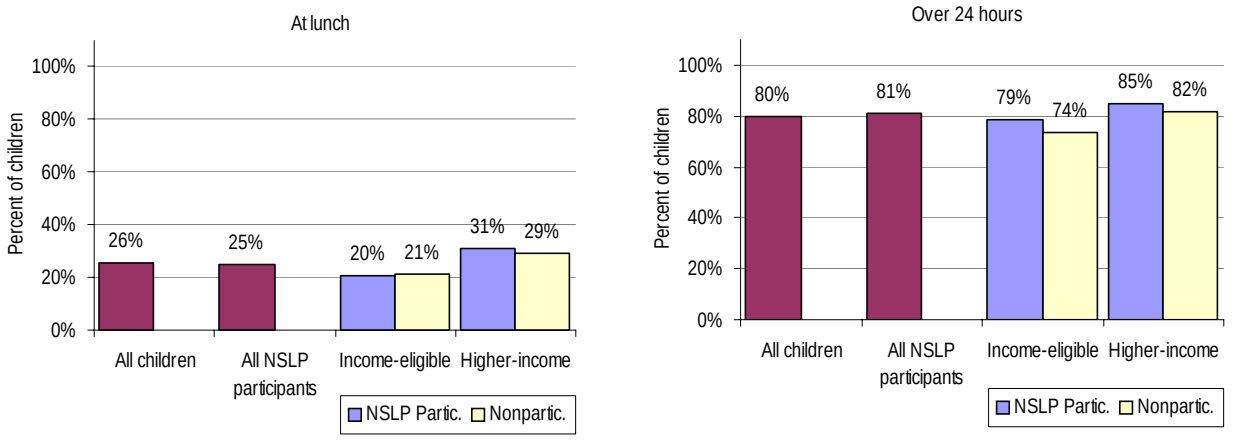
Corn-based salty snacks were the most commonly reported, followed by potato chips and popcorn. This same rank order was observed across all subgroups, both at lunch and over 24 hours.

Added fats and oils

Added fats and oils were reported by 8 percent of children at lunch, and 31 percent of children over 24 hours (Figure 5-14). Low-income NSLP participants were more likely to consume added fats and oils at lunch, compared with low-income nonparticipants (9 vs. 4 percent). There were no significant differences in consumption of added fats and oils for participants and nonparticipants over 24 hours.

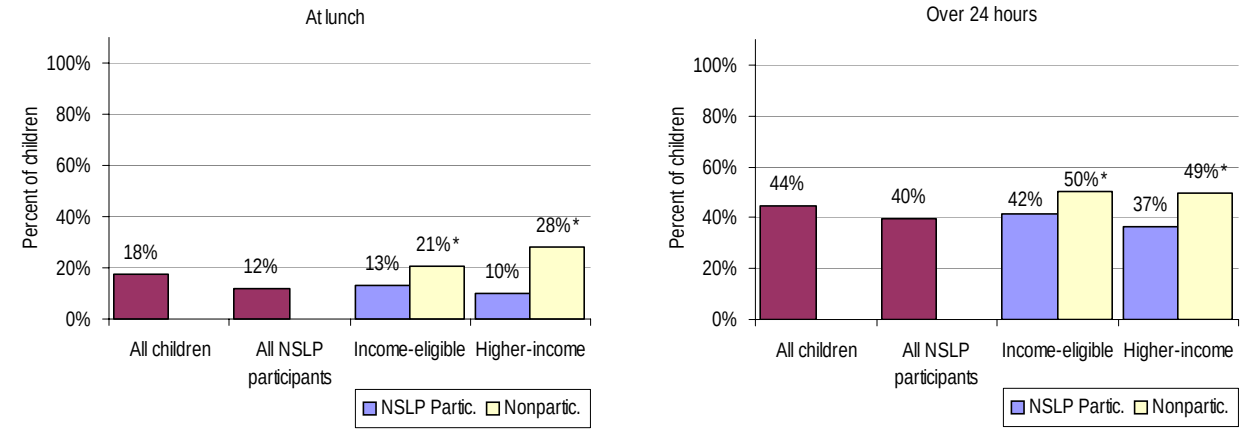
[4] NHANES dietary recalls did not collect data on water intake.

Figure 5-12—Percent of School Children Consuming Any Sweets and Desserts



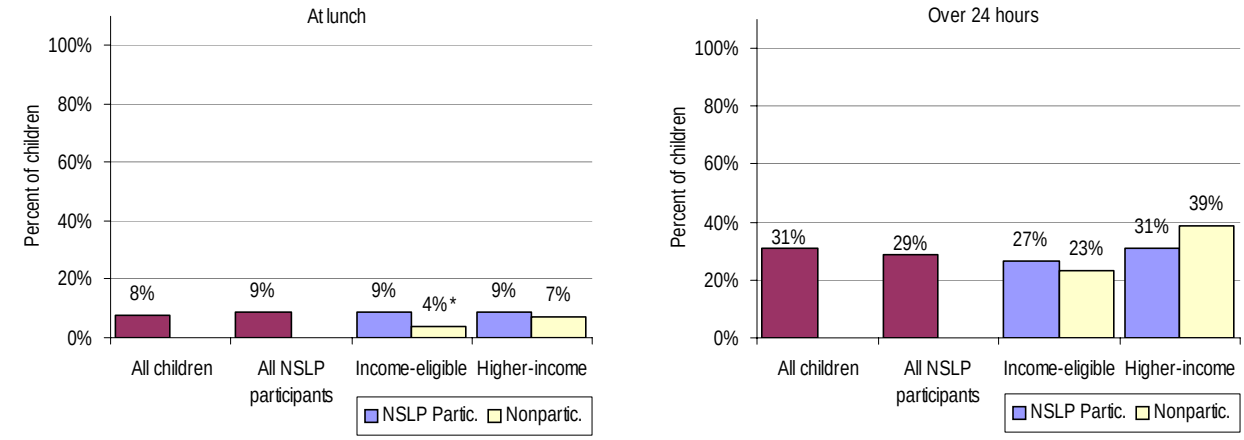
* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Figure 5-13—Percent of School Children Consuming Any Salty Snacks



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Figure 5-14—Percent of School Children Consuming Any Added Fats and Oils



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

Subgroups of added fats and oils include butter, margarine, salad dressing, gravy, cream cheese, and sour cream. None of these subgroups were reported by at least 5 percent of children at lunch (Table C-15). Over 24 hours, comparable proportions of NSLP participants and nonparticipants reported foods in each subgroup of added fats and oils, with 2 exceptions. Low-income NSLP participants were more likely than nonparticipants to consume gravy (6 vs. 2 percent); and higher-income NSLP participants were less likely than nonparticipants to consume cream cheese (1 vs. 8 percent).

Food Choices—Nutritional Quality Approach

Our second method for examining food choices is to examine the nutritional quality of foods consumed by NSLP participants and nonparticipants. This approach is based on the radiant pyramid/ power calories concept, as described by Zelman and Kennedy (2005). As shown in Figure 5-9, the radiant pyramid concept was presented as an idea to the committee developing the 2005 edition of the DGAs, and the basic concept was incorporated into the *MyPyramid* food guidance system. The expanded radiant pyramid, described by Zelman and

Kennedy and illustrated on the right side of Figure 5-9, uses data on nutrient density to identify "power calorie" foods. The idea is that, within each food group, the most nutrient-dense food choices provide "power calories" and should be enjoyed frequently; foods with lower nutrient density should be enjoyed selectively; and the least nutrient-dense foods in a food group should be enjoyed only occasionally. Choosing foods according to these guidelines makes it easier to obtain recommended levels of nutrients while maintaining energy balance.

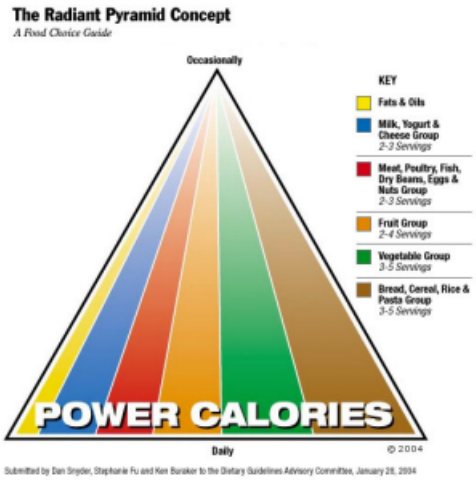
Implementation of the radiant pyramid concept

Categorizing foods into groups corresponding to the radiant pyramid is not straightforward. We explored the idea of using NR scores (described in Chapter 4) to sort foods into the three categories. However, we found this approach less than satisfactory for several reasons.

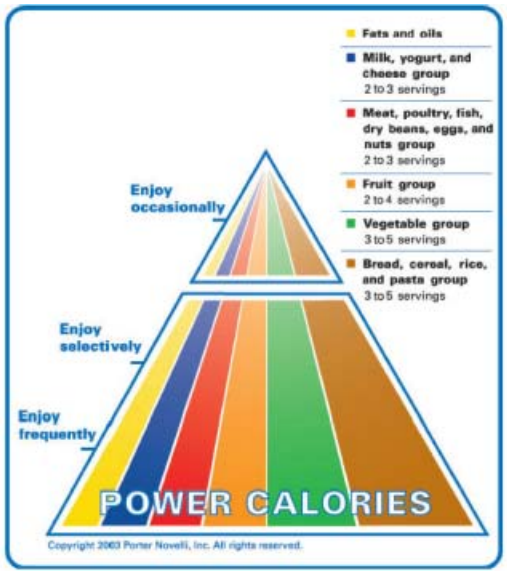
First, highly fortified foods have higher NR scores than their less-fortified counterparts, leading to some classifications that are not consistent with the basic nutrient density message. For example, highly fortified breakfast cereals, even those containing substantial amounts of sugar and/or fat, ranked much higher than whole wheat bread and unprocessed oatmeal, foods that should certainly be included in the "enjoy frequently" section of a radiant grain group.

Figure 5-15—Radiant Food Pyramid: Basic and Expanded Concepts

1) Radiant Pyramid Concept recommended to the DGA Committee.



2) MyPyramid adoption of the radiant pyramid concept.



3) Expanded radiant pyramid to emphasize food choices within food groups (Zelman and Kennedy, 2005)

Second, foods that provide relatively few nutrients but are very low in calories may be ranked higher than foods that provide substantially more nutrients but are also higher in calories. For example, in the vegetable group, raw iceberg lettuce has an NR score of 466.9, compared with 255.8 for cooked carrots (no fat added).

Finally, because the NR score does not include a 'penalty' for fat or sugar, foods that are concentrated sources of one or more nutrients may be ranked substantially higher than foods that are lower in calories and generally recommended as more optimal choices. For example, in the meat group, the items that received the highest NR scores (506.7 to 636.2) were livers, most of which were fried. Moreover, many beef items that included fat or were prepared with added fat scored higher than chicken items (NR of 130.4 for broiled steak, lean and fat eaten vs. NR of 91.1 for broiled, skinless chicken breast).

Because of the inherent limitations of NR scores for individual foods, we used an iterative process that used food descriptions and information about SoFAAS and total fat content to categorize foods into the three categories corresponding to the radiant pyramid concept of foods to consume frequently, selectively, and occasionally. We categorized foods within each of the 165 food subgroups listed in Table 5-1. Decision rules were informed by general dietary guidance provided in the *Dietary Guidelines for Americans* and *MyPyramid* which encourage consumption of nutrient-dense foods—foods in their their lowest-fat form with no added sugar. For example, whole grains, fruits and vegetables without added fat or sugar, fat-free and low-fat (1%) milk, and lean

Table 5-2—Categorization of Foods Suggested for Frequent, Selective, and Occasional Consumption

Food Group	Consume frequently	Consume selectively	Consume occasionally
Grains	All breads, rolls, bagels, etc. with 100% wheat, other "wheat," oatmeal, oat bran, or multi-grain description (USDA food code series 512, 513, 515, and 516); other 100% whole wheat/high-fiber breads; whole wheat, high-fiber pancakes and waffles; whole wheat pasta and noodles cooked without added fat; brown rice cooked without added fat; cold cereals with SoFAAS < 20; wheat bran, raw oats, wheat bran; oatmeal, whole wheat, and bran hot cereals cooked w/o added fat	Other breads, rolls, bagels, tortillas, crackers, etc. unless fat per 100 gm > 8.0; whole wheat pasta or noodles cooked with added fat; brown rice cooked with added fat; other pasta, noodles, and rice cooked without added fat; cold cereals with SoFAAS ≥ 20 but < 35; oatmeal, whole wheat, and bran hot cereals cooked with added fat; other hot cereals cooked w/o added fat	Stuffing, bread sticks, croutons, croissants, biscuits (unless low-fat); other breads, rolls, etc. with fat per 100 gm > 8.0; other pasta, noodles, and rice cooked with added fat; chow mein noodles; cold cereals with SoFAAS ≥ 35; other hot cereals cooked with added fat
Vegetables	All raw and cooked vegetables without added fat, except potatoes and other starchy vegs; spaghetti sauce w/o meat	Cooked vegetables with added fat, except fried; mashed potatoes; other cooked starchy vegs without added fat; spaghetti sauce w/ meat	All fried vegetables; cooked starchy vegs with added fat (other than mashed potatoes); veg salads with creamy dressing; vegs w/ cheese or cheese sauce; creamed vegs; glazed vegs
Fruit and 100% fruit juice	All fresh fruits w/o added sugar; other types of fruits and juice: fruits canned in water or juice w/ no added sugar; frozen fruits w/o added sugar; dried papaya; unsweetened citrus juices (incl. blends); other unsweetened juices with added vitamin C; fruits and juices with NS as to sweetener and SoFAAS = 0	Fresh fruits with added sugar; other types of fruits and juice: fruits canned in light or medium syrup; unsweetened dried fruit other than papaya; fruits with NS as to sweetener/syrup and SoFAAS > 0; unsweetened (SoFAAS = 0) non-citrus juices w/o added vitamin C	Fruits canned in heavy syrup; fruits with dressing, cream, marshmallows, chocolate, or caramel; guacamole; all pickled or fried fruits; maraschino cherries; pie filling; fruit soups; frozen juice bars; fruit smoothies; sweetened (SoFAAS > 0) juices; fruit nectars

Table 5-2—Categorization of Foods Suggested for Frequent, Selective, and Occasional Consumption —Continued

Food Group	Consume frequently	Consume selectively	Consume occasionally
Milk and milk products	Unflavored nonfat, skim, 1%, or lowfat fluid/dry milks; NFS unflavored fluid/dry milks with SoFAAS ≤ unflavored 1% milk (21.1) All plain yogurt, except from whole milk; fruited or flavored nonfat or lowfat yogurt with low-cal sweetener Non-fat and low-fat cheeses that meet gm fat criteria; cottage cheese except with added fruit/gelatin	Flavored/malted nonfat, skim, 1%, or lowfat fluid milks; unflavored 2% or reduced fat fluid milks; NFS fluid/dry milks and other milk-based beverages/mixtures with SoFAAS > unflavored 1% milk but ≤ unflavored 2% milk. Fruited or flavored nonfat and lowfat yogurts with added sugars, with SoFAAS ≤ 48.9. Low-fat cheeses that meet gm fat criteria; cottage cheese with added fruit/gelatin	Flavored/malted 2% or reduced fat fluid/dry milks; all types of whole fluid/dry milks; NFS fluid/dry milks and other milk-based beverages/mixtures with SoFASS > unflavored whole milk (33.3) All whole milk yogurts; other yogurt with SoFAAS > 48.9. All regular cheeses; cheese sauces, dips, fondues
Meat and meat alternates	Meat and poultry with fat per 100 gm ≤ 9.28 unless fried and (for chicken) skin eaten. Fish with fat per 100 gm > 9.28 and SoFAAS = 0 unless fried. Egg whites	Meat and poultry with fat per 100 gm > 9.28 but ≤ 18.56 unless fried and (for chicken) skin eaten; fish that meet gm fat criteria and SoFAAS > 0 unless fried. Cooked whole eggs or egg substitutes with no added fat, cheese, or bacon/sausage; other egg/egg substitute mixtures with total fat < 11.21 (max for whole egg cooked w/o fat)	All fried meat, fish, and poultry with skin; meat and poultry with fat per 100 gm > 18.56; fish that meet gm fat criteria and SoFAAS > 0. Cooked whole eggs with added fat, cheese, or bacon/sausage; egg yolks only; other egg/egg substitute mixtures with total fat ≥ 11.21 (max. for whole egg cooked w/o fat)
	Legumes cooked without added fat[a]	Legumes cooked with added fat; peanut butter; nuts and seeds; soy-based meat subs[a]	Soy-based meal replacements, supplements; legumes with cheese or meat; peanut butter with jelly; nuts with dried fruits; soy-based desserts[a]
Mixed dishes	Mixed dishes with gm fat/100 gm ≤ 4.64 or gm fat ≤ 9.28 and SoFAAS = 0	Unless SoFAAS = 0, mixed dishes with fat per 100 gm > 4.64 but ≤ 9.28	All mixed dishes with fat per 100 gm > 9.28
Beverages, excl. milk and 100% fruit juice	Sugar free and low-calorie beverages		Sweetened beverages, alcoholic beverages
Sweets and desserts		Pudding, frozen yogurt, light/non-fat ice cream (excl. novelties), sugar-free candy, sugar-free gelatin	All else
Salty snacks		Lowfat/nonfat/baked chips, unflavored pretzels, air-popped popcorn w/o butter	All else
Added fats, oils, and condiments	Fat-free. Sugar-free versions, with SoFAAS < 20 and fat per 100 gm < 10	Low-fat, low-sugar versions, SoFAAS > 20 but < 90 and fat per 100 gm > 10	Regular versions, SoFAAS > 90

[a]Legumes are counted as meat until a person's meat intake reaches 2.5 ounce equivalents per 1000 kcal, then legumes count as vegetables (HEI-2005).

meat, fish, and poultry were all classified as foods to consume frequently. For other foods, data on calories from SoFAAS and/or total fat were used to divide foods within a food subgroup so that foods with the lowest proportion of calories from SoFAAS/total fat content were included in the "consume frequently" category and foods with the highest proportion of calories from SoFAAS/total fat content were included in the "consume occasionally" category.

The rules used in assigning foods to the three consumption categories are summarized in Table 5-2. Table A-4 shows the number and percent of foods in the NHANES individual food files that were assigned to each category, by major food group and subgroups.

Quality of food selections at lunch and throughout the day

Among all school children, 73 percent of food choices at lunch were from the group of foods suggested for occasional consumption (Table C-17). Only 13 percent of food choices at lunch were from foods suggested for frequent consumption.

Among both low-income and higher-income groups, NSLP participants were less likely to consume foods from the "consume frequently" category and more likely to consume foods from the "consume selectively" category (Figure 5-16 and Table C-17). These differences were significant overall and for 9-13 year-olds. There were no significant differences between NSLP participants and nonparticipants in percents of foods selected from the occasional category.

Food selections of NSLP participants and nonparticipants over 24 hours were more comparable than lunch selections (Figure 5-16 and Table C-18). Low-income NSLP participants and nonparticipants were equally likely to consume foods suggested for frequent consumption (12 percent of food selections). Comparing the 24 hour results with the lunch results suggests that NSLP participants are more likely than nonparticipants to consume foods from the "consume frequently" category outside of lunch time.

Among higher-income children, NSLP participants were 3 percentage points less likely to consume from the "consume frequently" category at lunch, and this difference persisted over the day. Over 24 hours, there were no significant differences between higher-income participants and nonparticipants in the percentages of food choices from the "consume selectively" or "consume occasionally " categories.

Summary

In this chapter, we used two different approaches to compare the food choices of NSLP participants and nonparticipants:

- Supermarket aisle approach—"What percentage of NSLP participants and nonparticipants consumed at least one food item from each food group on the intake day, and what choices were made within food groups?"
- Nutritional quality approach—"What percentage of foods consumed by NSLP participants and nonparticipants were foods suggested for frequent, selective, or occasional consumption?"

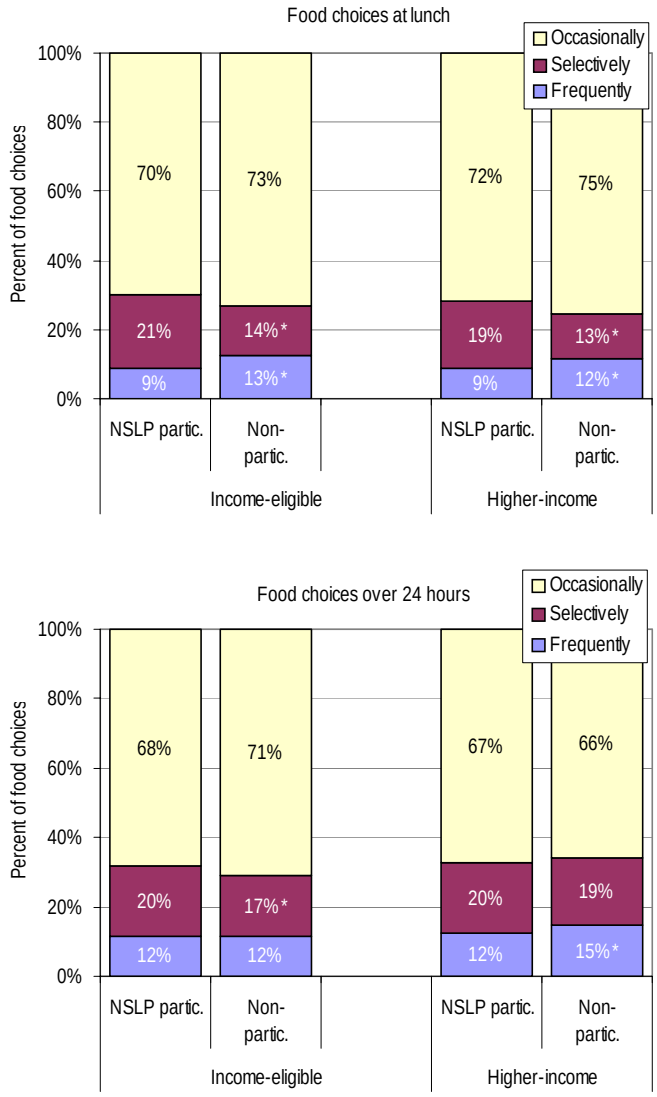
These analyses focused on food choice without regard to quantities of food consumed, which are examined in the next chapter. Both approaches examined foods consumed at lunch, and foods consumed over a 24-hour period, based on a single 24-hour recall.

Supermarket aisle approach

We examined the proportions of NSLP participants and nonparticipants consuming foods from each of 10 major food groups. The main findings were:

- NSLP participants and nonparticipants, in both income groups, were about equally likely to consume foods from 3 of the 10 food groups: grains, meat and meat alternates, and sweets and desserts. This was true of food choices at lunch and over 24 hours.
- At lunch, NSLP participants in both income groups were more likely than nonparticipants to consume foods from 4 of the 10 foo groups:

Figure 5-16—Percent of Food Choices From Foods Suggested for Frequent, Selective, and Occasional Consumption



* Denotes statistically significant differences between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted.

vegetables, fruit and fruit juice, milk and milk products, and mixed dishes. These differences persisted over 24 hours with the exception of the difference in fruit and fruit juice among higher-income children.

- At lunch, NSLP participants in both income groups were less likely than higher-income nonparticipants to consume foods from 2 of the 10 food groups: salty snacks and beverages, other than milk and 100% fruit juice. These differences persisted over 24 hours with the exception of the difference in beverage consumption among higher-income children.

Nutritional quality of food choices

Nearly 70 percent of the foods consumed by school children over a 24-hour period were foods suggested for occasional consumption (top of the radiant pyramid), and only 13 percent were foods to consume frequently. Compared with nonparticipants, NSLP participants were:

- about equally likely to consume foods from the "consume occasionally" category at lunch and over 24 hours
- somewhat less likely to consume foods from the "consume frequently" category at lunch (9% vs. 12% and 9% vs. 13% for low-income and higher-income groups, respectively)
- somewhat more likely to consume foods from the "consume selectively" category at lunch (21% vs. 14% and 19% vs. 13% for low-income and higher-income groups, respectively)

Differences between NSLP participants and nonparticipants in the distribution of food choices at lunch were more pronounced than when measured over 24 hours.

Chapter 6
The Healthy Eating Index–2005 and Sources of *MyPyramid* Intakes

In this chapter, we examine the overall quality of the diets consumed by NSLP participants and nonparticipants using the Healthy Eating Index (HEI)–2005. The HEI–2005 was developed by USDA's Center for Nutrition Policy and Promotion (CNPP) to measure compliance with diet-related recommendations of the 2005 *Dietary Guidelines for Americans* (DGA) and the *MyPyramid* food guidance system (Guenther et al., in press).

The *MyPyramid* food guidance system translates the DGA into simple messages about the types and amounts of food to consume in five major food groups (grains, vegetables, fruits, milk, meat and beans), based on energy needs. Recommendations are provided for 12 food intake patterns—specific to gender, age, and activity level—based on calorie needs, nutrient goals, nutrient content of foods in each group, and food consumption patterns. *MyPyramid* also provides guidance about intakes of oils and discretionary calories (see box).

The DGA encourages consumption of oils, within recommended calorie allowances, because they provide essential polyunsaturated fatty acids and other nutrients, such as vitamin E. Moderation of saturated fat and sodium intakes is recommended because excess consumption may contribute to cardiovascular disease and high blood pressure. Consumption of solid fats, alcoholic beverages, and added sugars (SoFAAS) should be within discretionary calorie allowances, which reflect the balance of calories remaining in a person's energy allowance after accounting for the calories in the most nutrient-dense (fat-free or lowest fat form, with no added sugars) form of the various foods needed to meet recommended nutrient intakes (Basiotis et al., 2006).

Analyses in this chapter are limited to data from NHANES 1999–2002 because *MyPyramid* data for 2003–2004 were not available at the time the analyses were completed.

MyPyramid Intakes and the Healthy Eating Index (HEI-2005)

Data

- NHANES 1999-2002: Single 24-hour recall per person
- MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, version 1.0

Measures

- Average HEI-2005 component scores
- Average number of MyPyramid Equivalents per child
- Food sources of MyPyramid intakes

The Healthy Eating Index–2005

The HEI–2005 is comprised of 12 component scores that measure consumption of food and nutrients relative to *MyPyramid* recommendations and the DGA (Table 6-1). Eight components are food-based and assess intakes of *MyPyramid* food groups and subgroups. The four remaining components assess intakes of oils, saturated fat, sodium, and calories from SoFAAS. The HEI–2005 scoring gives higher scores for greater consumption of food-based components and oils; but high scores

MyPyramid Food Groups

Consume oils for essential fatty acids.
Use discretionary calorie allowance to:

- Eat more foods from any food group,
- Eat foods in non-lean forms,
- Add fat or sweeteners to foods, or
- Consume foods that are mostly fats, caloric sweeteners, or alcohol (such as candy, soda, or alcoholic beverages).

Source: MyPyramid.gov

Table 6-1—Healthy Eating Index-2005 (HEI-2005) Scoring System

Component	Max Score	Criteria for:	
		Zero Score	Maximum Score
1. Total Fruit	5	No intake	≥ 0.8 cup equiv. per 1,000 kcal
2. Whole Fruit	5		≥ 0.4 cup equiv. per 1,000 kcal
3. Total Vegetables	5		≥ 1.1 cup equiv. per 1,000 kcal
4. Dark Green & Orange Vegetables and Legumes	5		≥ 0.4 cup equiv. per 1,000 kcal
5. Total Grains	5		≥ 3.0 oz equiv. per 1,000 kcal
6. Whole Grains	5		≥ 1.5 oz equiv. per 1,000 kcal
7. Milk	10		≥ 1.3 cup equiv. per 1,000 kcal
8. Meat and Beans	10		≥ 2.5 oz equiv. per 1,000 kcal
9. Oils	10		≥ 12 grams per 1,000 kcal
10. Saturated fat[a]	10	≥ 15%	≤ 7% of energy
11. Sodium[a]	10	≥ 2.0 gms	≤ 0.7 grams per 1,000 kcal
12. Calories from SoFAAS	20	≥ 50%	≤ 20% of energy

[a] Saturated Fat and Sodium get a score of 8 for the intake levels that reflect the 2005 Dietary Guidelines, <10% of calories from saturated fat and 1.1 grams of sodium/1,000 kcal, respectively.

Source: Guenther, et al., in press.

for sodium, saturated fats, and calories from SoFAAS are obtained with low consumption.

HEI–2005 component scores are assigned based on a density approach that compares intakes per 1,000 calories to a reference standard. This approach reflects the overarching recommendation of the DGA and *MyPyramid* that individuals should strive to meet food group and nutrient needs while maintaining energy balance. The per-1,000 calorie reference standards used in the HEI–2005 are based on the assumptions that underlie the recommended *MyPyramid* eating patterns, properly reflecting goals for intakes over time and the recommended mix of food groups.

Table 6-1 shows the intake criteria corresponding to minimum and maximum scores for each HEI–2005 component. The scoring is linear for all components except saturated fat and sodium. For example, an intake that is halfway between the criteria for the maximum and minimum scores yields a score that is half the maximum score. Saturated fat and sodium are scored on a nonlinear scale, with criteria specified for scores of 0, 8, and 10. A total HEI–2005 score, with a range from 0 to 100, is obtained by summing the component scores.

The source data for calculation of HEI–2005 scores is NHANES 1999–2002 Individual Food Files (IFF) and the *MyPyramid Equivalents Database for USDA Survey Food Codes* (MPED), developed by USDA's Agricultural Research Service (ARS) (see Appendix A). (The analysis is limited to NHANES 1999–2002 because MPED data for NHANES 2003–2004 were not available at the time the analysis was completed.) Both the IFF and MPED files contain one record for each food item reported by respondents. The IFF files contain measures of energy, saturated fat, sodium, and alcoholic beverages. The MPED contains, for every food reported in the IFF, measures of *MyPyramid* food group intakes in cups/cup equivalents (vegetables, fruits, and milk/milk products) or ounce (oz.)/oz. equivalents (grains and meat/beans). Data are also provided for intakes of oils (in grams (gm.), solid fats (gm.), and added sugars (in teaspoons (tsp.)).

We followed CNPP guidance in the *HEI–2005 Technical Report* (Guenther, et. al, 2007) and the CNPP SAS program for HEI–2005 population scores, to apply the HEI–2005 scoring system to population groups.[1] As noted by CNPP, it is

[1] HEI2005_NHANES0102_PopulationScore.sas. Available at http://www.cnpp.usda.gov/HealthyEatingIndexSupportFiles.htm.

preferable to calculate HEI–2005 scores based on *usual* intakes of a population group. When this is not possible because, for example, intake data are available for only one day, usual intake scores can be approximated by applying the HEI–2005 scoring system to the ratio of a group's mean food (or nutrient) intake to the group's mean energy intake. Additional information about methods used in computing HEI–2005 scores is provided in Appendix A.

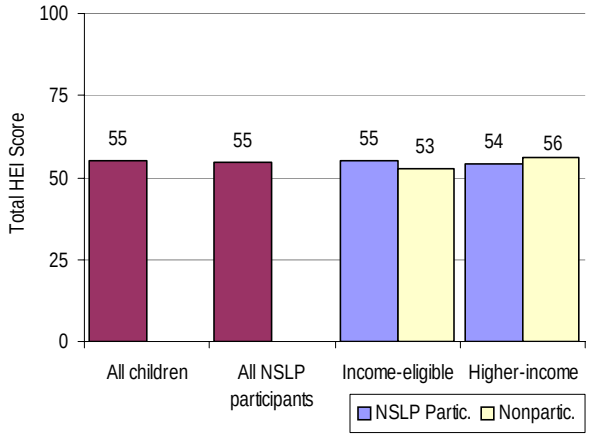
HEI–2005 Scores for NSLP Participants and Nonparticipants

On average, school-age children scored a total of 55 out of a possible 100 points on the HEI–2005 (Figure 6-1 and Table C-19). There were no significant differences between NSLP participants and nonparticipants on total scores for the HEI–2005 (overall and for each age group). Total scores across groups ranged from a low of 53 to a high of 56. This indicates that the usual diets of school-age children, regardless of income and NSLP participation, fell considerably short of the diet recommended in the DGA and *MyPyramid*.

HEI–2005 Components and Underlying Food and Nutrient Intakes

In this section we discuss each HEI–2005 component score separately. Estimates of components scores are shown in Figures 6-2 and 6-3 (by income group). The estimates of food group intakes underlying HEI–2005 scores are based at the component or ingredient level rather than at the whole food level used in the Chapter 5 analyses.[2] Thus, a single food in the Chapter 5 analysis may contribute to several of the *MyPyramid* food groups considered in the HEI–2005. For example, pizza contributes to intakes in the grain (crust), vegetable (tomato sauce and any vegetable toppings), milk (cheese), and, if applicable, meat and bean (meat toppings) groups. Similarly, fruits canned in heavy syrup are broken down into fruit and added sugars; and cookies, cakes, and pies are broken down into grains, oils and/or solid fats, added sugars, and, where appropriate, fruit.

Figure 6-1—Healthy Eating Index-2005 Total Scores



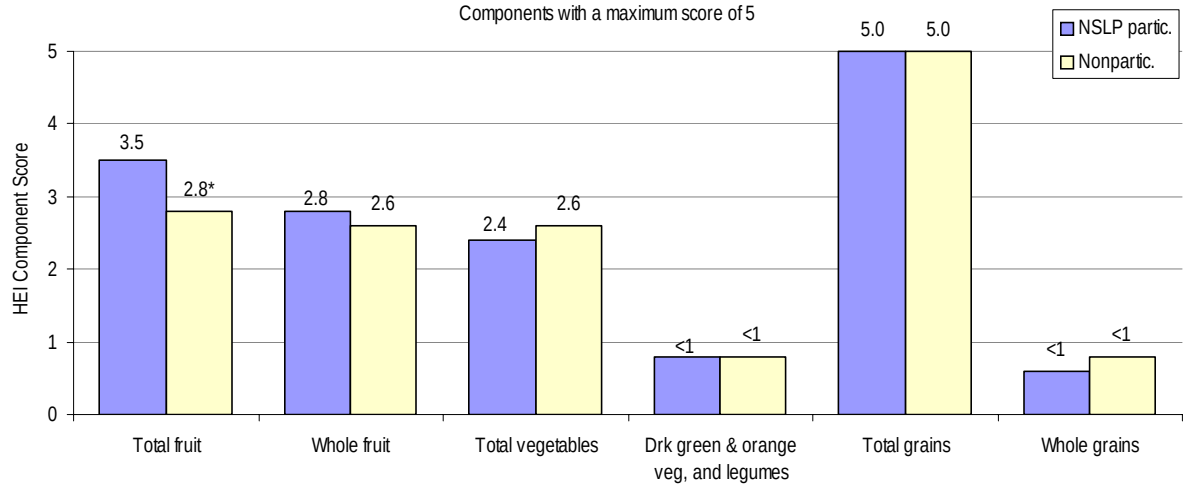
Differences between NSLP participants and nonparticipants within income groups are not statistically significant. Estimates are age adjusted.

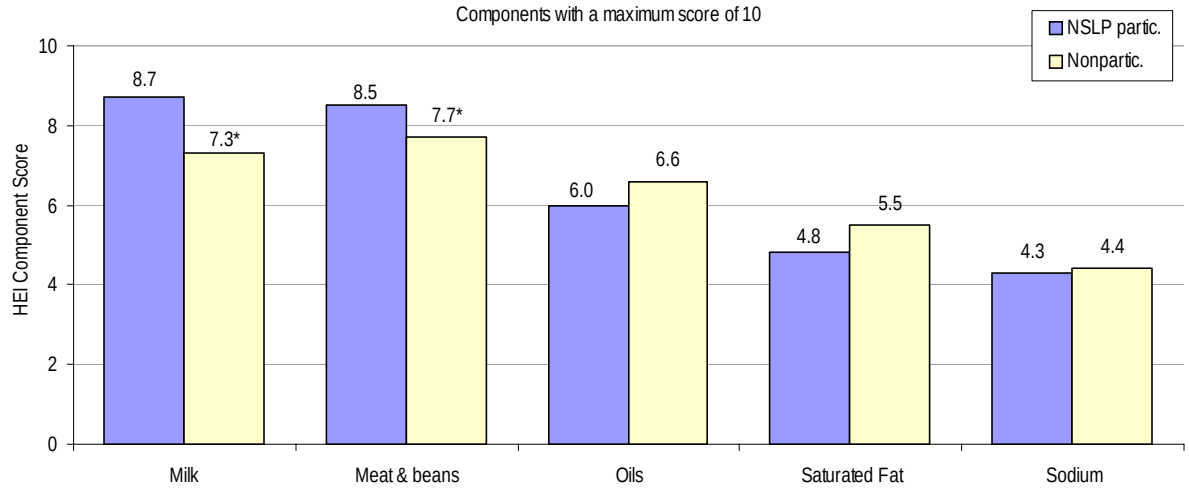
To gain insight into the specific food choices that contribute to HEI–2005 scores, we also present data on the relative contribution of specific foods to total intakes in each population subgroup (Tables 6-2 to 6-11). For each group of children, we ask the question: "Which specific foods contributed most to consumption in this food group?" For these analyses, we revert back to the food grouping scheme used in Chapter 5 so that the focus is on foods as they were eaten. For example, hamburgers or cheeseburgers that included lettuce and tomatoes may show up as contributors to vegetable intakes; and pizza, cheeseburgers, and other mixed dishes that contain cheese may show up as contributors to intakes of milk and milk products.

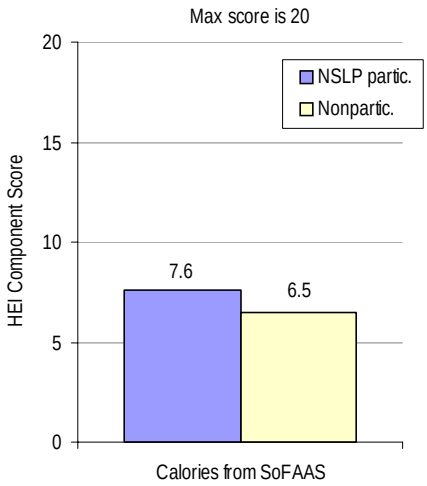
Results of these "food sources" analyses are presented in tables that list all foods that provided

[2] Data on total intakes within each *MyPyramid* food group are presented in Table C-19. Significant differences between NSLP participants and nonparticipants for HEI-2005 component scores are not always be consistent with differences observed in average intakes of the respective *MyPyramid* food groups. This can occur because the HEI-2005 component scores measure food group intake per-1,000 calories, while average *MyPyramid* intakes are not standardized per 1,000 calories. Where findings for a particular *MyPyramid* group are inconsistent, the HEI-2005 findings should be given more weight. Comparison of HEI-2005 scores answer the question that is most important in judging overall diet quality of NSLP participants and nonparticipants—that is: Are there differences between NSLP participants and nonparticipants in the extent to which the mix of foods/nutrients in their diets conform to DGA/*MyPyramid* guidelines?

Figure 6-2—Healthy Eating Index-2005 Component Scores: Low-income NSLP Participants and Nonparticipants

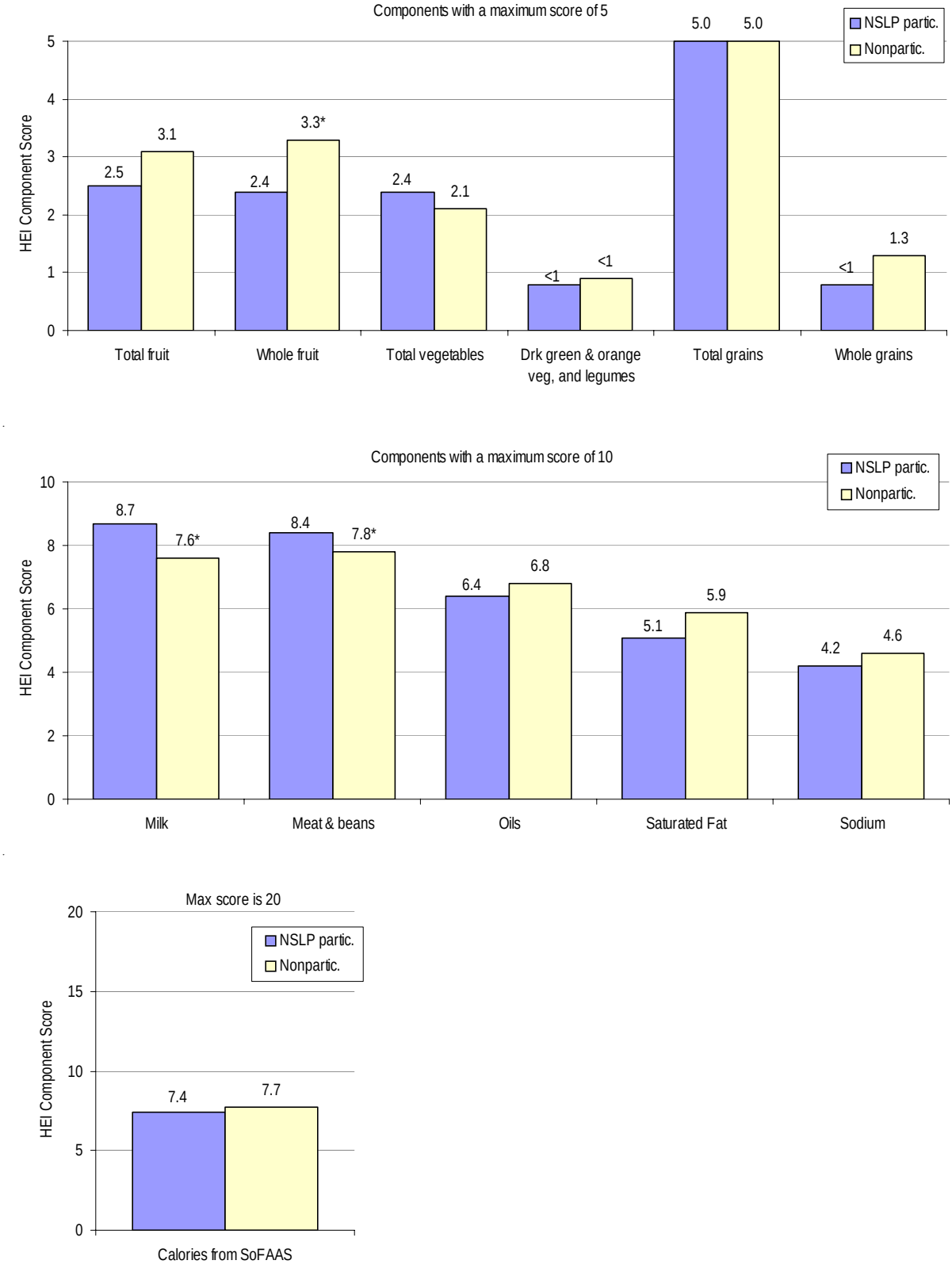






* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted. Estimates of HEI component scores less than one are not statistically reliable and point estimates are not shown.

Figure 6-3—Healthy Eating Index-2005 Component Scores: Higher-income NSLP Participants and Nonparticipants



* Denotes statistically significant difference between NSLP participants and nonparticipants at the .05 level or better. Estimates are age adjusted. Estimates of HEI component scores less than one are not statistically reliable and point estimates are not shown.

five percent or more of total intake for any group (all children, all NSLP participants, low-income NSLP participants and nonparticipants, higher-income NSLP participants and nonparticipants). Foods are listed in rank order, from largest contributor to smallest contributor, based on results for all children. In discussing significant differences between NSLP participants and nonparticipants in the "food sources" analyses, we focus primarily on differences that involved foods that were among the top five contributors to intakes for all children combined and differences that were observed for more than one income or age group.

Total Fruit and Whole Fruit

School-age children overall scored an average of 3.1 on the Total Fruit component of the HEI–2005 (which includes 100% fruit juices) and 2.8 on the Whole Fruit component. The maximum score for each component was 5.

Differences between NSLP participants and nonparticipants varied for low-income and higher-income children. Among low-income children, NSLP participants had a significantly higher mean score than nonparticipants for Total Fruit (3.5 vs. 2.8). Among higher-income children, NSLP participants had significantly lower mean scores than nonparticipants for whole fruit (2.4 vs. 3.3).

Findings also varied by age group (Table C-19). The difference between low-income NSLP participants and nonparticipants for the Total Fruit component was significant for the two younger age groups, but not for 14–18-year-olds. Low-income NSLP participants in the 5–8 year-old group also had significantly higher mean score than nonparticipants for the Whole Fruit component. Among higher-income children, there were no significant differences between NSLP participants and nonparticipants in the fruit components.

Food sources of fruit

Citrus juice was the leading contributor to fruit intakes for all school-age children, accounting for slightly more than one-quarter of total fruit intake overall (Table C-21). Non-citrus juice was the second leading source of fruit intakes. Overall, 46 percent of children's fruit intake came from juice rather than whole fruit. Other leading sources of fruit included fresh apples, noncarbonated sweetened drinks, and fresh bananas. Together with citrus and non-citrus juices, these sources accounted for 72 percent of total fruit intake, overall.

Among low-income children, NSLP participants obtained significantly more of their total fruit intake from non-citrus juices, relative to nonparticipants (28 vs. 16 percent), and significantly less from noncarbonated sweetened beverages (5 vs. 9 percent). These general patterns were noted for all three age groups, but the differences were not always statistically significant.

Among higher-income children, there were no significant differences between NSLP participants and nonparticipants, overall, in the sources of fruit intakes. Among 9–13-year-olds, however, NSLP participants obtained significantly larger shares of their total fruit intake from citrus juice, compared to nonparticipants, and significantly smaller shares from fresh apples, fresh bananas, and fresh oranges.

Total Vegetables, Dark Green and Orange Vegetables and Legumes

The population score for all school-age children was 2.4 on the Total Vegetables component and about 1 on the Dark Green and Orange Vegetables and Legumes component, out of possible scores of 5.[3]

There were no significant differences between NSLP participants and nonparticipants on the two component scores for vegetables (Figures 6-2 and 6-3). This was true for all income and age groups (Table C-19). Scores for the Total Vegetables component ranged from 2.0 to 3.1, while scores for the Dark Green and Orange Vegetables and Legumes component were just about 1.0 for all groups. These scores indicate that, on average, vegetable intakes of all groups of school-age children were low.

Food sources of vegetables

Fried potatoes were the leading contributor to vegetable intakes, for school-age children overall, as well as for each age group (Table C-22). Other

[3] Most HEI component scores at or below 1.0 were not statistically reliable due to large coefficients of variation.

leading contributors included salads/salad greens, potato chips, cooked potatoes that were not fried, and pizza with meat. Together, these top five sources accounted for close to half of total vegetable intake, overall.

Among low-income children, there were few significant differences between NSLP participants and nonparticipants in relative contributions of different types of vegetables to total vegetable intakes, and none was observed in more than one age group. Among higher-income children, NSLP participants, obtained significantly more of their total vegetable intake from Italian-style pasta relative to nonparticipants (8 vs. 2 percent), and significantly less from potato chips (5 vs. 8 percent) and sandwiches other than hamburgers and cheeseburgers (2 vs. 5 percent). The significant difference in the relative importance of sandwiches to vegetable intakes was noted for older children (9–13 years) and teenagers (14–18 years).

Total Grains and Whole Grains

School-age children had a "perfect" score for the Total Grains component of the HEI–2005 (5 of a possible 5 points). This indicates that, on average, children's intakes of grains met or exceeded the MyPyramid standards on which the HEI–2005 scoring algorithm is based. The mean score for the Whole Grains component was substantially lower, at 0.9 (out of 5), clearly indicating that intake of whole grains among school-age children is low.

There were no significant differences between NSLP participants and nonparticipants on the two HEI–2005 component scores that measure grain intake (Figures 6-2 and 6-3). This was true for all income and age group combinations.

Food sources of grains

The top contributors to grain intakes of school-age children were sandwiches other than hamburgers and cheeseburgers; pizza with meat; ready-to-eat breakfast cereals; bread (not part of a sandwich); and corn-based salty snacks.

There were few significant differences between NSLP participants and nonparticipants in the relative contributions of different foods to total grain intakes (Table C-23). The following were the only differences that involved a food that was among the top five contributors for all children:

- Among low-income children 5–8 years, pizza with meat made a significantly greater contribution to the grain intakes of NSLP participants than nonparticipants.
- Among low-income teenagers, ready-to-eat breakfast cereals made a significantly greater contribution to the grain intakes of NSLP participants than nonparticipants.
- Among higher-income teenagers, corn-based salty snacks made a significantly smaller contribution to the grain intakes of NSLP participants than nonparticipants.

Milk and milk products

Overall, school-age children scored 8.1 out of a possible 10 on the Milk component of the HEI–2005. HEI scores for the Milk and Meat and Beans components were the second and third highest scores (80 percent of the maximum score), following the score for Total Grains (100 percent of the maximum score).

NSLP participants had higher mean scores than nonparticipants on the Milk component. This was true for both low-income (8.8 vs. 7.3) and higher-income (8.7 vs. 7.6) children (Figures 6-2 and 6-3). Results were not consistent across age groups, however. Among the youngest children (5–8 years), there were no significant differences in HEI scores for the Milk component. Among older children (9–13 years), the difference in scores for NSLP participants and nonparticipants was significant for the higher-income group but not the lower-income group. Among teenagers (14–18 years), NSLP participants in both income groups had higher scores than their nonparticipant counterparts (7.8 vs. 5.5 (low-income) and 7.9 vs. 6.6 (higher-income)).

Food sources of milk and milk products

Unflavored 2% milk and unflavored whole milk were the leading contributors to milk intakes of school age children, with each contributing 16-17 percent of total milk intakes (Table C-24). Other foods in the top five contributors overall were: flavored milk (unspecified fat content), sandwiches

other than hamburgers and cheeseburgers (mainly cheese), and unflavored 1% milk.

Overall, low-income NSLP participants obtained a significantly smaller share of their total milk intake from whole milk than low-income nonparticipants (18 vs. 31 percent) and a significantly larger share from flavored milk (15 vs. 3 percent). Among higher-income children, the finding for whole milk was reversed, with NSLP participants obtaining a significantly larger share of total milk intakes from whole milk than nonparticipants (13 vs. 8 percent). In addition, in this income group, NSLP participants obtained a significantly larger share of their milk intakes from flavored milk than nonparticipants (13 vs. 3 percent) (this is consistent with the finding for low-income children), and a smaller share of their milk group intakes from sandwiches (4 vs. 9 percent).

The difference between NSLP participants and nonparticipants in the relative importance of flavored milk as a source of milk intakes (greater contribution among NLSP participants) was noted for all income and age groups (Table C-24). The difference in the relative importance of whole milk in the milk intakes of low-income children (smaller contribution among NSLP participants) was noted for both the youngest and oldest children but not for teenagers. Among low-income children 5–8 years, unflavored 2% milk made a substantially greater contribution to total milk intakes of NSLP participants than nonparticipants. And, finally, among teenagers, sandwiches made a smaller contribution to total milk group intakes of NSLP participants than nonparticipants. This was true for both the low-income and higher-income groups.

Meat and Beans

As noted above, the HEI–2005 score for Meat and Beans was one of the highest component scores for school-age children (8.1 out of a possible 10). NSLP participants had higher mean scores on the Meat and Beans component of the HEI–2005 than nonparticipants. This was true for both low-income (8.4 vs. 7.7) and higher-income (8.4 vs. 7.8) children (Figures 6-2 and 6-3). Results were not consistent across age groups, however. The difference between scores for NSLP participants and nonparticipants were significant only among older children (9–13 years) (for both the low-income and higher-income groups) (Table C-19).

Food sources of meat and beans

The top five contributors to meat and bean intakes of school-age children were sandwiches other than hamburgers and cheeseburgers, chicken, burgers, and beef and pork consumed as discrete items (Table C-25). There were relatively few significant differences between NSLP participants and nonparticipants in foods that were leading contributors to intakes of meat and beans. Among low-income children, only one isolated difference was observed, and that was for children 9–13 years. Among higher-income children overall, NSLP participants obtained a significantly smaller share of their total meat and bean intakes from sandwiches other than burgers (21 vs. 30 percent) and a significantly larger share from Italian-style pasta dishes.

Oils

MyPyramid encourages use of oils high in polyunsaturated fat and monounsaturated fat as the main sources of fat in the diet. These oils provide essential fatty acids, do not raise levels of LDL ("bad") cholesterol in the blood, and are the major source of vitamin E in the typical American diet (USDA, CNPP, 2008). In the *MyPyramid Equivalents Database*, fat in cooking oils, some salad dressings, and soft tub or squeeze margarines were counted as oils (rather than discretionary solid fats). In addition, fats from fish, nuts, and seeds were classified as oils.

School-age children scored 6.4 (out of a possible 10) on the Oils component of the HEI–2005. There were no significant differences between NSLP participants and nonparticipants (Figures 6-2 and 6-3).

Food sources of oils

Leading sources of oil in the diets of school-age children were sandwiches other than burgers (oil likely contributed by condiments), corn-based salty snacks, chicken, potato chips, and salads/salad greens (oil likely contributed by salad dressings) (Table C-26).

There were no significant differences in the leading contributors of oil in the diets of low-income NSLP

participants and nonparticipants. Among higher-income children, NSLP participants, overall and among children 5–8 years and 9–13 years, obtained a significantly smaller share of their total oil intake from sandwiches. Among higher-income children 9–13 years, chicken was a more important contributor to the oil intakes than NSLP participants than nonparticipants. Among teenagers, corn-based salty snacks made a smaller contribution to the oil intakes of NSLP participants than nonparticipants.

Saturated Fat

Overall, school-age children scored 5.4, out of a possible 10 on the Saturated Fat component. There were no significant differences in scores of NSLP participants and nonparticipants in any of the income-and-age subgroups (Figures 6-2 and 6-3).

Food sources of saturated fat

Sandwiches other than hamburgers and cheeseburgers were the leading contributor to saturated fat intakes of school-age children (sandwiches may have included cheese and/or mayonnaise) (Table C-27). Other "top five" contributors to saturated fat intakes were unflavored whole milk, hamburgers and cheeseburgers, ice cream, and pizza with meat.

Flavored milks made a significantly larger contribution to the saturated fat intakes of NSLP participants than nonparticipants. This was true overall and for every income-and-age subgroup. In addition:

- Among low-income children, NSLP participants obtained a significantly smaller contribution of saturated fat intakes from unflavored whole milk, relative to nonparticipants (overall and for children 5–8 years).

- Among higher-income teenagers, NSLP participants obtained a significantly larger share of saturated fat intakes from unflavored whole milk, relative to nonparticipants.

- Among low-income children 5–8 years, pizza with meat made a significantly larger contribution to saturated fat intakes of NSLP participants than nonparticipants.

- Among low-income children 9–13 years, hamburgers and cheeseburgers made a significantly larger contribution to the saturated fat intakes of NSLP participants, and ice cream made a significantly smaller contribution, relative to nonparticipants.

Sodium

School age children had an HEI component score for Sodium that was less than half the maximum score (4.4 out of a possible 10). There were no statistically significant differences between NSLP participants and nonparticipants in mean Sodium scores (Figures 6-2 and 6-3).

Food sources of sodium

Sandwiches other than hamburgers and cheeseburgers were the leading contributor to sodium intakes of school-age children (Table C-28). Rounding out the top contributors to sodium intakes were pizza, hamburgers and cheeseburgers, and Italian-style pasta dishes. Differences between NSLP participants and nonparticipants in the relative contributions of different foods varied by income and age and included the following:

- Among higher-income children overall, sandwiches other than hamburgers and cheeseburgers accounted for a significantly smaller share of the NSLP participants' sodium intakes, relative to nonparticipants.

- Among higher-income children overall and those 9–13 years old, Italian-style pasta dishes made a significantly larger contribution to the sodium intakes of NSLP participants than nonparticipants.

- Among low-income children 5–8 years, pizza with meat made a significantly larger contribution to sodium intakes of NSLP participants than nonparticipants. The same was true for hamburgers and cheeseburgers among low-income children 9–13 years.

Calories from Solid Fats, Alcoholic Beverages, and Added Sugars

Overall, school-age children had a low score on the Calories from SoFAAS component of the HEI–2005 (which assesses the percentage of total calorie intake contributed by solid fats, alcoholic

beverages, and sugars) (Figures 6-2 and 6-3). The average score was 7.4 out of a possible 20. This indicates that, on average, school-age children obtained considerably more of their total energy intakes from solid fats and added sugars (alcoholic beverages were not reported by this age group) than the 20 percent used as the reference for the maximum HEI–2005 score (Table 6-1).

All groups of NSLP participants and nonparticipants had low scores on the Calories from SoFAAS component. However, two significant differences were noted. Among higher-income children 5–8 years, NSLP participants had a significantly lower score on the SoFAAS component than nonparticipants. Among lower-income children 9–13 years, the finding went in the opposite direction, with NSLP participants having a higher score on the SoFAAS component than nonparticipants (8.1 vs. 6.3) (Figures 6-2 and 6-3).

Food sources of discretionary solid fat

Sandwiches other than hamburgers and cheeseburgers were the leading contributor to discretionary solid fat intakes of school-age children (sandwiches may have included cheese and/or mayonnaise) (Table C-29). Other foods in the "top five" were fried potatoes, pizza with meat, unflavored whole milk, and hamburgers and cheeseburgers.

Overall, as well as in all income-and-age subgroups, NSLP participants obtained more of their discretionary solid fat from flavored milks than nonparticipants did. Among low-income children, unflavored whole milk made a significantly smaller contribution to discretionary solid fat intakes of NSLP participants than nonparticipants (7 vs. 10 percent). Among higher-income teenagers, the opposite trend was observed: unflavored whole milk made a significantly larger contribution to discretionary solid fat intakes of NSLP participants than nonparticipants.

Food sources of added sugars

Regular (not sugar-free) soda was the leading source of added sugars in the diets of school-age children, accounting for 31 percent of all added sugars (Table C-30). Other "top five" contributors were noncarbonated sweetened drinks, candy, ready-to-eat breakfast cereals, and ice cream.

Among low-income children overall, NSLP participants obtained significantly less of their added sugar intakes from regular soda (32 vs. 39 percent) and from noncarbonated sweetened drinks (13 vs. 16 percent). Part of the reason for this may be that low-income NSLP participants obtain added sugars from more sources than nonparticipants. Overall, low-income NSLP participants obtained 31 percent of their added sugar from sources other than those listed in Table 6-11 (sources that contributed less than 5 percent of added sugars for any subgroup are not shown separately). Nonparticipants, on the other hand, obtained only 21 percent of their added sugar from "other" sources.

Summary

The HEI–2005 consists of 12 component scores designed to measure compliance with the DGAs and the *MyPyramid Food Guidance System*. The total HEI–2005 score for school-age children was 55 out of a possible 100 points, with no significant differences between NSLP participants and nonparticipants. These results indicate that the usual diets of school-age children, regardless of income and NSLP participation, fell considerably short of the diet recommended in the DGA and *MyPyramid*.

Estimates of the HEI–2005 component scores point to the following key concerns in the diets of *all* school-age children:

- Low intakes of vegetables and fruit, particularly whole fruits.
- Very low intakes of dark green and orange vegetables and legumes.
- Very low intakes of whole grains.
- High intakes of discretionary calories from SoFAAS. Excessive calories from SoFAAS may contribute to calorie intakes that exceed requirements (and, thereby, contribute to overweight and obesity).
- High intakes of sodium and saturated fat.

There were relatively few significant differences in HEI–2005 component scores for NSLP participants and nonparticipants. Differences observed for school-age children overall were:

- Total Fruit—Among low-income children, NSLP participants had a significantly higher mean score than nonparticipants for the total fruit component (3.5 vs. 2.8). (The total fruit component includes 100% fruit juices).

- Whole Fruit—Among higher-income children, NSLP participants had a significantly lower mean score on the HEI–2005 component for whole fruit than nonparticipants (2.4 vs. 3.3)

- Milk—NSLP participants had a significantly higher mean score than nonparticipants on the HEI–2005 component for milk. This was true for both low-income (8.8 vs. 7.3) and higher-income (8.7 vs. 7.6) children.

- Meat and Beans—NSLP participants in both income groups had a significantly higher mean score than nonparticipants on the HEI–2005 component for meat and beans. Mean scores were 8.4 vs. 7.7 for low-income children and 8.4 vs. 7.8 for higher-income children.

There were some differences between NSLP participants and nonparticipants in the food choices that contributed to the patterns noted above, particularly among low-income children. Key findings for NSLP participants and nonparticipants overall (all age groups combined) include:

- Fried potatoes were the largest contributor to vegetable intakes for both NSLP participants and nonparticipants in all age and income groups, accounting for 13 percent of total vegetable intake overall.

- Among low-income children, non-citrus juices made a significant larger contribution to total fruit intakes of NSLP participants than nonparticipants (28 vs. 16 percent), and noncarbonated sweetened drinks made a significantly smaller contribution (5 vs. 8 percent).

- Among higher-income children, potato chips made a significantly smaller contribution to the total vegetable intakes of NSLP participants than nonparticipants (5 vs. 8 percent).

- Among low-income children, unflavored whole milk accounted for a significantly smaller share of NSLP participants' intakes of milk/milk products, saturated fat, and solid fat. This is consistent with findings from Chapter 5, which showed that NSLP participants in this group were less likely than nonparticipants to consume unflavored whole milk.

- For both low-income and higher-income children, flavored milks made a significantly larger contribution to the milk, saturated fat, and solid fat intakes of NSLP participants than nonparticipants.

- Among low-income children, NSLP participants obtained significantly less of their added sugar intakes from regular soda (32 vs. 39 percent) and from noncarbonated sweetened drinks (13 vs. 16 percent). Part of the reason for this may be that low-income NSLP participants obtained added sugars from more sources than nonparticipants.

Chapter 7
Conclusion

This report uses the most recently available data from the National Health and Nutrition Examination Survey (NHANES 1999–2004) to provide an up-to-date and comprehensive picture of the diets of NSLP participants and nonparticipants on days when school was likely to be in session. Differences between NSLP participants and nonparticipants are examined for two income groups—low-income children (household incomes at or below 185 of poverty) who are eligible to receive free or reduced-price lunches and higher-income children (household incomes above 185 percent of poverty) who may purchase NSLP meals at full price.

This research was not designed to assess the impact of the NSLP or in any way attribute differences observed between NSLP participants and nonparticipants to an effect of the program. Data on nonparticipants are presented strictly to provide context for data on NSLP participants.

Key findings from the preceding chapters are presented here by topic.

Key Findings

Usual intakes of vitamins and minerals

Data from NHANES 1999–2004 were analyzed to examine the prevalence of adequate usual daily intakes of 13 vitamins and minerals with defined EARs. The prevalence of adequate intakes cannot be assessed for calcium, potassium, sodium, and fiber, so mean usual daily intakes were assessed relative to AIs. Mean usual intakes that meet or exceed the AI suggest a high prevalence of adequacy; however, no firm conclusions can be drawn about mean usual intakes that are less than the AI. Usual sodium intakes were assessed relative to the maximum intake level defined in the UL.

Key findings for school-age children overall include:

- Over 90 percent of school-age children had adequate usual daily intakes of eight essential vitamins and minerals.
- Children's usual intakes of Vitamins A, C, E, magnesium, and phosphorus need improvement. The need for improvement is greatest among teenagers, particularly teenage girls. Among teenage girls, usual intakes of vitamin B_6, folate, iron, and zinc also need improvement.
- For children 5-8 years, mean usual daily calcium intakes exceeded the AI, indicating that usual calcium intakes in this age group are likely to be adequate. For older children, usual daily calcium intakes were less than the AI.
- Mean usual daily intakes of potassium and fiber were less than the AI.
- Overall, more than 90 percent of children have usual sodium intakes that exceed the UL.

Supplements were used by 29 percent of school-age children. Supplement use was lower among low-income children, relative to higher-income children, and decreased with age. There were no significant differences between NSLP participants and nonparticipants in use of dietary supplements.

Among low-income children, NSLP participants:

- were more likely than nonparticipants to have adequate usual daily intakes of vitamin A, vitamin B6, vitamin B12, folate, niacin, riboflavin, thiamin, iron, phosphorus, and zinc.
- had higher mean usual daily intakes of calcium and potassium
- were more likely than nonparticipants to have usual daily sodium intakes that exceeded the UL

Among higher-income children, NSLP participants:

- were more likely than nonparticipants to have adequate usual daily intakes of zinc
- had a higher mean usual daily intake of potassium than nonparticipants.

As noted, the differences between NSLP participants and nonparticipants can not be interpreted as causal effects of NSLP participation because our analyses did not control for differences between participants and nonparticipants that may account for the differences in usual dietary intakes. For example, children who participate in the NSLP are, on average, younger, lower income, and more likely to be male than nonparticipants (Gordon et al., 2007). Participants may also differ from nonparticipants in ways that are not observable—for example, participants may have different attitudes about healthy eating.

The recently completed third School Nutrition Dietary Assessment Study (SNDA-III) used a propensity score matching approach to adjust for some of the observable differences between NSLP participants and nonparticipants when comparing dietary intakes of the two groups (Gordon et al., 2007). NSLP participants were "matched" to nonparticipants who had similar combinations of characteristics (age, gender, race, ethnicity, height, parent reports of whether the child was a hearty or picky eater and the child's health, whether the child was on a diet, family income, language spoken at home, and school location (urbanicity and geographic region)) using "nearest neighbor" matching. Usual nutrient intake distributions were then estimated for NSLP participants and the matched sample of nonparticipants.

Results showed that significant differences in the diets of NSLP participants and nonparticipants remain, even after controlling for differences in observable characteristics. NSLP participants in one or more school types (elementary schools, middle, schools, and high schools) were significantly less likely than matched nonparticipants to have inadequate intakes of magnesium, phosphorus, and vitamin A. Although not statistically significant, the prevalence of inadequate zinc intakes was lower for NSLP participants than matched nonparticipants at all three grade levels. Finally, among high school children, the prevalence of inadequate intakes of vitamin C, B_6, folate, and thiamin was significantly lower for NSLP participants than for matched nonparticipants.

The SNDA-III analysis also found that mean intakes of calcium, potassium, fiber and sodium (expressed as a percentage of the AI) were significantly higher for NSLP participants than for matched nonparticipants. These patterns were observed for all three age groups but the statistical significance of differences varied by school type; only the difference in mean fiber intakes was significant for all three school types. Among high school children, NSLP participants were significantly more likely than matched nonparticipants to have usual sodium intakes that exceeded the UL.

Prevalence of overweight and risk of becoming overweight

Eighteen percent of school-age children were overweight and another 15 percent were at risk of becoming overweight. Overall, there were no significant differences between NSLP participants or nonparticipants in the proportions of children in each category. This was true for both low-income children and higher-income children and most age and gender subgroups.

Sources of food energy (calories)

- About three-quarters of school-age children had usual daily intakes of energy from fat that were consistent with the AMDR; 23 percent of children consumed too much energy from fat.

- Almost all school-age children (greater than 97 percent) had usual daily intakes of energy from protein and carbohydrate that were consistent with AMDRs.

- There were no differences between NSLP participants and nonparticipants, in either income group, in usual daily intakes of energy from fat, protein, or carbohydrate.

- Only 15 percent of school-age children had usual daily intakes of energy from saturated fat that were consistent with the 2005 Dietary Guidelines for Americans (DGA) recommendation.

- Among both low-income and higher-income children, NSLP participants were significantly less likely than nonparticipants to have usual

daily intakes of saturated fat that were consistent with the DGA. This difference was concentrated among girls and, among low-income children, among teenage girls (14-18 years) in particular.

- On average, school-age children obtained about 39 percent of their total energy intake from solid fats, alcoholic beverages, and added sugars (SoFAAS) (although alcohol was not reported by this age group).

- Overall, there were no significant differences between NSLP participants and nonparticipants in the mean contribution of SoFAAS to total energy intakes. However, among higher-income children 5-8 years of age, NSLP participants obtained a significantly larger share of their total energy intake from SoFAAS than nonparticipants. This difference was concentrated among girls. Among lower-income boys, the pattern was reversed, with NSLP participants obtaining a significantly smaller share of total energy intake from SoFAAS than nonparticipants.

The SNDA-III propensity score matched analysis found no substantive differences between NSLP participants and matched nonparticipants in macronutrient intakes (Gordon et al., 2007). NSLP participants were more likely than matched nonparticipants to have usual fat intakes that exceeded the AMDR, but these differences were not statistically significant.

Meal and snack patterns

Overall, 69 percent of all school-age children reported eating all three meals. The proportion of children who consumed all three meals decreased with age, and, in all three age groups, breakfast was the meal that was most often skipped. Children consumed an average of 2.1 snacks on the day 24-hour recalls were completed.

Significant differences in the meal and snack patterns of NSLP participants and nonparticipants overall (all age groups combined) included the following:

- Among low-income children, NSLP participants were significantly more likely than nonparticipants to have consumed all three meals.

- Among higher-income children, NSLP participants were significantly less likely than nonparticipants to have consumed a breakfast.

- For both low-income and higher-income children. NSLP participants (who consumed a lunch by definition) were more likely than their nonparticipant counterparts to have consumed a lunch. The magnitude of the difference was greater among low-income children than higher-income children.

Nutritional quality of meals and snacks

The nutritional quality of meals and snacks was examined in terms of energy density (calories per 100 grams of food); percentage of energy obtained from solid fats, alcoholic beverages, and added sugars (SoFAAS); and nutrient density, measured by the Nutrient-Rich score (a weighted average of the contributions of 16 essential nutrients, relative to their energy contributions).

- Across all school-age children, mean energy density was consistently highest for snacks and lowest for dinners (2.97 vs. 1.97 calories per gram). Among the three main meals, mean energy density was highest for lunch (2.38) and lowest for dinner (1.97).

- Differences between NSLP participants and nonparticipants in the energy density of meals and snacks included the following:

  - For both low-income and higher-income NSLP participants, the mean energy density of foods consumed at lunch was significantly lower than for nonparticipants (2.23 vs. 2.47 and 2.28 vs. 2.54, respectively).

  - Low-income NSLP participants consumed breakfast foods with significantly higher energy density, on average, than the energy density of breakfast foods consumed by nonparticipants (2.11 vs. 1.81)

- For all school-age children, the percentage of energy from SoFAAS was notably higher for snacks than for any of the meals (47 vs. 34–36 percent). NSLP participants and nonparticipants did not differ in the percentages of snack calories from SoFAAS.

- Differences between NSLP participants and nonparticipants included:

    - Low-income NSLP participants obtained a slightly smaller share of their lunch energy from SoFAAS, compared with low-income nonparticipants (35 vs. 38 percent).

    - Higher-income NSLP participants obtained a slightly larger share of their breakfast energy from SoFASS, compared with higher-income nonparticipants (38 vs. 34 percent).

Nutrient density measures assess the nutrient contribution of a food relative to its energy contribution. Our analysis used the NR (Nutrient-Rich) score, which provides a method of assessing multiple key nutrients simultaneously.

- On average, children's NR scores were notably higher for breakfast (ranging from 148 to 158 across subgroups), than for lunch and dinner (79 to 99). This indicates that the mix of foods consumed at breakfast was more nutrient-dense—providing a higher concentration of nutrients per calorie—than the mix of foods consumed for lunch or dinner. NR scores for snacks were substantially lower than NR scores for any of the meals.

- Overall, there were no statistically significant differences between NSLP participants and nonparticipants, in either the low-income or higher-income groups, in mean NR scores for breakfast, dinner, snacks, or all meals and snacks combined.

- Lunches consumed by NSLP participants were more nutrient-dense than the lunches consumed by nonparticipants. This was true for both low-income children (mean NR score of 92 vs. 81) and higher-income children (87 vs. 82).

Food choices

We used two different approaches to compare the food choices of NSLP participants and nonparticipants. Key findings for each are summarized below.

- Supermarket aisle approach—"What percentage of NSLP participants and nonparticipants consumed at least one food item from each food group on the intake day, and what choices were made within food groups?"

    - NSLP participants and nonparticipants, in both income groups, were about equally likely to consume foods from 3 of the 10 food groups: grains, meat and meat alternates, and sweets and desserts. This was true of food choices at lunch and over 24 hours.

    - At lunch, NSLP participants in both income groups were more likely than nonparticipants to consume foods from 4 of the 10 food groups: vegetables, fruit and fruit juice, milk and milk products, and mixed dishes. These differences persisted over 24 hours with the exception of the between-group difference in fruit consumption for higher income children.

    - At lunch, NSLP participants in both income groups were less likely than higher-income nonparticipants to consume foods from 2 of the 10 food groups: beverages (other than water, milk, and 100% fruit juice) and salty snacks. These differences persisted over 24 hours with the exception of the between-group difference in beverage consumption for higher income children.

- Nutritional quality approach—"What percentage of foods consumed by NSLP participants and nonparticipants were foods

recommended for frequent, selective, or occasional consumption?"

- Nearly 70 percent of the foods consumed by school children over a 24-hour period were foods that should be consumed only occasionally (top of the radiant pyramid).

- There were no significant differences between NSLP participants and nonparticipants in percent of food choices from the occasionally "consume" category.

- NSLP participants are somewhat less likely than nonparticipants to consume foods from the "frequently consume" category at lunch (9% vs. 12% and 9% vs. 13% for low-income and higher-income groups, respectively)

- NSLP participants are somewhat more likely than nonparticipants to consume foods from the "selectively consume" category at lunch (21% vs. 14% and 19% vs. 13% for low-income and higher-income groups, respectively)

These differences between NSLP participants and nonparticipants in the distribution of food choices are less pronounced when measured over 24 hours.

The Healthy Eating Index–2005 (HEI–2005) and sources of MyPyramid intakes

The HEI–2005 consists of 12 component scores designed to measure compliance with the *Dietary Guidelines for Americans* and *MyPyramid Food Guidance System*. The total HEI–2005 score for school-age children was 55 out of a possible 100 points, with no significant differences between NSLP participants and nonparticipants. These results indicate that the usual diets of school-age children, regardless of income and NSLP participation, fell considerably short of the diet recommended in the DGA and *MyPyramid*.

Estimates of the HEI–2005 component scores point to the following key concerns in the diets of *all* school-age children:

- Low intakes of vegetables and fruit, particularly whole fruits.

- Very low intakes of dark green and orange vegetables and legumes.

- Very low intakes of whole grains.

- High intakes of discretionary calories from SoFAAS. Excessive calories from SoFAAS may contribute to calorie intakes that exceed requirements (and, thereby, contribute to overweight and obesity). When calories from SoFAAS exceed recommended levels, energy balance can be maintained only by reducing calories from nutrient-dense foods.

- High intakes of sodium and saturated fat.

There were relatively few significant differences in HEI–2005 component scores for NSLP participants and nonparticipants. Differences observed for school-age children overall were:

- Total Fruit—Among low-income children, NSLP participants had a significantly higher mean score than nonparticipants for the Total Fruit component (3.5 vs. 2.8). (The Total Fruit component includes 100% fruit juices).

- Whole Fruit—Among higher-income children, NSLP participants had a significantly lower mean score on the HEI–2005 component for Whole Fruit than nonparticipants (2.4 vs. 3.3)

- Milk—NSLP participants had a significantly higher mean score than nonparticipants on the HEI–2005 Milk component. This was true for both low-income (8.8 vs. 7.3) and higher-income (8.7 vs. 7.6) children.

- Meat and Beans—NSLP participants in both income groups had a significantly higher mean score than nonparticipants on the HEI–2005 component for Meat and Beans. Mean scores were 8.4 vs. 7.7 for low-income children and 8.4 vs. 7.8 for higher-income children.

There were some differences between NSLP participants and nonparticipants in the food choices

that contributed to the patterns noted above, particularly among low-income children. Key findings for NSLP participants and nonparticipants overall (all age groups combined) include:

- Fried potatoes are the largest contributor to vegetable intakes for both NSLP participants and nonparticipants in all age and income groups, accounting for 13 percent of total vegetable intake overall.

- Among low-income children, non-citrus juices made a significant larger contribution to total fruit intakes of NSLP participants than nonparticipants (28 vs. 16 percent), and noncarbonated sweetened drinks made a significantly smaller contribution (5 vs. 8 percent).

- Among higher-income children, potato chips made a significantly smaller contribution to the total vegetable intakes of NSLP participants than nonparticipants (5 vs. 8 percent).

- Among low-income children, unflavored whole milk accounted for a significantly smaller share of NSLP participants' intakes of milk/milk products, saturated fat, and solid fats. This is consistent with findings from Chapter 5, which showed that NSLP participants in this group were less likely than nonparticipants to consume unflavored whole milk.

- For both low-income and higher-income children, flavored milks made a significantly larger contribution to the milk, saturated fat, and solid fat intakes of NSLP participants than nonparticipants.

- Among low-income children, NSLP participants obtained significantly less of their added sugar intakes from regular soda (32 vs. 39 percent) and from noncarbonated sweetened drinks (13 vs. 16 percent). Part of the reason for this may be that low-income NSLP participants obtained added sugars from more sources than nonparticipants.

Conclusions and Implications

A primary conclusion from this study is that the diets of most school-age children in the U.S. are generally nutritionally adequate. Teenagers, particularly teenage girls, emerged as the subgroup at greatest risk for inadequate nutrient intakes. These children are a prime audience for nutrition education interventions to promote consumption of nutritionally balanced diets.

For school-age children overall, the issues of greatest concern are related to excessive consumption of discretionary calories from solid fats and added sugars, excessive intakes of saturated fat and sodium, and inadequate consumption of specific types of nutrient-dense foods, most notably whole fruits, dark green and deep yellow vegetables, legumes, and whole grains. Nutrition education efforts for this age group should target these concerns.

Another conclusion is that the usual diets of children who participated in the NSLP were better in some ways than the usual diets of children who did not participate and were worse in other ways. Some of the relationships between NSLP participation and children's dietary intakes varied for low-income and higher-income children. Among the most important concerns for policymakers, school food service providers, and nutrition educators are: (1) the increased prevalence of usual sodium intakes that exceed the UL among low-income NSLP participants, relative to nonparticipants, and (2) the increased prevalence of excessive usual intakes of saturated fat among NSLP participants (in both low-income and higher-income groups).

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Appendix A
Data and Methods

All tabulations in this report are based on NHANES data, analyzed alone or in conjunction with data from the MyPyramid Equivalents Database. In this appendix, we describe the data, variable construction, and statistical methods.

NHANES Data

The National Health and Nutrition Examination Survey (NHANES) is conducted by the National Center for Health Statistics (NCHS), part of the Centers for Disease Control and Prevention (CDC). NHANES has been conducted on a periodic basis since 1971.[1] Beginning in 1999, NHANES is a continuous annual survey with data released in public data files every two years (e.g., 1999-2000, 2001-02, 2003-04, etc.).

NCHS recommends combining two or more 2-year cycles of the continuous NHANES to increase sample size and produce estimates with greater statistical reliability. Most of the tabulations in this report are based on three 2-year cycles of NHANES data (1999-2004). NHANES 1999-2002 was used in conjunction with the MyPyramid Database (described below).

NHANES includes a 'household interview' conducted in respondents' homes, and a physical examination conducted in Mobile Exam Centers (MEC). Additional interview data were collected at the time of the MEC exam, including a dietary recall interview.

For this study, we used data from the following NHANES data files:

- Body Measures (BMX)
- Demographics (DEMO)
- Diet Behavior and Nutrition (DBQ)
- Dietary Interview Individual Food Files (DRXIFF)
- Dietary Interview, Total Nutrient Intakes (DRXTOT)
- Dietary Supplements (DSQ)
- Food Security (FSQ)
- Reproductive Health (RHQ)

Our sample for all analyses includes persons with complete dietary recalls, excluding pregnant and breastfeeding women, infants, and breastfeeding children. Pregnant and breastfeeding women were excluded due to differences in nutrient requirements and small sample sizes. Infants were excluded because DRI Estimated Average Requirements (EARs) are not defined for infants.

MyPyramid Equivalents Database for USDA Food Codes

The *MyPyramid Food Guidance System* (USDA, CNPP 2005), which replaced the Food Guide Pyramid introduced in 1992, provides estimates of the types and quantities of foods individuals should eat from the different food groups, tailored to individuals' age, gender, and activity level.

In contrast to the earlier Food Pyramid, which provided recommended numbers of servings from each food group, MyPyramid recommendations are in cup or ounce 'equivalents.' Recommendations for vegetable, fruit, and milk consumption are measured in cups or 'cup equivalents'; recommendations for grain and meat and bean consumption are measured in ounces or 'ounce equivalents."

The *MyPyramid Equivalents Database* contains records corresponding to NHANES dietary recalls, with NHANES food intakes measured in MyPyramid equivalents (Friday and Bowman, 2006).[2] Measures are provided for major food groups (grains, vegetables, fruits, milk, meat and beans) and subgroups, plus discretionary oils, discretionary solid fats, added sugar, and alcohol.

[1] NHANES-I was conducted from 1971-75; NHANES-II from 1976-80; and NHANES-III from 1988-94.

[2] MyPyramid Equivalents Database version 1.0 contains data corresponding to NHANES 1999-2000 and 2001-02, and CSFII 1994-96, 1998.

Each individual food may contain components from multiple MyPyramid food groups.

The MyPyramid database contains files corresponding to the NHANES individual food files (one record per food) and NHANES total nutrient files (one record per person, with total daily intake). We merged MyPyramid data to NHANES data for survey years 1999-2002. All analyses of pyramid intakes are limited to this 4-year period.

Subgroups for Tabulation

We tabulated NHANES data to provide estimates for the total population of school children, and for subgroups defined by age group, and program participation and income level.

Identification of School Children

The sample for analyses includes school-age children with 24-hour recalls that reference a day when they were likely to be attending school. These children were identified from the following survey variables:

- RIDAGEYR is the age at screening (we identified children age 5-18 years old)
- DBQ360 asks "During the school year, {do you/does SP} attend a kindergarten, grade school, junior or high school (yes or no)?"
- DRDDRSTS is the dietary recall status and DRDDAY is the intake day of the week

NHANES does not ask children whether they attended school on the intake day. We imputed school attendance, for each child, by comparing the date of the intake day with school calendar information obtained from the largest public school district in the county where the child resides. This imputation required two pieces of information that are not released in NHANES public data files: date of the dietary recall interview and county of residence. These two data items were available for analyses in the CDC Research Data Center.

Age Groups

The tabulations for this report show data for three age groups:

- Children, age 5 to 8
- Children, age 9 to 13
- Children, age 14 to 18

Age groups were defined by the NHANES data item, RIDAGEYR = age at screening recode (defined as the "best age in years at the time of the household screening").

Participation in the National School Lunch Program

For this study, NSLP participation—defined as receipt of an NSLP reimbursable school lunch—was determined at the *individual level* for the intake day. This determination could not be made with certainty, but was imputed based on information about foods consumed during lunch, as reported in the survey (described in the next section).

NSLP nonparticipants include children who did not consume a reimbursable meal on the intake day. These children were further classified as income-eligible for NSLP (household income at or below 185% of poverty) or higher income (household income above 185% of poverty).

Imputation of NSLP Participation

NHANES includes three questions about in the National School Lunch Program, administered as part of the household interview:

- Does {your/SP's} school serve school lunches? These are complete lunches that cost the same every day. (DBQ370)
- During the school year, approximately how many times a week {do you/does SP} usually eat a complete school lunch? (DBD380) [lunch_num]
- {Do you/Does SP} get these lunches free, at a reduced price, or {do you/does he/she} pay full price? (DBQ 390) [lunch_cat]

These questions provide useful indicators of the likelihood that children participate in the school lunch program, but do not indicate participation on the intake day. For example, some children were interviewed during the summer when school was not in session, and others who attended school and usually eat a complete school lunch may not have had a school lunch on the intake day. For these cases, dietary recalls do not provide information about the contribution of the NSLP to dietary intakes.

We imputed school lunch status based on information about the types of foods reported by children as lunch foods. We developed separate algorithms for each two-year wave of NHANES (1999-2000, 2001-02, and 2003-04) because the data about the meal place or source of food differed:

- NHANES 1999-2000 asked "Where did you eat this meal/food?" (e.g., home, friend's house, car, school, plane, restaurant)
- NHANES 2001-02 asked "Was this food eaten at home?" (yes or no)
- NHANES 2003-04 asked "Was this food eaten at home?" and "Where did you get (this/most of the ingredients for this) {FOODNAME}." (e.g., store, vending machine, restaurant, cafeteria at school, cafeteria not at school)

For each child in NHANES 2003-04 who was determined to be attending school, we identified the number of school meal components reported as lunch and obtained from the school cafeteria. NSLP reimbursable meals are required to include 3 meal components "as served"—that is, children may be offered a choice of foods and are required to take at least 3 different components from among 5 possible components offered for the meal (milk, meat, grain, fruit, and vegetables). They are not required to eat all three components.

For NHANES 2003-04, we identified NSLP participants as children who:

a) ate 3 or more meal components from the school cafeteria,

b) ate 2 meal components from the school cafeteria and reported to "usually eat a complete school lunch" 5 days a week, or

c) ate 2 meal components from the school cafeteria and no food from outside the school cafeteria.

NSLP nonparticipants were identified as children who ate one or no meal components from the school cafeteria. Only 11 children did not fit into one of the above categories and most of these were determined to be nonparticipants based on manual review of foods consumed.

In 1999-2002, NHANES did not collect information on whether foods were obtained from the school cafeteria. Therefore, we calculated the likelihood that individual food items are "school lunch foods" based on NHANES 2003-04 data for lunch items reported by K-12 children. The 2003-04 data were used to determine the percentage of children reporting the food as obtained from the school cafeteria (from among children reporting the food from any source at lunch). The distribution of likelihoods was examined, and we used the percentiles of the distribution as cutoffs in our algorithm for identifying school lunch foods in 1999-2002.

For children surveyed in 1999-2000, we identified NSLP participants as children who:

a) ate all lunch items at school, had 3 or more components, and reported that they "usually eat a complete school lunch" 5 days a week, or

b) reported that they "usually eat a complete school lunch" 5 days a week and the likelihood of reported lunch foods being from the school cafeteria, average across all lunch foods, was greater than the 90th percentile of the distribution in 2003-04.

NSLP nonparticipants were identified as children who ate one or no meal components at school, or report that they never "eat a complete school lunch." Children who did not fit into one of the above categories were sequentially determined to be NSLP participants or nonparticipants according to the following criteria: a) if the average likelihood

that lunch foods came from the school cafeteria was at or above the 95th percentile (participants); b) if the average likelihood was at or below the 5th percentile (nonparticipants); c) if they "usually eat a complete school lunch" 5 days a week (participants); d) if they ate 3 components at school, or 2 components at school and no lunch food consumed outside school (participants).

For children surveyed in 2001-02, we began by identifying NSLP nonparticipants as children who:

a) ate one or no meal components, or
b) ate all lunch foods at home, or
c) reported that they never "eat a complete school lunch."

NSLP participants were then identified as children who reported that they "usually eat a complete school lunch" 5 days a week and the average likelihood of reported lunch foods being from the school cafeteria was at or above the 90th percentile.

Children who did not fit into one of the above categories were sequentially determined to be NSLP participants or nonparticipants according to the following criteria: a) if the average likelihood that lunch foods came from the school cafeteria was at or above the 95th percentile (participants); b) if the average likelihood was at or below the 5th percentile (nonparticipants); c) if they "usually eat a complete school lunch" 5 days a week (participants); d) if they ate 3 components (participants).

Dietary Intake Data, Reference Intake Standards, and Estimation of Usual Intakes

Application of the DRIs requires information about the usual intake distribution for the population of interest. The usual intake distribution can be estimated using two or more days of recall information, or single-day recalls may be adjusted by out-of-sample information about the within-person day-to-day variance for each nutrient.

NHANES Dietary Recalls

Beginning with NHANES 2003-04, NCHS releases two days of dietary recall data for each respondent. The first day (Day 1) is collected in the MEC and the second day (Day 2) is collected by telephone 3 to 10 days later. In 2003-04, 87 percent of respondents completing the first day recall also completed the second day.

For this study, we pooled three 2-year cycles of NHANES (1999-2004). NHANES 1999-2002 public release data contain single-day dietary recalls.[3] Therefore, we estimated usual nutrient intake distributions by first estimating within-person variance components for NHANES 2003-04. These variance components were then used to adjust the single day (first day) intakes of the pooled sample of NHANES 1999-2004.

Usual intakes were estimated using the personal computer version of the ***Software for Intake Distribution Estimation*** (PC-SIDE). PC-SIDE estimates usual intake distributions from single day intakes when provided with information about variance components and the fourth moments of variance components (fourth moments are measures of skewness).

PC-SIDE was used to estimate means and proportions, standard errors of estimates, and percentiles of dietary intake distributions for gender by age subgroups. Estimates for both sexes were calculated in SAS as the weighted average of the PC-SIDE estimates for males and females.

Reference Intake Standards

The Dietary Reference Intakes (DRIs) are a group of standards developed by the Food and Nutrition Board of the Institute of Medicine (IOM) to assess the adequacy and quality of nutrient intakes. Four different DRI standards are used to assess the usual nutrient intakes of NSLP participants and nonparticipants:

- Estimated Average Requirements (EARs)

[3] Second recalls were collected for the entire sample beginning with NHANES 2002, but the second day recalls from 2002 were not publicly released.

- Adequate Intakes (AIs)
- Tolerable Upper Intake Levels (ULs)
- Acceptable Macronutrient Distribution Ranges (AMDRs).

The **Estimated Average Requirement (EAR)** is the level of intake that is estimated to meet the requirements of half of the healthy individuals in a particular life stage and gender group. The EAR is used to assess the prevalence of inadequate intakes using the IOM-recommended "EAR-cutpoint method" (IOM, 2006).

The EAR cut-point method was used to analyze all nutrients for which EARs have been established. The EAR cut-point method assumes that nutrient requirements are symmetrically distributed. This assumption, however, does not hold for iron requirements among menstruating females. It is not appropriate to use the EAR cut-point method to estimate the prevalence of adequate iron intakes for menstruating females and the full probability approach was used for females aged 9-18 years old (IOM, 2006).

An **Adequate Intake (AI)** was defined when the data available for a particular nutrient were insufficient to estimate requirements and establish an EAR. The AI is the level of intake that is assumed to be adequate, based on observed or experimentally determined estimates of intake. AIs cannot be used to determine the proportion of a population with inadequate intakes. Instead, assessment focuses on comparison of mean usual intakes to the AI. Populations with a mean usual intake equivalent to or greater than the population-specific AI can be assumed to have adequate intakes.

The **Tolerable Upper Intake Level (UL)** is the maximum level of intake that is likely to pose no risks of adverse health effects for all individuals in a population group. As intake increases above the UL, the risk of adverse effects increases. For most nutrients for which ULs have been established, the UL is based on intake from food, water, and dietary supplements (e.g., fluoride, phosphorus, and vitamin C) (IOM, 2006). For some nutrients, the UL applies only to synthetic forms from dietary supplements, fortified foods, or over-the-counter medications (e.g., magnesium, folate, niacin, and vitamin E).

The NHANES nutrient intake files do not include nutrients provided by water, dietary supplements, or over-the-counter medications. Thus, our ability to assess usual intakes relative to ULs is limited. We estimated the prevalence of intakes above the UL for nutrients for which a UL is available, and found prevalence so small that most tables were populated with zeroes. (This is consistent with data presented in Moshfegh et al. (2005) where, with the exception of sodium and a handful of results for other nutrients, every cell in every table is identical (<3%)). For this reason, we included analyses of intake relative to the UL only for sodium.

The DRIs specify **Acceptable Macronutrient Distribution Ranges (AMDRs)** for macronutrients (protein, carbohydrate, and total fat) and fatty acids (linoleic acid and alpha-linolenic acid).[4] AMDRs define ranges of macronutrient intakes that are associated with reduced risk of chronic disease, while providing recommended intakes of other essential nutrients. AMDRs are expressed as percentages of total energy intake because their requirements are *not* independent of each other or of the total energy requirement of the individual (IOM, 2006). A key feature of AMDRs is that each has lower and upper bounds. Intakes that fall below or exceed these levels of intake may increase risk of chronic disease.

Table A-1 provides the DRI values.

Variable Construction

For several analyses, we constructed new variables from the original NHANES data elements, as described in this section.

Body Mass Index

NHANES examinations included measurement of childrens' body weight and stature. The NHANES public data files include Body Mass Index (BMI), defined as:

[4] Usual protein and carbohydrate intakes are also assessed relative to EARs, based on total intake—gm/day for carbohydrate and gm/day per kg body weight for protein.

Table A-1—Dietary Reference Intakes for Individuals

	Estimated Average Requirements (EARs)							
	Vitamin A (mcg RAE)	Vitamin C (mg)	Vitamin B-6 (mg)	Vitamin B-12 (mcg)	Vitamin E (mg AT)	Folate (mcg DFE)	Niacin (mg)	Riboflavin (mg)
Males								
1-3 years	210	13	0.4	0.7	5	120	5.0	0.4
4-8 years	275	22	0.5	1.0	6	160	6.0	0.5
9-13 years	445	39	0.8	1.5	9	250	9.0	0.8
14-18 years	630	63	1.1	2.0	12	330	12.0	1.1
19-30 years	625	75	1.1	2.0	12	320	12.0	1.1
31-50 years	625	75	1.1	2.0	12	320	12.0	1.1
51-70 years	625	75	1.4	2.0	12	320	12.0	1.1
71 + years	625	75	1.4	2.0	12	320	12.0	1.1
Females								
1-3 years	210	13	0.4	0.7	5	120	5.0	0.4
4-8 years	275	22	0.5	1.0	6	160	6.0	0.5
9-13 years	420	39	0.8	1.5	12	250	9.0	0.8
14-18 years	485	56	1.0	2.0	12	330	11.0	0.9
19-30 years	500	60	1.1	2.0	12	320	11.0	0.9
31-50 years	500	60	1.1	2.0	12	320	11.0	0.9
51-70 years	500	60	1.3	2.0	12	320	11.0	0.9
71 + years	500	60	1.3	2.0	12	320	11.0	0.9

	Estimated Average Requirements (EARs)						
	Thiamin (mg)	Iron (mg)	Magnesium (mg)	Phosphorus (mg)	Zinc (mg)	Carbohy-drate (g)	Protein (g/kg body wgt)
Males							
1-3 years	0.4	3.0	65	380	2.5	100	0.87
4-8 years	0.5	4.1	110	405	4.0	100	0.76
9-13 years	0.7	5.9	200	1055	7.0	100	0.76
14-18 years	1.0	7.7	340	1055	8.5	100	0.73
19-30 years	1.0	6.0	330	580	9.4	100	0.66
31-50 years	1.0	6.0	350	580	9.4	100	0.66
51-70 years	1.0	6.0	350	580	9.4	100	0.66
71 + years	1.0	6.0	350	580	9.4	100	0.66
Females							
1-3 years	0.4	3.0	65	380	2.5	100	0.87
4-8 years	0.5	4.1	110	405	4.0	100	0.76
9-13 years	0.7	5.7	200	1055	7.0	100	0.76
14-18 years	0.9	7.9	300	1055	7.3	100	0.71
19-30 years	0.9	8.1	255	580	6.8	100	0.66
31-50 years	0.9	8.1	265	580	6.8	100	0.66
51-70 years	0.9	5.0	265	580	6.8	100	0.66
71 + years	0.9	5.0	265	580	6.8	100	0.66

See note at end of table.

Table A-1—Dietary Reference Intakes for Individuals —Continued

	Adequate Intakes (AI)						Upper Tolerable Intake Level (UL)
	Calcium (mg)	Potassium (g)	Sodium (g)	Fiber (g)	Linoleic acid (g)	Linolenic acid (g)	Sodium (g)
Males							
1-3 years	500	3000	1000	19	7	0.7	1.5
4-8 years	800	3800	1200	25	10	0.9	1.9
9-13 years	1300	4500	1500	31	12	1.2	2.2
14-18 years	1300	4700	1500	38	16	1.6	2.3
19-30 years	1000	4700	1500	38	17	1.6	2.3
31-50 years	1000	4700	1500	38	17	1.6	2.3
51-70 years	1200	4700	1300	30	14	1.6	2.3
71 + years	1200	4700	1200	30	14	1.6	2.3
Females							
1-3 years	500	3000	1000	19	7	0.7	1.5
4-8 years	800	3800	1200	25	10	0.9	1.9
9-13 years	1300	4500	1500	26	10	1.0	2.2
14-18 years	1300	4700	1500	26	11	1.1	2.3
19-30 years	1000	4700	1500	25	12	1.1	2.3
31-50 years	1000	4700	1500	25	12	1.1	2.3
51-70 years	1200	4700	1300	21	11	1.1	2.3
71 + years	1200	4700	1200	21	11	1.1	2.3

See note at end of table.

Table A-1—Dietary Reference Intakes for Individuals —Continued

	Acceptable Macronutrient Distribution Ranges (AMDRs)				
	Total fat	Linoleic acid	Linolenic acid	Carbohydrate	Protein
	Range (% energy)				
Children, 1-3 yrs	30 – 40	5 – 10	0.6 – 1.2	45 – 65	5 – 20
Children, 4-18 yrs	25 – 35	5 – 10	0.6 – 1.2	45 – 65	10 – 30
Adults	20 – 35	5 – 10	0.6 – 1.2	45 – 65	10 – 35

Source: Institute of Medicine (IOM), Food and Nutrition Board. *Dietary Reference Intakes,* 1997-2005

BMI = weight in kilograms / [height in meters]^2

We classified children's weight status based on comparison of BMI-for-age with the percentiles of the CDC BMI-for-age growth chart using the SAS program provided by the CDC at: http://www.cdc.gov/nccdphp/dnpa/growthcharts/sas.htm. The CDC SAS program includes LMS parameters of the smoothed growth curve for each age in months, by gender. The LMS parameters are the median (M), the generalized coefficient of variation (S), and the power in the Box-Cox transformation (L) of the growth curve. Documentation of LMS calculations is available at: http://www.cdc.gov/nchs/about/major/nhanes/growthcharts/datafiles.htm

Body Weight for Analyzing Usual Intakes of Protein Per Kilogram Body Weight

The EAR for protein is specified in terms of protein per kilogram of body weight. We followed the method described in *What We Eat in America* (Moshfegh et al. (2005), Appendix B), which assumes that the EAR refers to the ratio of protein per kg of body weights falling in the healthy range. Thus, if actual body weight is not in the healthy range, a reference body weight is assigned to an individual as follows:

- Children ages 4-18—If BMI-for-age is below the 5th or above the 85th percentile, the reference weight is the weight that places the respondent at the nearest percentile of the healthy range (5th or 85th), given their height. Reference weights associated with the 5th and 85th BMI-for-age percentiles (given age and gender) were determined by modifying the CDC SAS program noted above.

Meals and Snacks

To analyze meal patterns and nutrient characteristics of meals, we classified all foods in the NHANES food files as part of breakfast lunch, dinner, or snacks. NHANES 1999-2000 and 2001-02 contained 16 codes corresponding to English and Spanish meal names, with two additional codes added for NHANES 2003-04. The codes were mapped into four categories as shown in Table A-2.

Table A-2— NHANES Meal and Snack Codes

Meal Category / Meal name	NHANES Meal Codes 1999-00	2001-02	2003-04
1. Breakfast			
Breakfast	1	1	1
Desayuno	9	10	10
Almuerzo	10	11	11
2. Lunch			
Brunch	2	5	5
Lunch	3	2	2
Comida	11	12	12
3. Dinner			
Dinner	5	3	3
Supper	NA	NA	4
Cena	13	14	14
4. Snacks			
Snack/beverage	4	6	6 / 7
Extended consumption	7	9	9
Merienda	12	13	13
Entre comida, bebida/tentempie	14	15	15 / 18
Bocadillo	15	17	17
Botana	16	16	16
Other	8	91	91
Don't know	99	99	99

Foods reported as meals were coded as breakfast, lunch, and dinner without regard to mealtime. Thus persons were observed to consume from zero to three meals. Snack foods were categorized into 'snack periods' according to meal time so that the number of 'snacks' is equal to the number of times a person consumed food and beverages outside of meals, not the number of individual foods consumed as snacks.

Energy Density

We calculated energy density as the ratio of kilocalories per gram of food. Foods are defined as specified by Ledikwe et al. (2005) as solid and liquid items that are typically consumed as foods. This definition excludes all beverages. Included are soft and liquid foods such as ice cream and soup. Excluded are items typically consumed as beverages, such as milkshakes and liquid meal replacements.[5]

[5] Liquid meal replacements include instant breakfast, protein supplements and powder, and meal replacement drinks. Meal replacement bars are included in the definition of solid foods.

The rationale provided by LedIkwe et al. (2005) for including solid foods and not beverages is that, "Intake of foods, as compared with beverages, is more influenced by hunger and less influenced by fluid balance. Beverages may disproportionately affect energy density values."

We implemented this definition by excluding foods at the food group level, after categorizing foods into 3-digit food groups. The following food groups were excluded:

- Milk (white, flavored, soymilk, dry and evaporated milk)
- Protein/meal enhancement drinks
- Non-citrus and citrus juice (juice bars were not excluded)
- Vegetable juice
- Coffee, tea
- Beer, wine, liquor
- Drinking water (identified in NHANES 2003-04 only)
- Soft drinks; sweetened, low calorie, and sugar-free beverages

In addition, all ingredients of "combination beverages" were excluded. These were identified by the NHANES variable for "combination type."

Total calories and total grams were summed on a per person basis for all foods not excluded, to obtain estimates of the average energy density of daily intake.

Nutrient Rich (NR) Score

A nutrient rich score is a ratio that measures the nutrient contribution of a food relative to its energy contribution. We calculated NR scores based on the naturally nutrient rich (NNR) score developed by Drewnowski (2005). The NNR score excludes fortified foods; our NR score does not make that exclusion.

We calculated an NR score based on the 16 nutrients shown in Table A-3. For a single food, the NR score is obtained by calculating a score for each nutrient (equation 1 below), and averaging across the 16 nutrients (equation 2):

Table A-3 — Nutrients and Recommended Daily Values (DVs) used to Calculate Nutrient Rich Scores[a]

Nutrient	Value	Nutrient	Value
Calcium	1300 mg	Vitamin B_{12}	2.4 μg
Folate	400 μg	Vitamin C	90 mg
Iron	18 mg	Vitamin E	15 mg
Magnesium	420 mg	Zinc	11 mg
Potassium	4.7 g	Dietary Fiber	38 g
Riboflavin	1.3 mg	Linoleic acid	17 g
Thiamin	1.2 mg	α-Linolenic acid	1. 6 g
Vitamin A (RAE)	900 mg	Protein	56 g

[a] Daily values are based on maximum RDAs or AIs (calcium, magnesium, potassium, dietary fiber, linoleic acid, and α-linolenic acid), excluding pregnant or lactating women.

$$(1)\quad \%DV_x = \frac{amountper2000kcal_x}{DV_x},$$

where x= nutrient 1 to 16

$$(2)\quad NR = \sum_{x=1}^{16} \%DV_x \Big/ 16$$

The NR scores for total daily intakes, meals/snacks, and food groups are obtained by applying equations (1) and (2) to the total nutrients consumed per person at each level of daily intake, meals/snacks, and food groups. Thus, nutrients are summed for each level of analyses; total nutrients are normalized to a "nutrient per 2,000 kcal" measure; the percent DV is calculated for each nutrient; and the NR score is the average of "%DV" across all nutrients. Nutrients are weighted equally. Consistent with Drenowski, the %DV value is truncated at 2000% DV when implementing equation 1, before the average across nutrients is taken, thus limiting the influence of large concentrations of one nutrient.

The mean NR score must be interpreted with caution. The NR score is not designed to characterize nutrient adequacy or diet quality, but to characterize food choices in terms of nutrient density. The score is normalized to 2,000 kcal, so it does not provide an absolute measure of nutrient intake relative to DVs. Furthermore, the score does not account negatively for "bad nutrients" (satu-

rated fat, cholesterol, and sodium); in contrast, the HEI-2005 accounts for over consumption of "bads." And finally, the score weights all nutrients equally. Thus, a person consuming 2000% DV of one nutrient will have a higher NR score from that single nutrient than a person consuming exactly 100% DV of all nutrients.

The mean NR score for a group of individuals is based on individuals with reported intakes. The score does not weight the contribution of zero intakes (nutrients per 2000 kcal is zero if intake is zero). Thus, the sample size for NR scores per meal varies over meals.

Percent of Energy from SoFAAS

SoFAAS is an acronym for solid fats, alcoholic beverages, and added sugars. Staff at USDA's Center for Nutrition Policy and Promotion (CNPP) developed the SoFAAS measure to provide insight into discretionary calorie intakes.

We measured SoFAAS calories per food and per NHANES respondent using data from the NHANES individual food file (grams of alcohol) and the MyPyramid Equivalents database (grams of discretionary solid fat and teaspoons of added sugar). Analyses of SoFAAS were limited to NHANES 1999-2002 because MyPyramid data for NHANES 2003-04 had not been released at the time of this study.

The measure of SoFFAS calories was constructed at the level of individual food, and then aggregated for daily intake. The measures from the NHANES and MyPyramid file were converted to measures of calories as follows:

(1) Kcal from solid fat = Grams of solid fat × 9

(2) Kcal from alcohol[6] = Grams of alcohol x 7 + (Carbohydrates from beer and wine, excluding carbs from added sugar) x 4

(3) Kcal from added sugar[7] = Teaspoons of added sugar × 4.2 × 4

Alcoholic beverages have foodcodes with the first three digits from 931 to 935. Alcohol from cooking wine is not included in SoFAAS (foodcode 93401300). Carbohydrates from mixed drinks (e.g., orange juice, Bloody Mary mix, soda, etc) are not included in SoFAAS. Note that (2) excludes calories from added sugar to avoid double counting added sugar in steps (2) and (3).

Total calories from SoFAAS were obtained by summing (1) – (3) above, and then expressed as a percentage of total energy:

Percent of total energy from SoFAAS = SoFAAS calories / Total calories ´ 100

This measure was calculated for total daily intakes, meals/snacks, and food groups by applying steps (1) - (3) to each food record, summing SoFAAS calories and total calories for each level of analysis (daily intake, meals/snacks, and food groups), and calculating the percent SoFAAS based on the summations.

Our analyses of SoFAAS revealed some anomalies with the NHANES data, which we discussed with staff at USDA/ARS. Some food records have grams of discretionary fat in excess of grams of total fat (2,718 records or 1.1 percent), and some food records have calories from added sugar in excess of calories from total sugar.

Problems with discretionary fat

We discussed this problem with ARS staff. They indicated that the problem is due to recipe modifications in the NHANES data that are not accounted for in the MyPyramid data. For example, in the NHANES data, tuna salad might be coded with the same foodcode but one individual's record was modified to reflect the fact that light mayonnaise rather than regular mayonnaise was used in preparation. In the MyPyramid data, each case of tuna salad coded with the same food code received the

[6] The algorithm for computing calories from alcoholic beverages was taken from the HEI-2005 SAS code provided at: www.cnpp.usda.gov/HealthyEatingIndex.htm

[7] Each teaspoon of sugar is equivalent to 4.2 grams of table sugar, and each gram of table sugar (carbohydrate) provides 4 calories.

[8] The data confirm that in the NHANES data there is variation in total fat per 100 grams across records with the same food code, but no variation in discretionary fat for the same records in the MyPyramid data.

same amount of discretionary fat, based on the "original" recipe.[8] ARS staff indicated that this problem will be addressed in future releases of NHANES/MyPyramid data. Our solution was to topcode grams of discretionary fat (solids and oils) to sum to grams of total fat, by decreasing both discretionary solid fats and discretionary oils in proportion to their original values.

Problems with added sugar

The MyPyramid Equivalents Database documentation indicates that added sugar was derived by different methods for NHANES 1999-00 and NHANES 2001-02. Methods were improved in the later years and the values of added sugar for 1999-00 were made consistent with 2001-02 for all food codes that appeared in both years with the same total sugar per 100 grams and *same sources of added sugar*. Our examination found that, for some foods, the added sugar values (per 100 grams) for identical food codes in different years varied significantly and calories from added sugar sometimes exceeded calories from total sugar. We chose to use consistent values of added sugar per 100 grams of food across all years of data. The following steps were taken to impose consistency on the added sugar values:

a) For each food code, added sugar per 100 grams was taken from the MyPyramid equivalents database file for 2001-02 ('Equiv0102').

b) For each food code, total sugar per 100 grams was calculated as the median in the NHANES 2001-02 food files.

c) RATIO-1 = ratio of (a) to (b)

d) 1999-2000 NHANES individual food records were merged with 1999-2000 Pyramid data.

e) RATIO-2 = ratio of added to total sugar per 100 grams on 1999-2000 individual food records

f) If RATIO-2 did not equal RATIO-1, added sugar on the 1999-2000 food record was set equal to total sugar multiplied by RATIO-1.

g) For all food codes in 1999-2000 and not in 2001-02, if added sugar (in grams) exceeded total sugar (in grams), added sugar was topcoded at the total sugar value.

After "cleaning" the values for discretionary solid fat and added sugar, 2 percent of food records had total SoFAAS calories in excess of total energy. These are mainly the result of rounding error. These records were topcoded at SoFAAS percent of calories equal to 100.

Foods Categorized for Frequent, Selective, and Occasional Consumption

We categorized NHANES foods according to the radiant pyramid/power calories concept, as described by Zelman and Kennedy (2005). This concept recommends that, within food group, the most nutrient-dense choices be consumed most frequently (to obtain recommended levels of nutrients while maintaining energy balance) and choices that are lowest in nutrient density should be consumed only occasionally.

Categorization of foods was implemented through an iterative approach. First, within each of the 10 broad food groups, foods were sorted by Nutrient Rich (NR) score and the percentage of calories from SoFAAS. Decision rules based on the combination of NR score and SoFAAS were applied to each borad food group to provide an initial "break" of foods into 3 categories, thus reducing the need to manually code all foods. Foods were then sorted by 3-digit food subgroup and we reviewed food descriptions, percentage of calories from SoFAAS, and total fat per 100 grams. We divided foods within a food subgroup so that foods with the lowest proportion of calories from SoFAAS/total fat content were included in the "consume frequently" category and foods with the highest proportion of calories from SoFAAS/total fat content were included in the "consume occasionally" category.

The rules used in assigning foods to the three categories were presented in Chapter 5, Table 5-2. These decision rules were informed by general recommendations made in MyPyramid guidance and/or in the Dietary Guidelines for Americans.

This categorization was applied only to foods in NHANES 1999-2002 because information about SoFAAS comes from the MyPyramid database, available only for 1999-2002 at the time of this study.

Table A-4— Number and Percent of NHANES Food Codes Categorized as Foods Suggested for Frequent, Selective, or Occasional Consumption

	Number of food codes			Percent of foods		
	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy occasionally	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy occasionally
All foods	1,244	1,426	2,021	26.5	30.4	43.1
Grains	147	230	159	27.4	42.9	29.7
Plain bread, rolls, bagels, Eng muffin	61	68	9	44.2	49.3	6.5
Tortillas and taco shells	2	3	2	28.6	42.9	28.6
Cereals	72	100	67	30.1	41.8	28.0
Rice and pasta	5	29	20	9.3	53.7	37.0
Other	7	30	61	7.1	30.6	62.2
Vegetables	237	382	245	27.4	44.2	28.4
Raw	42	6	5	79.2	11.3	9.4
Cooked, excl. potatoes	164	238	114	31.8	46.1	22.1
Cooked, potatoes	–	20	47	–	29.8	70.2
Green salads	1	2	36	2.6	5.1	92.3
Beans	24	43	11	30.8	55.1	14.1
Nuts and seeds	1	58	2	1.6	95.1	3.3
Soy products/ meal enhancement	5	15	30	10.0	30.0	60.0
Fruit	113	86	63	43.1	32.8	24.0
Fresh	39	5	11	70.9	9.1	20.0
Canned	35	45	15	36.8	47.4	15.8
Other fruit	2	12	13	7.4	44.4	48.2
Juice (all types)	37	24	24	43.5	28.2	28.2
Milk group	20	20	67	18.7	18.7	62.6
Fluid milk	8	12	41	13.1	19.7	67.2
Dry or Evaporated Milk	7	5	18	23.3	16.7	60.0
Yogurt	5	3	8	31.2	18.8	50.0
Meat and meat alternates	277	258	325	32.2	30.0	37.8
Red meats (beef, lamb, pork, veal)	49	81	76	23.8	39.3	36.9
Other meats	27	20	70	23.1	17.1	59.8
Poultry	84	92	57	36.0	39.5	24.5
Fish/shellfish	99	27	48	56.9	15.5	27.6
Eggs	2	25	24	3.9	49.0	47.1
Cheese	16	13	50	20.2	16.5	63.3
Mixed dishes	374	316	294	38.0	32.1	29.9
Mostly meat	194	150	76	46.2	35.7	18.1
Mostly grain (incl. pizza)	106	151	210	22.7	32.3	45.0
Soup, mostly vegetable	74	15	8	76.3	15.5	8.2
Condiments, Oils, Fats	12	33	99	8.3	22.9	68.8
Added fats	3	31	48	3.7	37.8	58.5
Sweet toppings	9	2	51	14.5	3.2	82.3
Sweets	–	89	562	–	13.7	86.3
Dairy-based desserts	–	80	48	–	62.5	37.5
Baked desserts	–	–	396	–	–	100.0
Other	–	9	118	–	7.1	92.9
Beverages	64	–	168	27.6	–	72.4
Coffee/tea	35	–	35	50.0	–	50.0
Soft drinks	16	–	13	55.2	–	44.8
Noncarbonated beverage	13	–	77	14.4	–	85.6
Alcohol	–	–	43	–	–	100.0
Salty snacks	–	12	39	–	23.5	76.5

– No foods in this category.
Source: NHANES 1999–2004 Individual Food Files.

Table A-4 shows the number of foods in the NHANES individual food files (unique food codes) categorized for frequent, selective, or occasional consumption.

Healthy Eating Index-2005 (HEI-2005)

HEI-2005 component and total scores were constructed using the following guidance and resources available from USDA/CNPP:[9]

- Healthy Eating Index-2005 Development and Evaluation Technical Report (Guenther, et al. November 2007), section on "Using the HEI-2005 to Assess Diets of Groups and Individuals"
- CNPP SAS program for computing HEI -2005 scores for a population or group (HEI2005_NHANES0102_PopulationScore.sas)
- Database for whole fruit

The HEI-2005 Technical Report contains the HEI-2005 scoring system and guidance for applying the scoring system to population groups.

The SAS program constructs HEI component scores and total score for a population or group. The program reads the NHANES individual food files, MyPyramid Equivalents Database (equiv0102), and the whole fruit database.

The whole fruit database is supplied as a supplement to the Pyramid equivalents database to support the calculation of the HEI component score for whole fruit. The database contains records corresponding to NHANES 2001-02 food records for persons age 2 and above. The file contains two data items—"whole fruit" and "fruit juice"—measured in cup equivalents per 100 grams of food. For each food, the total fruit cup equivalents from the MyPyramid database was assigned to either whole fruit or juice; foods containing both were assigned to one category depending on the majority component.

Methods for calculating HEI-2005 scores

We calculated HEI-2005 scores for groups of program participants and nonparticipants, using the pooled sample of persons in NHANES 1999-2002. These steps were followed:

a) Merged the whole fruit database to NHANES 1999-2000 food records, by food code and imputed "whole fruit" and "fruit juice" for foods appearing in 1999-2000 and not in the whole fruit database.

b) Followed the procedures in the CNPP SAS program to apply the HEI scoring system "to the ratio of the population's mean food group (or nutrient) intake to the population's mean energy intake", using the SUDAAN PROC RATIO procedure.

The HEI-2005 scoring system is shown in Table A-5. Population scores were obtained using the SUDAAN PROC RATIO procedure, using dietary recall sampling weights and age adjustment.

Statistical Methods

We produced estimates for this report using the following two statistical software packages:

- ***PC-SIDE: Software for Intake Distribution Estimation***—used to estimate means, percentiles, and standard errors for nutrient intake tables.
- ***SUDAAN (version 9.0)***—used to calculate means, standard errors, and tests of statistical significance for non-nutrient tables, using the DESCRIPT, CROSSTAB, and RATIO procedures.

Sample weights were used to account for sample design and nonresponse. Information about the NHANES survey design (strata and primary sampling units) was used for estimating variances and testing for statistical significance in SUDAAN.

[9] The HEI-2005 Technical Report and supporting files are available at http://www.cnpp.usda.gov/HealthyEatingIndex.htm

Table A-5—HEI-2005 Scoring System

Component	Max Score	Criteria for: Zero Score	Criteria for: Max Score	Equation for Score
Total fruit	5	Zero intake	≥ 0.8 cup equivalents per 1000 kcal	$\frac{5}{0.8} \times \frac{f\_total}{energy/1000}$
Whole fruit	5	Zero intake	≥ 0.4 cup equivalents per 1000 kcal	$\frac{5}{0.4} \times \frac{wholefrt}{energy/1000}$
Total vegetables	5	Zero intake	≥ 1.1 cup equivalents per 1000 kcal	$\frac{5}{1.1} \times \frac{v\_total}{energy/1000}$
Dark green & orange vegetables & legumes	5	Zero intake	≥ 0.4 cup equivalents per 1000 kcal	$\frac{5}{0.4} \times \frac{v\_dol}{energy/1000}$
Total grains	5	Zero intake	≥ 3.0 oz equivalents per 1000 kcal	$\frac{5}{3.0} \times \frac{g\_total}{energy/1000}$
Whole grains	5	Zero intake	≥ 1.5 oz equivalents per 1000 kcal	$\frac{5}{1.5} \times \frac{g\_whl}{energy/1000}$
Milk	10	Zero intake	≥ 1.3 cup equivalents per 1000 kcal	$\frac{10}{1.3} \times \frac{d\_total}{energy/1000}$
Meat & beans	10	Zero intake	≥ 2.5 oz equivalents per 1000 kcal	$\frac{10}{2.5} \times \frac{allmeat}{energy/1000}$
Oils	10	Zero intake	≥ 12 grams per 1000 kcal	$\frac{10}{12} \times \frac{discfat\_oil}{energy/1000}$
Saturated fat	10	≥ 15% of kcal	≤ 7% of kcal	For saturated fat between min & max: If >10 then HEI = 8-(8/5 x (%sfat-10)) If ≤10 then HEI =10-(2/3 x (%sfat-7))

Sodium	10	≥ 2.0 grams per 1000 kcal	≤ 0.7 grams per 1000 kcal	For sodium between min & max:
				If >1100 then
				HEI = 8-(8 x (sodium-1100)/900))
				If ≤1100 then
				HEI =10-(2 x (sodium-700)/400))

Calories from SoFAAS	20	≥ 50% of kcal	≤ 20% of kcal	If % calories from SoFAAS < 50: HEI = Min((50 - %SoFAAS)/1.5, 20)

Source: Guenther, et al., 2007.

Sampling Weights

Tables are based on either NHANES 1999-2004 (6 years) or NHANES 1999-2002 (4 years). Accordingly, 6-year weights or 4-year weights were used.

NHANES 1999-2002 public files include two sets of sampling weights: Interview weights and MEC exam weights (MEC weights account for the additional nonresponse to the MEC exam). NHANES 2003-04 also include dietary intake weights. All weights sum to the total US civilian non-institutionalized population in year 2000.

Our sample for analyses includes only persons with complete dietary recalls. We followed the documentation provided in *What We Eat in America (WWEIA)* (Moshfegh et al., 2005, Appendix B) to construct dietary intake sampling weights for NHANES 1999-2002, consistent with the intake weights released with NHANES 2003-04. Dietary intake weights are constructed from the MEC exam

weights: a) to account for additional nonresponse to the dietary recall, and b) to provide proportionate weighting of weekday and weekend recalls. The second adjustment is needed because proportionately more dietary recalls occurred on weekends than on weekdays. Since food intake varies by day of week, use of MEC weights would disproportionately represent intakes on weekends. Sample weights for persons with weekday vs. weekend recalls were recalibrated, within demographic group, so that weekday recalls account for 4/7 of the total sample weight.

Dietary intake weights for NHANES 1999-2002 and for NHANES 2003-04 each sum to the US population in year 2000. To construct 6-year weights, we multiplied the 1999-2002 weights by two-thirds and the 2003-04 weights by one-third. Jacknife weights (87 weights) were constructed to account for the NHANES survey design when using PC-SIDE software.

Age Adjusted Totals

This report presents estimates for children age 5-18 years old, in three age groups and "Total". We used age-adjustment to produce estimates for the "Total" of all children age 5-18. The age-adjusted estimates are calculated as the weighted average of estimates for age group with the weights equal to year 2000 population. For example, in Appendix B, three age group estimates (5-8, 9-13, and 14-18) are calculated by weighting responses by NHANES dietary intake weights. The "Total" rows weight the age group estimates by population weights so that each column in the tables (All Children; All NSLP Participants; and NSLP Participants and Nonparticipants by income group) is weighted by the same set of weights. This age adjustment eliminates between-group differences due solely to differences in the age distribution of the groups. Age adjustment is an option within the SUDAAN software.

Table A-6 shows the population distribution used for age-adjustment.

Table A-6— Census 2000 population for DRI Age Groups

Age	Population (1,000's)
5-8 years	16,282
9-13 years	20,743
14-18 years	20,144

Source: Census 2000 Summary File (SF1).

Tests of Statistical Significance

We tested the statistical significance of differences in means and proportions between NSLP participants and each group of nonparticipants using t-tests. When multiple outcome categories were examined simultaneously in Appendix B tables of usual nutrient intake distributions, we used the Bonferroni adjustment to adjust for multiplicity (Lohr, 1999). The statistical significance of differences in distributions (excluding usual nutrient intake distributions) between NSLP participants and each group of nonparticipants was tested using chi-square-tests.

Indicators of Statistical Reliability

We tested all estimates for statistically reliability according to recommendations in the *NHANES Analytic Guidelines* (NCHS, 1996). Tables include indicators of estimates that are statistically unreliable due to small sample size or large coefficient of variation.

NHANES recommends flagging estimates as unreliable if any of the following conditions are met:

1. **Inadequate sample size for normal approximation.** For means and for proportions based on commonly occurring events (where $0.25 < P < 0.75$), an estimate is flagged if it is based on a cell size of less than 30 times a "broadly calculated average design effect."
2. **Large coefficient of variation.** Estimates are flagged if the coefficient of variation (ratio of the standard error to the mean expressed as a percent) is greater than 30.

3. **Inadequate sample size for uncommon or very common events.** For proportions below 0.25 or above 0.75, the criteria for statistical reliability is that the cell size be sufficiently large that the minimum of nP and n(1-P) be greater than or equal to 8 times a broadly calculated average design effect, where n is the cell size and P is the estimated proportion.

For each data item, the design effect was calculated for each table cell as the ratio of the complex sampling design variance calculated by SUDAAN, to the simple random sample variance. The average design effect for a data item is the average of estimated design effects across age groups (pooled genders) within a program participation/income group (FS participants, income eligible nonparticipants, and higher-income nonparticipants).

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Appendix B
Nutrient Intake Tables

Sample Size

Energy

Vitamins

Minerals

Fiber

Macronutrients

Table B-1—NHANES Respondents with Complete Dietary Recalls, 1999-2004: Sample Sizes and Weighted Population Counts

	All Income Groups				Income-eligible for Free/RP Meals				Higher-income			
	All Children		All NSLP Participants		NSLP Participants		Nonparticipants		NSLP Participants		Nonparticipants	
	Sample size	Population	Sample size	Population	Sample size	Population	Sample size	Population	Sample size	Population	Sample size	Population
Both sexes												
5–8 years	779	6,253,773	473	3,533,926	321	2,261,657	161	860,600	152	1,272,269	129	1,697,184
9–13 years	1,360	8,191,229	794	4,683,803	512	2,787,781	315	1,455,632	282	1,896,022	224	1,938,256
14–18 years	1,407	6,830,627	474	2,410,143	304	1,248,488	474	1,605,421	170	1,161,655	408	2,599,339
Total	3,546	21,275,629	1,741	10,627,872	1,137	6,297,926	950	3,921,653	604	4,329,946	761	6,234,779
Boys												
5–8 years	386	3,159,589	238	1,712,777	167	1,107,106	78	474,901	71	605,671	60	855,665
9–13 years	660	4,297,978	405	2,569,269	257	1,487,907	147	816,201	148	1,081,362	102	889,151
14–18 years	748	3,737,596	292	1,606,092	180	784,640	231	755,315	112	821,452	202	1,266,878
Total	1,794	11,195,163	935	5,888,138	604	3,379,653	456	2,046,417	331	2,508,485	364	3,011,694
Girls												
5–8 years	393	3,094,184	235	1,821,151	154	1,154,552	83	385,699	81	666,599	69	841,520
9–13 years	700	3,893,251	389	2,114,535	255	1,299,874	168	639,431	134	814,661	122	1,049,105
14–18 years	659	3,093,030	182	804,051	124	463,848	243	850,107	58	340,203	206	1,332,461
Total	1,752	10,080,465	806	4,739,737	533	2,918,274	494	1,875,237	273	1,821,463	397	3,223,086

Notes: Weighted population is based on NHANES examination weights, recalibrated to account for nonresponse to the dietary recall and to proportionately weight weekday and weekend recalls (See *What We Eat In American (WWEA),*Appendix B). Six percent of the NHANES examination sample did not have complete dietary recalls NHANES is weighted by year 2000 U.S. Census population totaling 281 million persons. Table excludes girls who were pregnant or breastfeeding.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session (see Appendix A). Excludes pregnant and breastfeeding girls.

Table B-2—Food Energy (kcal): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	2099	*(31.1)*	779	1912	*(52.6)*	1,360	2073	*(49.5)*	1,407	2313	*(59.3)*
All NSLP Participants	1,741	2181	*(50.2)*	473	1951	*(73.0)*	794	2128	*(68.7)*	474	2465	*(113.3)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	2119	*(61.8)*	321	1921	*(87.8)*	512	2087	*(95.6)*	304	2349	*(133.0)*
Nonparticipants	950	** 1894	*(58.0)*	161	1790	*(80.9)*	315	1906	*(120.2)*	474	* 1987	*(95.2)*
Higher-income[2]												
NSLP Participants	604	2260	*(66.2)*	152	2000	*(70.3)*	282	2191	*(90.8)*	170	2590	*(163.1)*
Nonparticipants	761	2121	*(47.7)*	129	1899	*(99.9)*	224	2073	*(73.5)*	408	2393	*(72.0)*
						Boys						
All Children	1,794	2291	*(46.8)*	386	2009	*(66.6)*	660	2231	*(78.1)*	748	2635	*(95.8)*
All NSLP Participants	935	2332	*(67.6)*	238	2032	*(76.5)*	405	2283	*(100.8)*	292	2684	*(159.4)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	2222	*(85.0)*	167	1998	*(105.5)*	257	2162	*(133.7)*	180	2507	*(190.5)*
Nonparticipants	456	2064	*(93.8)*	78	1847	*(114.2)*	147	2063	*(195.8)*	231	2283	*(165.0)*
Higher-income[2]												
NSLP Participants	331	2465	*(93.2)*	71	2089	*(97.1)*	148	2454	*(142.6)*	112	2855	*(221.1)*
Nonparticipants	364	2370	*(79.2)*	60	2064 u	*(167.6)*	102	2228	*(122.1)*	202	2821	*(116.7)*
						Girls						
All Children	1,752	1878	*(39.1)*	393	1812	*(81.7)*	700	1898	*(58.4)*	659	1924	*(61.2)*
All NSLP Participants	806	1947	*(63.9)*	235	1874	*(122.0)*	389	1941	*(90.4)*	182	2027	*(118.2)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	1977	*(82.9)*	154	1848	*(139.0)*	255	2001	*(136.4)*	124	2082	*(155.2)*
Nonparticipants	494	* 1716	*(62.9)*	83	1719	*(113.1)*	168	1702	*(108.9)*	243	1728	*(104.7)*
Higher-income[2]												
NSLP Participants	273	1904	*(69.7)*	81	1920	*(101.0)*	134	1842	*(93.8)*	58	1951 u	*(158.5)*
Nonparticipants	397	1886	*(54.4)*	69	1731 u	*(107.5)*	122	1942	*(87.9)*	206	1985	*(86.0)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-3—Food Energy (kcal): Distribution of Usual Intake

	Percentiles																	
	Boys									Girls								
	5th	10th	15th	25th	50th	75th	85th	90th	95th	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																		
5-8 years	1430	1545	1627	1752	1995	2245	2387	2487	2642	1328	1423	1490	1593	1795	2013	2137	2223	2356
9-13 years	1547	1683	1779	1928	2215	2504	2668	2786	2976	1314	1422	1499	1618	1862	2139	2304	2422	2608
14-18 years	1656	1842	1972	2172	2575	3030	3304	3502	3820	1243	1379	1474	1616	1891	2195	2376	2508	2719
All NSLP Participants																		
5-8 years	1545	1633	1698	1799	2009	2241	2372	2463	2600	1376	1479	1550	1657	1864	2081	2201	2284	2409
9-13 years	1591	1722	1814	1955	2241	2564	2756	2896	3118	1324	1437	1517	1644	1903	2197	2370	2494	2688
14-18 years	1710	1882	2003	2198	2626	3098	3359	3551	3865	1354	1484	1575	1717	1999	2307	2484	2607	2797
Income-eligible Participants																		
5-8 years	1538	1618	1676	1767	1963	2194	2332	2430	2580	1314	1422	1498	1612	1831	2067	2203	2299	2444
9-13 years	1477	1603	1693	1831	2115	2441	2637	2779	3005	1328	1452	1542	1684	1965	2279	2465	2597	2800
14-18 years	1598	1763	1882	2070	2449	2867	3118	3305	3615	1447	1569	1647	1766	2042	2365	2537	2657	2846
Income-eligible Nonparticipants																		
5-8 years	1180	1309	1394	1535	1833	2136	2291	2399	2570	1200	1293	1359	1464	1682	1933	2083	2192	2363
9-13 years	1379	1511	1605	1750	2037	2343	2517	2641	2836	1166	1259	1325	1430	1651	1914	2080	2204	2413
14-18 years	1400	1571	1689	1868	2226	2632	2881	3064	3361	1082	* 1203	* 1287	1415	1676	1981	2172	2315	2552
Higher-income Participants																		
5-8 years	1569	1681	1757	1871	2085	2303	2422	2503	2624	1493	1584	1646	1738	1915	2096	2195	2262	2363
9-13 years	1793	1924	2013	2147	2411	2711	2896	3034	3260	1341	1434	1500	1604	1813	2049	2189	2288	2442
14-18 years	1821	2013	2144	2346	2768	3283	3599	3826	4177	1280 u	1408 u	1499 u	1639 u	1921 u	2231 u	2409 u	2534 u	2727 u
Higher-income Nonparticipants																		
5-8 years	1425 u	1545 u	1630 u	1762 u	2031 u	2330 u	2504 u	2627 u	2818 u	1300 u	1384 u	1443 u	1533 u	1714 u	1910 u	2022 u	2101 u	2221 u
9-13 years	1675	1794	1876	1999	2228	2453	2573	2656	2782	1397	1508	1585	1701	1926	2166	2302	2398	2546
14-18 years	1836	2033	2168	2374	2776	3218	3478	3665	3961	1296	1432	1528	1675	1962	2263	2435	2558	2754

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-4—Vitamin A (mcg RAE): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	603	*(21.7)*	779	642	*(46.9)*	1,360	583	*(29.1)*	1,407	584	*(35.0)*
All NSLP Participants	1,741	619	*(34.6)*	473	667	*(75.5)*	794	619	*(44.7)*	474	571	*(56.3)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	612	*(55.9)*	321	696	*(114.4)*	512	622	*(87.9)*	304	518	*(86.3)*
Nonparticipants	950	* 465	*(25.6)*	161	523	*(45.5)*	315	473	*(52.5)*	474	399	*(31.8)*
Higher-income[2]												
NSLP Participants	604	631	*(34.1)*	152	626	*(67.7)*	282	640	*(51.4)*	170	628	*(57.3)*
Nonparticipants	761	646	*(34.4)*	129	631	*(63.6)*	224	586	*(50.9)*	408	724	*(63.9)*
						Boys						
All Children	1,794	660	*(35.2)*	386	720	*(81.2)*	660	637	*(45.0)*	748	623	*(51.3)*
All NSLP Participants	935	702	*(59.6)*	238	815	*(148.2)*	405	684	*(72.8)*	292	606	*(70.4)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	696	*(99.4)*	167	893	*(231.2)*	257	669	*(152.9)*	180	527	*(110.8)*
Nonparticipants	456	497	*(32.3)*	78	520	*(42.6)*	147	490	*(68.4)*	231	482	*(53.1)*
Higher-income[2]												
NSLP Participants	331	709	*(47.8)*	71	696	*(96.2)*	148	750	*(80.9)*	112	680	*(68.9)*
Nonparticipants	364	672	*(44.6)*	60	638 u	*(66.7)*	102	646	*(94.1)*	202	734	*(66.5)*
						Girls						
All Children	1,752	540	*(24.7)*	393	562	*(46.0)*	700	522	*(35.7)*	659	537	*(46.1)*
All NSLP Participants	806	523	*(37.6)*	235	528	*(45.9)*	389	539	*(44.8)*	182	501	*(93.4)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	527	*(52.5)*	154	508	*(35.4)*	255	570	*(70.7)*	124	502	*(137.0)*
Nonparticipants	494	435	*(42.0)*	83	527	*(87.5)*	168	451	*(81.8)*	243	326	*(37.5)*
Higher-income[2]												
NSLP Participants	273	519	*(49.6)*	81	562	*(95.1)*	134	492	*(52.6)*	58	503 u	*(102.9)*
Nonparticipants	397	624	*(53.3)*	69	625	*(108.9)*	122	535	*(50.2)*	206	715	*(107.4)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-5—Vitamin A (mcg RAE): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	71.6	*(2.34)*	779	>97	*(1.00)*	1,360	71.2	*(4.72)*	1,407	45.3	*(5.09)*
All NSLP Participants	1,741	71.6	*(3.47)*	473	>97	*(0.94)*	794	74.6	*(5.66)*	474	41.2	*(8.71)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	68.0	*(4.97)*	321	>97	*(1.22)*	512	71.5	*(8.65)*	304	33.6 u	*(12.11)*
Nonparticipants	950	* 55.3	*(4.07)*	161	94.6 u	*(2.88)*	315	52.4	*(10.60)*	474	18.9	*(4.98)*
Higher-income[3]												
NSLP Participants	604	76.4	*(3.66)*	152	>97	*(1.73)*	282	78.6	*(5.88)*	170	50.9	*(9.15)*
Nonparticipants	761	79.9	*(3.20)*	129	>97	*(1.64)*	224	77.8	*(7.22)*	408	63.9	*(6.04)*
	Boys											
All Children	1,794	72.2	*(3.26)*	386	>97	*(0.30)*	660	74.8	*(6.24)*	748	42.3	*(7.49)*
All NSLP Participants	935	72.7	*(4.27)*	238	>97	*(0.21)*	405	78.9	*(7.09)*	292	39.1	*(10.70)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	65.4	*(6.55)*	167	>97	*(0.21)*	257	68.8	*(12.30)*	180	27.3 u	*(15.30)*
Nonparticipants	456	57.9	*(5.41)*	78	96.7 u	*(2.67)*	147	54.6	*(13.80)*	231	22.2 u	*(7.73)*
Higher-income[3]												
NSLP Participants	331	81.0	*(3.93)*	71	>97	*(0.32)*	148	90.4 u	*(5.84)*	112	52.3	*(10.30)*
Nonparticipants	364	79.3	*(4.50)*	60	>97	*(0.93)*	102	81.2	*(10.40)*	202	57.2	*(8.40)*
	Girls											
All Children	1,752	71.0	*(3.34)*	393	97.0 u	*(1.99)*	700	67.2	*(7.14)*	659	49.0	*(6.66)*
All NSLP Participants	806	70.9	*(5.86)*	235	>97	*(1.81)*	389	69.4	*(9.11)*	182	45.5 u	*(15.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	72.2	*(7.75)*	154	>97	*(2.38)*	255	74.5	*(12.10)*	124	44.3 u	*(19.80)*
Nonparticipants	494	* 52.5	*(6.27)*	83	92.0 u	*(5.56)*	168	49.4 u	*(16.50)*	243	16.1 u	*(6.43)*
Higher-income[3]												
NSLP Participants	273	69.8	*(7.40)*	81	>97	*(3.28)*	134	63.0	*(11.30)*	58	47.4 u	*(18.90)*
Nonparticipants	397	80.7	*(4.56)*	69	>97	*(3.17)*	122	74.8	*(10.00)*	206	70.3	*(8.66)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-6—Vitamin A (mcg RAE): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	275	390	437	472	527	652	837	975	1086	1279	275	298	341	375	432	546	669	746	801	888
9-13 years	445	291	342	380	444	587	776	899	992	1148	420	265	305	336	385	495	629	713	774	872
14-18 years	630	245	300	343	414	576	780	910	1006	1163	485	179	226	263	327	478	680	814	918	1096
All NSLP Participants																				
5-8 years	275	429	478	514	576	728	954	1116	1246	1477 u	275	313	354	385	432	521	615	670	710	772
9-13 years	445	318	368	405	469	621	826	964	1072	1261	420	275	315	345	394	507	648	737	803	909
14-18 years	630	258	308	347	411	558	748	871	965	1119	485	185	231	266	324	459	631	742	826	962
Income-eligible Participants																				
5-8 years	275	438	488	526	591	762	1038	1250 u	1428 u	1762 u	275	304	340	366	407	493	593	653	696	765
9-13 years	445	277	321	355	412	552	776	960	1121 u	1436 u	420	279	325	360	418	543	688	778	844	953
14-18 years	630	221	258	287	338	467	653	778	875	1036	485	163 u	207 u	243	304	448	641	768	864 u	1023 u
Income-eligible Nonparticipants																				
5-8 years	275	297	339	369	* 416	511	614	672	713	776	275	247	290	321	374	492	642	737	809	926
9-13 years	445	207	257	293	350	467	608	698	762	856	420	212	247	273	317	417	547	632	696	803
14-18 years	630	184	227	260	315	442	605	710	789	917	485	111	134	158	204	292	409	496	556	648
Higher-income Participants																				
5-8 years	275	418	468	505	564	688	820	890	936	1002	275	352	394	424	469	557	649	700	735	787
9-13 years	445	389	449	493	564	717	900	1013	1095	1226	420	262	300	328	373	470	588	660	713	798
14-18 years	630	313	372	416	488	645	833	949	1034	1168	485	220 u	264 u	297 u	351 u	472 u	621 u	714 u	782 u	892 u
Higher-income Nonparticipants																				
5-8 years	275	365 u	415 u	450 u	506 u	621 u	751 u	827 u	881 u	965 u	275	305	356	394	455	591	757	860	936	1059
9-13 years	445	315	373	417	487	633	792	879	937	1019	420	292	337	369	419	522	637	703	750	823
14-18 years	630	286	355	407	494	686	922	1069	1176	1347	485	256	319	368	450	639	893	1066	1200	1431

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-7—Vitamin C (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	90	*(3.61)*	779	92	*(6.51)*	1,360	81	*(4.83)*	1,407	97	*(7.23)*
All NSLP Participants	1,741	90	*(4.95)*	473	98	*(8.78)*	794	85	*(6.49)*	474	88	*(10.15)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	96	*(5.75)*	321	105	*(10.17)*	512	93	*(8.48)*	304	92	*(11.12)*
Nonparticipants	950	85	*(6.72)*	161	86	*(11.66)*	315	77	*(11.53)*	474	92	*(11.74)*
Higher-income[2]												
NSLP Participants	604	82	*(6.93)*	152	86	*(12.66)*	282	76	*(8.49)*	170	84	*(14.27)*
Nonparticipants	761	89	*(6.29)*	129	88	*(13.60)*	224	72	*(8.68)*	408	107	*(9.90)*
Boys												
All Children	1,794	94	*(5.34)*	386	94	*(9.27)*	660	84	*(7.66)*	748	106	*(10.67)*
All NSLP Participants	935	92	*(6.85)*	238	104	*(12.64)*	405	86	*(9.64)*	292	86	*(13.11)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	97	*(7.78)*	167	115	*(14.49)*	257	85	*(11.88)*	180	91	*(13.99)*
Nonparticipants	456	87	*(9.30)*	78	82	*(14.86)*	147	81	*(18.38)*	231	100	*(14.68)*
Higher-income[2]												
NSLP Participants	331	85	*(9.38)*	71	85 u	*(17.68)*	148	87	*(12.59)*	112	83	*(18.10)*
Nonparticipants	364	99	*(10.07)*	60	84 u	*(20.23)*	102	80	*(15.22)*	202	* 133	*(16.57)*
Girls												
All Children	1,752	84	*(4.74)*	393	91	*(9.14)*	700	77	*(5.64)*	659	86	*(9.41)*
All NSLP Participants	806	89	*(7.09)*	235	92	*(12.20)*	389	85	*(8.35)*	182	91	*(15.47)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	97	*(8.69)*	154	95	*(14.27)*	255	101	*(12.08)*	124	94	*(18.30)*
Nonparticipants	494	82	*(9.37)*	83	90	*(18.54)*	168	71	*(11.58)*	243	85	*(17.88)*
Higher-income[2]												
NSLP Participants	273	79	*(9.96)*	81	88	*(18.04)*	134	61	*(10.54)*	58	88 u	*(21.59)*
Nonparticipants	397	79	*(7.75)*	69	91 u	*(18.14)*	122	65	*(9.54)*	206	82	*(11.16)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-8—Vitamin C (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	87.0	*(1.72)*	779	>97	*(0.98)*	1,360	92.5	*(2.11)*	1,407	71.0	*(4.62)*
All NSLP Participants	1,741	86.9	*(2.93)*	473	>97	*(1.00)*	794	94.7	*(2.13)*	474	67.3	*(8.56)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	88.6	*(3.15)*	321	>97	*(1.29)*	512	96.5 u	*(2.17)*	304	70.6	*(9.20)*
Nonparticipants	950	83.4	*(4.04)*	161	95.9 u	*(3.08)*	315	88.1	*(7.10)*	474	66.2	*(9.34)*
Higher-income[3]												
NSLP Participants	604	83.8	*(4.22)*	152	>97	*(1.48)*	282	88.9	*(4.22)*	170	64.0	*(11.96)*
Nonparticipants	761	86.2	*(2.79)*	129	95.7 u	*(2.75)*	224	87.9	*(5.50)*	408	75.0	*(5.67)*
	Boys											
All Children	1,794	88.5	*(2.37)*	386	>97	*(1.15)*	660	93.9	*(3.07)*	748	73.8	*(6.36)*
All NSLP Participants	935	86.5	*(3.86)*	238	>97	*(0.62)*	405	95.4 u	*(2.88)*	292	64.4	*(11.30)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	87.7	*(4.39)*	167	>97	*(0.22)*	257	95.6 u	*(3.53)*	180	67.3	*(12.80)*
Nonparticipants	456	84.6	*(4.94)*	78	95.4 u	*(4.62)*	147	89.6 u	*(11.30)*	231	68.7	*(8.20)*
Higher-income[3]												
NSLP Participants	331	84.8	*(5.28)*	71	>97	*(2.47)*	148	95.5 u	*(3.50)*	112	60.9	*(15.40)*
Nonparticipants	364	90.7	*(3.09)*	60	94.4 u	*(4.66)*	102	92.6 u	*(6.15)*	202	84.9	*(5.10)*
	Girls											
All Children	1,752	85.3	*(2.48)*	393	96.9 u	*(1.60)*	700	91.0	*(2.88)*	659	67.7	*(6.72)*
All NSLP Participants	806	88.3	*(4.21)*	235	>97	*(1.85)*	389	93.9	*(3.17)*	182	73.3	*(12.20)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	90.3	*(4.12)*	154	96.8 u	*(2.51)*	255	>97	*(2.32)*	124	76.3	*(12.00)*
Nonparticipants	494	82.2	*(5.95)*	83	96.5 u	*(3.82)*	168	86.2	*(7.20)*	243	63.9	*(16.00)*
Higher-income[3]												
NSLP Participants	273	83.6	*(6.33)*	81	>97	*(1.72)*	134	80.1	*(8.67)*	58	71.6 u	*(16.90)*
Nonparticipants	397	82.2	*(4.52)*	69	>97	*(2.87)*	122	83.8 u	*(8.72)*	206	65.6	*(9.94)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-9—Vitamin C (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	22	28	37	44	56	84	122	146	163	191	22	26	35	42	54	82	118	141	157	184
9-13 years	39	37	44	50	59	79	103	119	130	148	39	34	40	45	53	72	95	110	121	138
14-18 years	63	32	41	48	61	94	137	165	186	219	56	24	32	38	49	74	111	135	154	185
All NSLP Participants																				
5-8 years	22	38	47	55	67	95	134	157	174	198	22	28	36	43	55	82	119	143	161	191
9-13 years	39	40	47	52	61	81	105	121	132	151	39	37	44	50	59	79	105	121	132	150
14-18 years	63	27	35	41	52	78	110	132	148	175	56	30 u	37	44	54	80	116	140	159	190
Income-eligible Participants																				
5-8 years	22	46	56	63	77	109	147	168	182	203	22	26	35	42	55	85	125	149	167	197
9-13 years	39	40	48	53	62	81	104	118	129	145	39	46	55	62	73	97	124	140	152	170
14-18 years	63	28	36	43	54	83	118	140	155	180	56	28 u	37 u	45 u	58	85	120	144	163	195
Income-eligible Nonparticipants																				
5-8 years	22	23 u	29	34	44 u	70	107	130	148	180	22	25 u	34 u	41 u	53	83	120	142	158	181
9-13 years	39	31 u	39 u	44 u	54 u	76	103	118	129	146	39	29	35	40	48	66	89	103	114	132
14-18 years	63	27	35	42	55	88	132	159	180	214	56	19	26 u	32	44 u	73	113	141	161	194
Higher-income Participants																				
5-8 years	22	27 u	34 u	40 u	50 u	74 u	108 u	131 u	149 u	181 u	22	33 u	41	46	56	78	108	129	146	176 u
9-13 years	39	40	47	52	60	80	106	123	135	156	39	27	32	36	42	57	75	87	96	111
14-18 years	63	27 u	34	40	50	74	106	127	143	170	56	31 u	38 u	44 u	53 u	76 u	110 u	133 u	152 u	185 u
Higher-income Nonparticipants																				
5-8 years	22	21 u	28 u	34 u	45 u	71 u	109 u	136 u	157 u	193 u	22	27 u	36 u	43 u	55 u	84 u	121 u	142 u	156 u	177 u
9-13 years	39	36	42	47	55	73	98	114	126	146	39	29	34	38	45	60	79	92	100	115
14-18 years	63	42	54	63	79	120	172	205	228	266	56	26	32	38	47	71	106	129	147	176

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-10—Vitamin B_6: Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	1.71	*(0.039)*	779	1.68	*(0.074)*	1,360	1.63	*(0.059)*	1,407	1.82	*(0.070)*
All NSLP Participants	1,741	1.77	*(0.056)*	473	1.74	*(0.096)*	794	1.69	*(0.071)*	474	1.87	*(0.119)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	1.74	*(0.067)*	321	1.81	*(0.118)*	512	1.66	*(0.098)*	304	1.76	*(0.131)*
Nonparticipants	950	* 1.53	*(0.076)*	161	1.61	*(0.124)*	315	1.47	*(0.164)*	474	1.50	*(0.097)*
Higher-income[2]												
NSLP Participants	604	1.78	*(0.071)*	152	1.61	*(0.113)*	282	1.74	*(0.088)*	170	1.99	*(0.158)*
Nonparticipants	761	1.74	*(0.068)*	129	1.61	*(0.139)*	224	1.62	*(0.104)*	408	2.00	*(0.110)*
						Boys						
All Children	1,794	1.90	*(0.057)*	386	1.76	*(0.087)*	660	1.77	*(0.094)*	748	2.16	*(0.115)*
All NSLP Participants	935	1.91	*(0.076)*	238	1.80	*(0.103)*	405	1.82	*(0.110)*	292	2.11	*(0.172)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	1.86	*(0.095)*	167	1.89	*(0.144)*	257	1.72	*(0.159)*	180	1.98	*(0.187)*
Nonparticipants	456	1.67	*(0.125)*	78	1.57	*(0.165)*	147	1.60	*(0.278)*	231	1.84	*(0.185)*
Higher-income[2]												
NSLP Participants	331	1.95	*(0.096)*	71	1.65 u	*(0.145)*	148	1.95	*(0.130)*	112	2.25	*(0.215)*
Nonparticipants	364	2.00	*(0.102)*	60	1.75 u	*(0.198)*	102	1.82	*(0.165)*	202	2.44	*(0.168)*
						Girls						
All Children	1,752	1.50	*(0.051)*	393	1.60	*(0.119)*	700	1.47	*(0.069)*	659	1.42	*(0.068)*
All NSLP Participants	806	1.53	*(0.069)*	235	1.67	*(0.158)*	389	1.54	*(0.085)*	182	1.38	*(0.102)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	1.58	*(0.087)*	154	1.73	*(0.184)*	255	1.60	*(0.103)*	124	1.40	*(0.156)*
Nonparticipants	494	1.39	*(0.079)*	83	1.66	*(0.188)*	168	1.31	*(0.116)*	243	1.20	*(0.084)*
Higher-income[2]												
NSLP Participants	273	1.46	*(0.085)*	81	1.57	*(0.171)*	134	1.45	*(0.112)*	58	1.36 u	*(0.153)*
Nonparticipants	397	1.50	*(0.092)*	69	1.48 u	*(0.196)*	122	1.45	*(0.132)*	206	1.58	*(0.144)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-11—Vitamin B_6: Percent of Children With Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	96.0	*(0.70)*	779	>97	*(0.00)*	1,360	>97	*(0.36)*	1,407	88.9	*(2.08)*
All NSLP Participants	1,741	>97	*(0.93)*	473	>97	*(0.00)*	794	>97	*(0.30)*	474	92.4	*(2.80)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	96.6	*(1.41)*	321	>97	*(0.02)*	512	>97	*(0.72)*	304	90.7	*(4.20)*
Nonparticipants	950	* 91.4	*(1.65)*	161	>97	*(0.41)*	315	96.8 u	*(2.31)*	474	* 77.5	*(4.38)*
Higher-income[3]												
NSLP Participants	604	>97	*(1.05)*	152	>97	*(0.12)*	282	>97	*(0.48)*	170	94.7 u	*(3.15)*
Nonparticipants	761	96.8	*(1.10)*	129	>97	*(0.00)*	224	>97	*(0.74)*	408	91.2	*(3.25)*
	Boys											
All Children	1,794	>97	*(0.63)*	386	>97	*(0.00)*	660	>97	*(0.42)*	748	95.4	*(1.85)*
All NSLP Participants	935	>97	*(0.80)*	238	>97	*(0.00)*	405	>97	*(0.40)*	292	95.8 u	*(2.38)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(1.34)*	167	>97	*(0.00)*	257	>97	*(1.28)*	180	94.0 u	*(3.84)*
Nonparticipants	456	95.1	*(2.01)*	78	>97	*(0.73)*	147	96.5 u	*(3.78)*	231	89.2	*(4.64)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.90)*	71	>97	*(0.00)*	148	>97	*(0.11)*	112	>97	*(2.73)*
Nonparticipants	364	>97	*(0.51)*	60	>97	*(0.00)*	102	>97	*(0.23)*	202	>97	*(1.53)*
	Girls											
All Children	1,752	93.4	*(1.34)*	393	>97	*(0.00)*	700	>97	*(0.60)*	659	81.2	*(4.02)*
All NSLP Participants	806	95.1	*(2.29)*	235	>97	*(0.00)*	389	>97	*(0.45)*	182	85.7	*(6.92)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	95.0	*(3.06)*	154	>97	*(0.05)*	255	>97	*(0.46)*	124	85.2 u	*(9.26)*
Nonparticipants	494	88.2	*(2.46)*	83	>97	*(0.11)*	168	>97	*(2.02)*	243	67.2	*(7.15)*
Higher-income[3]												
NSLP Participants	273	95.7 u	*(2.82)*	81	>97	*(0.23)*	134	>97	*(1.10)*	58	88.2 u	*(8.48)*
Nonparticipants	397	94.6	*(2.09)*	69	>97	*(0.00)*	122	>97	*(1.35)*	206	85.4	*(6.18)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-12—Vitamin B_6: Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	0.5	1.10	1.22	1.30	1.44	1.72	2.04	2.22	2.36	2.57	0.5	0.95	1.06	1.14	1.27	1.55	1.88	2.07	2.21	2.43
9-13 years	0.8	1.06	1.19	1.29	1.43	1.73	2.07	2.26	2.40	2.62	0.8	0.95	1.04	1.11	1.22	1.44	1.69	1.84	1.95	2.11
14-18 years	1.1	1.12	1.30	1.43	1.63	2.07	2.58	2.90	3.13	3.50	1.0	0.77	0.88	0.95	1.07	1.34	1.68	1.91	2.07	2.34
All NSLP Participants																				
5-8 years	0.5	1.18	1.29	1.37	1.49	1.76	2.06	2.24	2.38	2.59	0.5	0.99	1.12	1.21	1.35	1.63	1.96	2.14	2.28	2.48
9-13 years	0.8	1.09	1.22	1.32	1.48	1.79	2.11	2.30	2.44	2.66	0.8	1.00	1.10	1.17	1.28	1.51	1.77	1.92	2.03	2.19
14-18 years	1.1	1.14	1.32	1.44	1.64	2.05	2.51	2.79	3.00	3.32	1.0	0.86	0.95	1.01	1.11	1.34	1.60	1.76	1.87	2.04
Income-eligible Participants																				
5-8 years	0.5	1.22	1.33	1.42	1.55	1.83	2.16	2.37	2.51	2.74	0.5	0.99	1.12	1.22	1.37	1.68	2.04	2.25	2.41	2.64
9-13 years	0.8	0.96	1.08	1.17	1.33	1.67	2.05	2.26	2.41	2.64	0.8	1.05	1.15	1.22	1.34	1.57	1.83	1.98	2.09	2.25
14-18 years	1.1	1.06	1.21	1.32	1.49	1.89	2.34	2.64	2.87	3.24	1.0	0.84	0.93	1.00	1.11	1.36	1.64	1.81	1.92	2.09
Income-eligible Nonparticipants																				
5-8 years	0.5	0.86	1.00	1.09	1.24	1.52	1.85	2.05	2.20	2.45	0.5	0.93	1.05	1.15	1.29	1.60	1.96	2.18	2.34	2.59
9-13 years	0.8	0.86	0.99	1.07	1.22	1.53	1.93	2.17	2.34	2.58	0.8	0.85	0.93	0.98	1.07	1.26	1.49	1.64	1.75	1.94
14-18 years	1.1	0.94	1.08	1.19	1.36	1.73	2.19	2.48	2.71	3.10	1.0	0.67	0.77	0.84	0.93	1.14	1.41	1.59	1.73	1.95
Higher-income Participants																				
5-8 years	0.5	1.12 u	1.21 u	1.28 u	1.39 u	1.62 u	1.87 u	2.02 u	2.12 u	2.27 u	0.5	0.99	1.11	1.20	1.33	1.56	1.80	1.93	2.02	2.16
9-13 years	0.8	1.34	1.47	1.55	1.68	1.93	2.20	2.36	2.47	2.65	0.8	0.94	1.03	1.09	1.20	1.42	1.67	1.82	1.92	2.09
14-18 years	1.1	1.25	1.44	1.58	1.79	2.20	2.65	2.93	3.13	3.44	1.0	0.90 u	0.98 u	1.03 u	1.12 u	1.31 u	1.55 u	1.69 u	1.80 u	1.97 u
Higher-income Nonparticipants																				
5-8 years	0.5	1.14 u	1.25 u	1.33 u	1.46 u	1.72 u	2.01 u	2.17 u	2.29 u	2.47 u	0.5	0.91 u	1.00 u	1.06 u	1.17 u	1.41 u	1.70 u	1.90 u	2.04 u	2.27 u
9-13 years	0.8	1.22	1.34	1.42	1.55	1.79	2.05	2.21	2.33	2.52	0.8	0.93	1.02	1.09	1.20	1.42	1.66	1.80	1.91	2.06
14-18 years	1.1	1.24	1.44	1.59	1.83	2.35	2.94	3.29	3.55	3.96	1.0	0.78	0.91	1.01	1.16	1.50	1.91	2.17	2.35	2.65

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-13—Vitamin B_{12}: Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	4.94	*(0.185)*	779	4.90	*(0.427)*	1,360	4.76	*(0.228)*	1,407	5.18	*(0.275)*
All NSLP Participants	1,741	5.48	*(0.322)*	473	5.50	*(0.716)*	794	5.13	*(0.359)*	474	5.81	*(0.549)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	5.60	*(0.533)*	321	6.11	*(1.221)*	512	5.13	*(0.613)*	304	5.57	*(0.846)*
Nonparticipants	950	** 4.01	*(0.201)*	161	4.10	*(0.331)*	315	3.87	*(0.313)*	474	4.07	*(0.398)*
Higher-income[2]												
NSLP Participants	604	5.31	*(0.242)*	152	4.72	*(0.393)*	282	5.21	*(0.363)*	170	6.02	*(0.491)*
Nonparticipants	761	4.75	*(0.292)*	129	4.23	*(0.512)*	224	4.65	*(0.602)*	408	5.36	*(0.371)*
						Boys						
All Children	1,794	5.71	*(0.324)*	386	5.51	*(0.790)*	660	5.33	*(0.365)*	748	6.31	*(0.446)*
All NSLP Participants	935	6.40	*(0.582)*	238	6.74	*(1.437)*	405	5.80	*(0.618)*	292	6.69	*(0.795)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	6.67	*(0.992)*	167	7.84 u	*(2.458)*	257	5.76	*(1.116)*	180	6.44	*(1.287)*
Nonparticipants	456	* 4.55	*(0.279)*	78	4.19	*(0.396)*	147	4.36	*(0.441)*	231	5.11	*(0.593)*
Higher-income[2]												
NSLP Participants	331	6.04	*(0.334)*	71	5.32	*(0.512)*	148	5.98	*(0.539)*	112	6.83	*(0.675)*
Nonparticipants	364	5.30	*(0.380)*	60	4.22 u	*(0.743)*	102	5.00	*(0.677)*	202	6.69	*(0.538)*
						Girls						
All Children	1,752	4.08	*(0.163)*	393	4.27	*(0.305)*	700	4.14	*(0.262)*	659	3.81	*(0.279)*
All NSLP Participants	806	4.24	*(0.199)*	235	4.35	*(0.333)*	389	4.32	*(0.265)*	182	4.07	*(0.424)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	4.32	*(0.283)*	154	4.45	*(0.439)*	255	4.41	*(0.322)*	124	4.11	*(0.658)*
Nonparticipants	494	* 3.47	*(0.295)*	83	3.99	*(0.556)*	168	* 3.25	*(0.436)*	243	3.16	*(0.535)*
Higher-income[2]												
NSLP Participants	273	4.13	*(0.280)*	81	4.17	*(0.590)*	134	4.18	*(0.448)*	58	4.05 u	*(0.396)*
Nonparticipants	397	4.24	*(0.432)*	69	4.25	*(0.703)*	122	4.36	*(0.951)*	206	4.09	*(0.512)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-14—Vitamin B_{12}: Percent of Children With Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	>97	*(0.37)*	779	>97	*(0.00)*	1,360	>97	*(0.17)*	1,407	94.6	*(1.11)*
All NSLP Participants	1,741	>97	*(0.27)*	473	>97	*(0.00)*	794	>97	*(0.10)*	474	>97	*(0.80)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	>97	*(0.52)*	321	>97	*(0.00)*	512	>97	*(0.15)*	304	>97	*(1.57)*
Nonparticipants	950	** 94.4	*(1.54)*	161	>97	*(0.07)*	315	>97	*(1.81)*	474	** 85.2	*(4.27)*
Higher-income[3]												
NSLP Participants	604	>97	*(0.20)*	152	>97	*(0.00)*	282	>97	*(0.15)*	170	>97	*(0.58)*
Nonparticipants	761	>97	*(0.84)*	129	>97	*(0.00)*	224	>97	*(0.66)*	408	95.6	*(2.47)*
	Boys											
All Children	1,794	>97	*(0.12)*	386	>97	*(0.00)*	660	>97	*(0.10)*	748	>97	*(0.36)*
All NSLP Participants	935	>97	*(0.13)*	238	>97	*(0.00)*	405	>97	*(0.00)*	292	>97	*(0.38)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(0.21)*	167	>97	*(0.00)*	257	>97	*(0.13)*	180	>97	*(0.61)*
Nonparticipants	456	>97	*(0.61)*	78	>97	*(0.00)*	147	>97	*(0.73)*	231	>97	*(1.70)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.14)*	71	>97	*(0.00)*	148	>97	*(0.00)*	112	>97	*(0.43)*
Nonparticipants	364	>97	*(0.21)*	60	>97	*(0.00)*	102	>97	*(0.39)*	202	>97	*(0.50)*
	Girls											
All Children	1,752	96.1	*(0.80)*	393	>97	*(0.00)*	700	>97	*(0.34)*	659	88.8	*(2.41)*
All NSLP Participants	806	>97	*(0.75)*	235	>97	*(0.00)*	389	>97	*(0.21)*	182	96.7 u	*(2.27)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	>97	*(1.36)*	154	>97	*(0.00)*	255	>97	*(0.28)*	124	95.4 u	*(4.11)*
Nonparticipants	494	* 90.1	*(2.94)*	83	>97	*(0.16)*	168	95.6 u	*(4.04)*	243	* 74.5	*(7.87)*
Higher-income[3]												
NSLP Participants	273	>97	*(0.57)*	81	>97	*(0.00)*	134	>97	*(0.34)*	58	>97	*(1.70)*
Nonparticipants	397	96.9 u	*(1.63)*	69	>97	*(0.00)*	122	>97	*(1.18)*	206	91.7	*(4.79)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-15—Vitamin B_{12}: Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	1.0	3.10	3.44	3.68	4.06	4.94	6.25	7.28	8.17	9.84	1.0	2.42	2.74	2.97	3.34	4.13	5.05	5.60	6.00	6.63
9-13 years	1.5	2.95	3.38	3.68	4.13	4.95	6.06	6.92	7.64	8.95	1.5	2.16	2.48	2.71	3.09	3.93	4.95	5.58	6.05	6.81
14-18 years	2.0	3.00	3.50	3.90	4.60	5.90	7.60	8.70	9.50	10.90	2.0	1.59	1.94	2.19	2.61	3.52	4.67	5.44	6.03	7.04
All NSLP Participants																				
5-8 years	1.0	3.70	4.00	4.30	4.70	5.70	7.50	8.90	10.30 u	12.90 u	1.0	2.59	2.90	3.12	3.48	4.22	5.08	5.59	5.96	6.53
9-13 years	1.5	3.20	3.60	3.90	4.30	5.30	6.70	7.70	8.60	10.10	1.5	2.51	2.83	3.07	3.44	4.22	5.08	5.58	5.93	6.47
14-18 years	2.0	3.10	3.70	4.10	4.70	6.20	8.10	9.30	10.30	12.00	2.0	2.16	2.47	2.69	3.06	3.87	4.90	5.51	5.94	6.59
Income-eligible Participants																				
5-8 years	1.0	3.80	4.10	4.40	5.00	6.40	8.80 u	10.90 u	12.80 u	16.70 u	1.0	2.69	2.99	3.22	3.58	4.33	5.16	5.67	6.04	6.64
9-13 years	1.5	2.80	3.20	3.50	3.90	5.00	6.70	8.10	9.20	11.30 u	1.5	2.60	2.95	3.20	3.58	4.33	5.14	5.61	5.95	6.48
14-18 years	2.0	2.90	3.40	3.80	4.40	5.80	7.70	9.10	10.30	12.30	2.0	2.04	2.35	2.58	2.94	3.80	4.98	5.73	6.28	7.13
Income-eligible Nonparticipants																				
5-8 years	1.0	2.60	2.92	3.14	3.48	4.14	4.85	5.25	5.52	5.93	1.0	2.05	2.37	2.61	3.00	3.82	4.80	5.40	5.84	6.52
9-13 years	1.5	2.47	2.81	3.04	3.43	4.24	5.12	5.66	6.08	6.76	1.5	1.54	1.79	1.97	2.29	3.03	3.97	4.55	4.98	5.68
14-18 years	2.0	2.30	2.80	3.10	3.70	4.90	6.30	7.10	7.80	8.80	2.0	1.18	1.44	1.65	1.98	2.78	3.89	4.67	5.31	6.44
Higher-income Participants																				
5-8 years	1.0	3.67	3.99	4.21	4.56	5.25	6.01	6.44	6.74	7.21	1.0	2.44	2.76	2.99	3.35	4.08	4.90	5.37	5.71	6.23
9-13 years	1.5	3.84	4.22	4.49	4.92	5.82	6.86	7.49	7.94	8.66	1.5	2.39	2.69	2.91	3.27	4.06	4.96	5.49	5.85	6.40
14-18 years	2.0	3.40	4.00	4.40	5.10	6.50	8.30	9.30	10.10	11.30	2.0	2.39 u	2.72 u	2.96 u	3.32 u	4.01 u	4.74 u	5.13 u	5.41 u	5.82 u
Higher-income Nonparticipants																				
5-8 years	1.0	2.38 u	2.71 u	2.96 u	3.35 u	4.15 u	5.02 u	5.50 u	5.81 u	6.26 u	1.0	2.23	2.56	2.80	3.19	4.05	5.09	5.74	6.21	6.97
9-13 years	1.5	2.92	3.31	3.58	4.01	4.87	5.85	6.43	6.85	7.51	1.5	2.00	2.30	2.60	3.00	4.00	5.30	6.20	6.80 u	8.00 u
14-18 years	2.0	3.40	4.00	4.40	5.10	6.40	8.00	8.90	9.70	10.90	2.0	1.73	2.11	2.40	2.87	3.84	5.03	5.79	6.38	7.35

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-16—Vitamin E (mg AT): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	5.87	*(0.20)*	779	5.23	*(0.26)*	1,360	6.14	*(0.47)*	1,407	6.23	*(0.25)*
All NSLP Participants	1,741	5.78	*(0.22)*	473	5.24	*(0.37)*	794	5.90	*(0.37)*	474	6.20	*(0.43)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	5.64	*(0.27)*	321	5.18	*(0.43)*	512	5.58	*(0.38)*	304	6.15	*(0.60)*
Nonparticipants	950	5.45	*(0.27)*	161	5.36	*(0.52)*	315	5.45	*(0.40)*	474	5.53	*(0.46)*
Higher-income[2]												
NSLP Participants	604	6.04	*(0.35)*	152	5.41	*(0.60)*	282	6.42	*(0.70)*	170	6.29	*(0.52)*
Nonparticipants	761	6.61	*(0.88)*	129	5.29	*(0.38)*	224	7.83 u	*(2.54)*	408	6.67	*(0.34)*
						Boys						
All Children	1,794	6.23	*(0.30)*	386	5.34	*(0.31)*	660	6.56	*(0.75)*	748	6.79	*(0.37)*
All NSLP Participants	935	5.96	*(0.29)*	238	5.10	*(0.36)*	405	6.32	*(0.61)*	292	6.46	*(0.52)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	5.66	*(0.33)*	167	5.11	*(0.51)*	257	5.45	*(0.54)*	180	6.41	*(0.65)*
Nonparticipants	456	5.99	*(0.44)*	78	5.97	*(0.88)*	147	5.69	*(0.57)*	231	6.30	*(0.83)*
Higher-income[2]												
NSLP Participants	331	6.40	*(0.50)*	71	5.09	*(0.60)*	148	7.55	*(1.18)*	112	6.52	*(0.69)*
Nonparticipants	364	7.37	*(1.76)*	60	5.62 u	*(0.62)*	102	8.97 u	*(5.14)*	202	7.47	*(0.46)*
						Girls						
All Children	1,752	5.44	*(0.26)*	393	5.10	*(0.42)*	700	5.67	*(0.56)*	659	5.55	*(0.31)*
All NSLP Participants	806	5.49	*(0.34)*	235	5.38	*(0.63)*	389	5.40	*(0.35)*	182	5.70	*(0.75)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	5.56	*(0.48)*	154	5.24	*(0.68)*	255	5.73	*(0.53)*	124	5.70	*(1.17)*
Nonparticipants	494	4.87	*(0.28)*	83	4.60	*(0.42)*	168	5.13	*(0.56)*	243	4.86	*(0.46)*
Higher-income[2]												
NSLP Participants	273	5.44	*(0.41)*	81	5.70	*(1.02)*	134	4.90	*(0.39)*	58	5.74 u	*(0.57)*
Nonparticipants	397	5.92	*(0.64)*	69	4.95 u	*(0.45)*	122	6.87	*(1.76)*	206	5.91	*(0.49)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-17—Vitamin E (mg AT): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	11.4	*(2.77)*	779	25.5	*(6.46)*	1,360	7.2 u	*(5.13)*	1,407	<3	*(0.82)*
All NSLP Participants	1,741	10.4 u	*(3.15)*	473	25.7 u	*(8.95)*	794	4.7 u	*(3.04)*	474	<3	*(0.92)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	8.8 u	*(3.53)*	321	24.4 u	*(10.54)*	512	<3	*(1.10)*	304	<3	*(1.20)*
Nonparticipants	950	10.3 u	*(3.57)*	161	27.7 u	*(10.58)*	315	<3	*(1.28)*	474	<3	*(1.70)*
Higher-income[3]												
NSLP Participants	604	14.8 u	*(6.38)*	152	30.2 u	*(16.68)*	282	13.2 u	*(9.37)*	170	<3	*(1.17)*
Nonparticipants	761	15.7 u	*(7.48)*	129	26.5 u	*(11.56)*	224	18.4 u	*(18.90)*	408	<3	*(1.23)*
	Boys											
All Children	1,794	14.8	*(4.32)*	386	28.8	*(8.35)*	660	12.6 u	*(9.69)*	748	<3	*(1.49)*
All NSLP Participants	935	10.6 u	*(3.47)*	238	22.1 u	*(8.70)*	405	8.4 u	*(5.55)*	292	<3	*(1.37)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	8.6 u	*(4.23)*	167	22.6 u	*(12.50)*	257	<3	*(2.02)*	180	<3	*(1.75)*
Nonparticipants	456	16.4 u	*(6.15)*	78	43.2 u	*(18.10)*	147	<3	*(2.25)*	231	4.1 u	*(3.61)*
Higher-income[3]												
NSLP Participants	331	15.6 u	*(7.30)*	71	22.0 u	*(14.20)*	148	23.1 u	*(16.40)*	112	<3	*(1.65)*
Nonparticipants	364	24.6 u	*(15.05)*	60	35.6 u	*(20.10)*	102	33.9 u	*(39.70)*	202	3.9 u	*(2.48)*
	Girls											
All Children	1,752	7.8 u	*(3.31)*	393	22.1 u	*(9.90)*	700	<3	*(1.47)*	659	<3	*(0.22)*
All NSLP Participants	806	9.8 u	*(5.06)*	235	29.2 u	*(15.30)*	389	<3	*(0.25)*	182	<3	*(0.37)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	8.9 u	*(5.58)*	154	26.2 u	*(16.80)*	255	<3	*(0.45)*	124	<3	*(1.28)*
Nonparticipants	494	<3	*(2.45)*	83	8.3 u	*(7.39)*	168	<3	*(0.33)*	243	<3	*(0.31)*
Higher-income[3]												
NSLP Participants	273	12.4 u	*(9.63)*	81	37.6 u	*(29.10)*	134	<3	*(0.00)*	58	<3	*(0.00)*
Nonparticipants	397	7.6 u	*(4.93)*	69	17.4 u	*(11.20)*	122	5.2 u	*(9.55)*	206	<3	*(0.42)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-18—Vitamin E (mg AT): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	6	3.33	3.67	3.92	4.32	5.17	6.19	6.80	7.24	7.94	6	3.26	3.58	3.81	4.18	4.95	5.86	6.42	6.82	7.46
9-13 years	9	3.70	4.10	4.40	4.90	6.00	7.50	8.60	9.50	11.10	12	3.35	3.69	3.94	4.35	5.28	6.55	7.42	8.10	9.28
14-18 years	12	3.50	4.00	4.40	5.10	6.50	8.20	9.20	9.90	11.10	12	3.20	3.60	3.90	4.30	5.30	6.50	7.30	7.80	8.60
All NSLP Participants																				
5-8 years	6	3.29	3.60	3.82	4.17	4.93	5.86	6.43	6.84	7.48	6	3.34	3.69	3.94	4.33	5.18	6.21	6.85	7.32	8.09
9-13 years	9	3.70	4.20	4.50	5.00	6.10	7.30	8.10	8.80	9.80	12	3.33	3.66	3.90	4.29	5.16	6.26	6.95	7.46	8.27
14-18 years	12	3.40	3.90	4.30	4.90	6.20	7.80	8.70	9.30	10.30	12	3.40	3.80	4.10	4.50	5.50	6.70	7.40	7.90	8.70
Income-eligible Participants																				
5-8 years	6	3.29	3.59	3.81	4.17	4.94	5.88	6.46	6.88	7.55	6	3.13	3.47	3.72	4.12	4.99	6.07	6.76	7.30	8.19
9-13 years	9	3.34	3.72	4.01	4.46	5.33	6.27	6.87	7.31	8.02	12	3.40	3.70	4.00	4.50	5.50	6.70	7.50	8.00	8.80
14-18 years	12	3.40	3.90	4.20	4.80	6.10	7.70	8.60	9.30	10.30	12	3.20	3.60	4.00	4.40	5.50	6.70	7.50	8.10	9.00
Income-eligible Nonparticipants																				
5-8 years	6	3.10	3.60	4.00	4.50	5.70	7.10	8.00	8.70	9.80	6	3.17	3.44	3.63	3.92	4.52	5.20	5.60	5.88	6.32
9-13 years	9	3.40	3.80	4.10	4.60	5.60	6.70	7.20	7.60	8.30	12	3.07	3.39	3.64	4.03	4.89	5.98	6.67	7.19	8.02
14-18 years	12	2.70	3.30	3.60	4.30	5.80	7.80	9.00	10.00	11.60	12	2.73	3.07	3.31	3.71	4.58	5.72	6.46	7.01	7.90
Higher-income Participants																				
5-8 years	6	3.31	3.61	3.83	4.16	4.91	5.85	6.43	6.85	7.51	6	3.74	4.10	4.36	4.76	5.58	6.51	7.05	7.44	8.04
9-13 years	9	4.40	4.90	5.20	5.80	7.20	8.80	9.90	10.70	12.10	12	3.24	3.52	3.73	4.06	4.75	5.59	6.11	6.49	7.09
14-18 years	12	3.40	4.00	4.40	5.00	6.30	7.80	8.70	9.30	10.30	12	3.63 u	4.03 u	4.31 u	4.75 u	5.64 u	6.62 u	7.18 u	7.58 u	8.19 u
Higher-income Nonparticipants																				
5-8 years	6	3.80 u	4.15 u	4.40 u	4.79 u	5.55 u	6.38 u	6.86 u	7.19 u	7.70 u	6	3.27 u	3.56 u	3.78 u	4.12 u	4.82 u	5.64 u	6.13 u	6.49 u	7.05 u
9-13 years	9	4.00	4.40	4.80	5.40	7.30 u	10.40 u	12.90 u	15.10 u	19.40 u	12	3.70	4.10	4.40	5.00	6.30	8.10	9.30 u	10.30 u	12.10 u
14-18 years	12	4.20	4.70	5.20	5.80	7.20	8.90	9.80	10.50	11.60	12	3.50	3.90	4.20	4.70	5.70	6.90	7.70	8.20	9.10

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-19—Folate (mcg DFE): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	582	*(18.3)*	779	581	*(39.0)*	1,360	569	*(28.0)*	1,407	596	*(26.6)*
All NSLP Participants	1,741	586	*(26.6)*	473	562	*(52.8)*	794	572	*(35.6)*	474	623	*(48.5)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	581	*(36.3)*	321	587	*(64.2)*	512	555	*(42.6)*	304	603	*(77.7)*
Nonparticipants	950	512	*(28.3)*	161	518	*(45.5)*	315	532	*(61.4)*	474	485	*(36.1)*
Higher-income[2]												
NSLP Participants	604	584	*(33.3)*	152	520	*(51.4)*	282	592	*(49.9)*	170	639	*(70.0)*
Nonparticipants	761	618	*(33.8)*	129	606	*(64.4)*	224	600	*(53.4)*	408	647	*(57.4)*
						Boys						
All Children	1,794	648	*(27.5)*	386	625	*(53.4)*	660	613	*(48.6)*	748	706	*(40.1)*
All NSLP Participants	935	640	*(34.4)*	238	592	*(53.3)*	405	616	*(53.6)*	292	714	*(70.5)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	636	*(49.4)*	167	622	*(57.0)*	257	581	*(68.9)*	180	708	*(119.0)*
Nonparticipants	456	551	*(45.4)*	78	508 u	*(62.1)*	147	544	*(101.4)*	231	602	*(64.4)*
Higher-income[2]												
NSLP Participants	331	638	*(46.9)*	71	540 u	*(78.5)*	148	661	*(66.8)*	112	712	*(96.2)*
Nonparticipants	364	703	*(54.7)*	60	664 u	*(94.9)*	102	674	*(98.0)*	202	772	*(90.9)*
						Girls						
All Children	1,752	507	*(23.3)*	393	535	*(56.8)*	700	521	*(24.5)*	659	464	*(33.2)*
All NSLP Participants	806	499	*(35.1)*	235	535	*(89.2)*	389	519	*(44.5)*	182	442	*(35.5)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	502	*(44.5)*	154	554	*(113.1)*	255	525	*(46.4)*	124	425	*(55.6)*
Nonparticipants	494	477	*(30.7)*	83	530	*(66.7)*	168	516	*(51.6)*	243	383	*(37.5)*
Higher-income[2]												
NSLP Participants	273	489	*(38.7)*	81	502	*(67.3)*	134	501	*(75.1)*	58	464 u	*(56.8)*
Nonparticipants	397	538	*(41.3)*	69	547 u	*(86.9)*	122	538	*(53.3)*	206	529	*(71.2)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-20—Folate (mcg DFE): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	95.4	*(0.83)*	779	>97	*(0.00)*	1,360	>97	*(0.17)*	1,407	86.4	*(2.50)*
All NSLP Participants	1,741	96.5	*(1.00)*	473	>97	*(0.00)*	794	>97	*(0.26)*	474	89.8	*(3.01)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	95.8	*(1.69)*	321	>97	*(0.00)*	512	>97	*(0.57)*	304	87.6	*(5.09)*
Nonparticipants	950	* 90.4	*(2.08)*	161	>97	*(0.25)*	315	>97	*(1.77)*	474	72.5	*(6.03)*
Higher-income[3]												
NSLP Participants	604	>97	*(1.35)*	152	>97	*(0.00)*	282	>97	*(0.30)*	170	91.5 u	*(4.09)*
Nonparticipants	761	96.7	*(1.24)*	129	>97	*(0.00)*	224	>97	*(0.10)*	408	90.1	*(3.76)*
	Boys											
All Children	1,794	>97	*(0.57)*	386	>97	*(0.00)*	660	>97	*(0.31)*	748	94.4	*(1.69)*
All NSLP Participants	935	>97	*(0.80)*	238	>97	*(0.00)*	405	>97	*(0.38)*	292	95.8 u	*(2.41)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(0.69)*	167	>97	*(0.00)*	257	>97	*(1.03)*	180	96.5 u	*(1.80)*
Nonparticipants	456	95.7 u	*(1.99)*	78	>97	*(0.45)*	147	>97	*(3.12)*	231	89.2	*(5.08)*
Higher-income[3]												
NSLP Participants	331	>97	*(1.30)*	71	>97	*(0.00)*	148	>97	*(0.14)*	112	95.3 u	*(3.95)*
Nonparticipants	364	>97	*(0.72)*	60	>97	*(0.00)*	102	>97	*(0.22)*	202	95.7 u	*(2.17)*
	Girls											
All Children	1,752	92.2	*(1.70)*	393	>97	*(0.00)*	700	>97	*(0.13)*	659	76.7	*(5.14)*
All NSLP Participants	806	92.6	*(2.51)*	235	>97	*(0.00)*	389	>97	*(0.33)*	182	78.0	*(7.62)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	90.9	*(4.42)*	154	>97	*(0.00)*	255	>97	*(0.31)*	124	72.5	*(13.40)*
Nonparticipants	494	86.0	*(3.43)*	83	>97	*(0.09)*	168	>97	*(0.51)*	243	57.8	*(10.40)*
Higher-income[3]												
NSLP Participants	273	94.0 u	*(3.37)*	81	>97	*(0.00)*	134	>97	*(0.67)*	58	82.3 u	*(10.20)*
Nonparticipants	397	95.0 u	*(2.32)*	69	>97	*(0.00)*	122	>97	*(0.03)*	206	84.8	*(7.04)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-21—Folate (mcg DFE): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)

	Percentiles																			
	Boys										Girls									
	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	160	349	393	426	478	592	733	822	891	1010	160	315	350	377	420	513	625	694	746	831
9-13 years	250	349	393	424	475	586	721	804	865	965	250	343	375	398	434	508	595	647	685	745
14-18 years	330	322	379	421	492	651	858	996	1101	1278	330	226	263	292	337	429	547	633	701	821
All NSLP Participants																				
5-8 years	160	361	397	424	468	564	684	760	818	916	160	313	348	375	418	512	624	694	747	833
9-13 years	250	361	405	438	490	601	725	794	844	923	250	331	362	386	423	503	598	655	697	764
14-18 years	330	342	398	441	511	668	867	993	1088	1243	330	238	271	298	342	431	523	578	619	691
Income-eligible Participants																				
5-8 years	160	370	412	443	493	598	718	793	851	953	160	319	355	381	425	522	647	729	792	899 u
9-13 years	250	336	379	411	460	565	685	754	803	880	250	351	384	407	442	514	596	645	680	737
14-18 years	330	351	401	439	502	649	847	980	1084	1262	330	232	262	285	322	403	503	565	612	691
Income-eligible Nonparticipants																				
5-8 years	160	279 u	320 u	349 u	395 u	490 u	604 u	673 u	722 u	799 u	160	303	343	371	417	513	625	692	740	816
9-13 years	250	288	325	354	402	513	655	742	805	902	250	331	365	389	427	505	593	645	682	740
14-18 years	330	273	323	363	429	572	734	835	911	1041	330	186	217	239	275	356	457	527	583	679
Higher-income Participants																				
5-8 years	160	360 u	388 u	408 u	438 u	507 u	608 u	681 u	739 u	835 u	160	309	340	363	402	488	589	646	685	742
9-13 years	250	407	451	483	533	638	764	841	899	992	250	315	345	367	402	480	577	637	682	755
14-18 years	330	334	396	442	517	682	875	989	1069	1192	330	256 u	292 u	318 u	360 u	448 u	551 u	613 u	658 u	729 u
Higher-income Nonparticipants																				
5-8 years	160	379 u	429 u	468 u	531 u	651 u	771 u	845 u	906 u	1014 u	160	322 u	354 u	378 u	419 u	512 u	636 u	719 u	782 u	889 u
9-13 years	250	386	430	463	515	633	785	887	965	1099	250	371	402	424	459	529	608	653	686	737
14-18 years	330	341	399	442	516	692	938	1109	1243	1474	330	257	299	329	379	490	634	730	805	932 u

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-22—Niacin (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	20.9	*(0.43)*	779	19.5	*(0.73)*	1,360	20.1	*(0.67)*	1,407	23.0	*(0.81)*
All NSLP Participants	1,741	21.6	*(0.66)*	473	19.8	*(1.05)*	794	20.9	*(0.93)*	474	24.1	*(1.42)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	21.1	*(0.78)*	321	20.2	*(1.28)*	512	20.6	*(1.30)*	304	22.5	*(1.45)*
Nonparticipants	950	* 18.3	*(0.80)*	161	17.9	*(1.26)*	315	17.7	*(1.66)*	474	19.3	*(1.19)*
Higher-income[2]												
NSLP Participants	604	22.0	*(0.87)*	152	19.0	*(1.30)*	282	21.4	*(1.10)*	170	25.7	*(1.99)*
Nonparticipants	761	21.5	*(0.77)*	129	19.7	*(1.52)*	224	20.3	*(1.28)*	408	24.6	*(1.18)*
Boys												
All Children	1,794	23.1	*(0.63)*	386	20.3	*(0.88)*	660	22.1	*(1.07)*	748	26.8	*(1.27)*
All NSLP Participants	935	23.5	*(0.92)*	238	20.6	*(1.02)*	405	23.0	*(1.50)*	292	27.0	*(2.09)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	22.9	*(1.13)*	167	21.4	*(1.46)*	257	21.9	*(2.20)*	180	25.4	*(2.14)*
Nonparticipants	456	19.6	*(1.30)*	78	17.3	*(1.58)*	147	18.8	*(2.79)*	231	22.9	*(2.18)*
Higher-income[2]												
NSLP Participants	331	24.2	*(1.22)*	71	19.2 u	*(1.77)*	148	24.7	*(1.70)*	112	28.7	*(2.72)*
Nonparticipants	364	24.3	*(1.17)*	60	21.2 u	*(2.32)*	102	22.3	*(2.01)*	202	29.5	*(1.66)*
Girls												
All Children	1,752	18.3	*(0.56)*	393	18.6	*(1.16)*	700	18.0	*(0.76)*	659	18.4	*(0.93)*
All NSLP Participants	806	18.5	*(0.73)*	235	19.1	*(1.79)*	389	18.3	*(0.97)*	182	18.2	*(0.82)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	18.7	*(0.94)*	154	19.2	*(2.08)*	255	19.1	*(1.19)*	124	17.8	*(1.48)*
Nonparticipants	494	17.1	*(0.87)*	83	18.8	*(2.04)*	168	16.3	*(1.20)*	243	16.1	*(1.14)*
Higher-income[2]												
NSLP Participants	273	18.1	*(0.94)*	81	18.9	*(1.89)*	134	17.0	*(1.20)*	58	18.5 u	*(1.74)*
Nonparticipants	397	18.9	*(1.01)*	69	18.1 u	*(1.95)*	122	18.7	*(1.65)*	206	20.0	*(1.66)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-23—Niacin (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	>97	*(0.27)*	779	>97	*(0.00)*	1,360	>97	*(0.17)*	1,407	>97	*(0.79)*
All NSLP Participants	1,741	>97	*(0.16)*	473	>97	*(0.00)*	794	>97	*(0.21)*	474	>97	*(0.43)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	>97	*(0.31)*	321	>97	*(0.00)*	512	>97	*(0.53)*	304	>97	*(0.77)*
Nonparticipants	950	* 97.4	*(0.96)*	161	>97	*(0.16)*	315	>97	*(1.53)*	474	* 93.6	*(2.43)*
Higher-income[3]												
NSLP Participants	604	>97	*(0.21)*	152	>97	*(0.00)*	282	>97	*(0.17)*	170	>97	*(0.60)*
Nonparticipants	761	>97	*(0.47)*	129	>97	*(0.00)*	224	>97	*(0.14)*	408	>97	*(1.40)*
	Boys											
All Children	1,794	>97	*(0.19)*	386	>97	*(0.00)*	660	>97	*(0.29)*	748	>97	*(0.48)*
All NSLP Participants	935	>97	*(0.19)*	238	>97	*(0.00)*	405	>97	*(0.34)*	292	>97	*(0.48)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(0.36)*	167	>97	*(0.00)*	257	>97	*(0.97)*	180	>97	*(0.46)*
Nonparticipants	456	>97	*(1.14)*	78	>97	*(0.28)*	147	>97	*(2.70)*	231	>97	*(2.03)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.26)*	71	>97	*(0.00)*	148	>97	*(0.00)*	112	>97	*(0.78)*
Nonparticipants	364	>97	*(0.09)*	60	>97	*(0.00)*	102	>97	*(0.14)*	202	>97	*(0.22)*
	Girls											
All Children	1,752	>97	*(0.55)*	393	>97	*(0.00)*	700	>97	*(0.14)*	659	96.0	*(1.65)*
All NSLP Participants	806	>97	*(0.30)*	235	>97	*(0.00)*	389	>97	*(0.22)*	182	>97	*(0.89)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	>97	*(0.64)*	154	>97	*(0.00)*	255	>97	*(0.26)*	124	>97	*(1.91)*
Nonparticipants	494	96.6 u	*(1.39)*	83	>97	*(0.00)*	168	>97	*(0.33)*	243	90.3	*(4.21)*
Higher-income[3]												
NSLP Participants	273	>97	*(0.30)*	81	>97	*(0.00)*	134	>97	*(0.41)*	58	>97	*(0.80)*
Nonparticipants	397	>97	*(0.90)*	69	>97	*(0.00)*	122	>97	*(0.22)*	206	96.8 u	*(2.73)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-24—Niacin (mg): Distribution of Usual Intake

	Percentiles																		
	Boys										Girls								
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	6	13.7	15.0	15.9	17.2	20.0	23.0	24.8	26.1	28.1	6	12.4	13.6	14.4	15.7	18.3	21.2	22.9	24.2	26.1
9-13 years	9	13.2	14.8	16.0	17.9	21.8	25.9	28.0	29.5	31.9	9	12.1	13.2	14.0	15.2	17.7	20.5	22.1	23.3	25.1
14-18 years	12	15.8	17.8	19.2	21.3	25.8	31.4	34.8	37.2	41.2	11	11.4	12.6	13.5	14.9	17.9	21.4	23.4	24.8	27.0
All NSLP Participants																				
5-8 years	6	14.5	15.6	16.4	17.6	20.0	23.0	24.9	26.3	28.6	6	12.6	13.8	14.7	16.0	18.7	21.7	23.5	24.7	26.7
9-13 years	9	14.0	15.8	17.0	18.9	22.7	26.7	29.1	30.7	33.3	9	12.3	13.4	14.2	15.5	18.0	20.8	22.4	23.5	25.2
14-18 years	12	16.4	18.3	19.7	21.8	26.3	31.4	34.5	36.8	40.3	11	12.4	13.5	14.3	15.6	18.1	20.6	21.9	22.8	24.2
Income-eligible Participants																				
5-8 years	6	15.3	16.4	17.2	18.3	20.8	23.8	25.7	27.2	29.5	6	12.3	13.5	14.4	15.8	18.7	22.0	24.0	25.4	27.6
9-13 years	9	12.2	13.9	15.1	17.2	21.5	26.0	28.5	30.3	32.9	9	12.7	13.9	14.8	16.1	18.8	21.7	23.4	24.6	26.4
14-18 years	12	15.9	17.6	18.8	20.7	24.6	29.2	32.0	34.1	37.4	11	12.2	13.2	14.0	15.3	17.9	20.2	21.3	22.1	23.3
Income-eligible Nonparticipants																				
5-8 years	6	11.1	12.2	13.0	14.3	17.0	20.0	21.6	22.6	24.2	6	12.2	13.5	14.3	15.7	18.5	21.5	23.3	24.5	26.4
9-13 years	9	10.3	11.7	12.7	14.4	18.2	22.6	25.1	26.8	29.3	9	11.1	12.0	12.7	13.7	15.8	18.4	20.0	21.2	23.2
14-18 years	12	13.2	14.9	16.2	18.1	22.1	26.8	29.7	31.8	35.2	11	9.9	11.0	11.8	13.1	15.8	18.7	20.3	21.5	23.2
Higher-income Participants																				
5-8 years	6	13.2 u	14.4 u	15.2 u	16.4 u	18.7 u	21.5 u	23.2 u	24.6 u	26.7 u	6	13.3	14.4	15.1	16.3	18.7	21.3	22.6	23.5	24.9
9-13 years	9	17.0	18.5	19.6	21.2	24.4	28.0	29.9	31.3	33.4	9	11.7	12.7	13.4	14.5	16.7	19.2	20.6	21.6	23.2
14-18 years	12	16.9	19.1	20.7	23.1	28.1	33.6	36.8	39.1	42.5	11	13.0 u	14.0 u	14.8 u	15.9 u	18.2 u	20.8 u	22.3 u	23.4 u	25.1 u
Higher-income Nonparticipants																				
5-8 years	6	14.6 u	15.8 u	16.7 u	18.0 u	20.8 u	24.0 u	25.9 u	27.2 u	29.4 u	6	12.4 u	13.4 u	14.2 u	15.3 u	17.7 u	20.5 u	22.1 u	23.4 u	25.3 u
9-13 years	9	14.6	16.0	17.1	18.7	22.0	25.5	27.4	28.9	31.2	9	12.5	13.6	14.4	15.7	18.3	21.3	23.0	24.2	26.1
14-18 years	12	17.4	19.4	20.8	23.1	28.0	34.4	38.5	41.4	46.1	11	11.8	13.2	14.3	15.9	19.4	23.6	26.0	27.7	30.2

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-25—Riboflavin (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	2.18	*(0.043)*	779	2.24	*(0.077)*	1,360	2.13	*(0.066)*	1,407	2.18	*(0.081)*
All NSLP Participants	1,741	2.31	*(0.066)*	473	2.32	*(0.102)*	794	2.24	*(0.091)*	474	2.37	*(0.143)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	2.24	*(0.083)*	321	2.38	*(0.125)*	512	2.18	*(0.127)*	304	2.18	*(0.176)*
Nonparticipants	950	*** 1.84	*(0.067)*	161	* 1.98	*(0.117)*	315	1.83	*(0.129)*	474	* 1.69	*(0.099)*
Higher-income[2]												
NSLP Participants	604	2.39	*(0.085)*	152	2.24	*(0.133)*	282	2.34	*(0.110)*	170	2.58	*(0.191)*
Nonparticipants	761	2.19	*(0.082)*	129	2.14	*(0.177)*	224	2.12	*(0.119)*	408	2.32	*(0.126)*
Boys												
All Children	1,794	2.44	*(0.065)*	386	2.41	*(0.101)*	660	2.34	*(0.108)*	748	2.57	*(0.128)*
All NSLP Participants	935	2.56	*(0.093)*	238	2.56	*(0.132)*	405	2.46	*(0.145)*	292	2.65	*(0.200)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	2.44	*(0.122)*	167	2.62	*(0.174)*	257	2.31	*(0.203)*	180	2.38	*(0.253)*
Nonparticipants	456	** 2.02	*(0.104)*	78	** 1.98 u	*(0.148)*	147	1.95	*(0.201)*	231	2.13	*(0.183)*
Higher-income[2]												
NSLP Participants	331	2.68	*(0.126)*	71	2.46 u	*(0.228)*	148	2.67	*(0.168)*	112	2.90	*(0.254)*
Nonparticipants	364	2.46	*(0.132)*	60	2.27 u	*(0.278)*	102	2.35	*(0.202)*	202	2.76	*(0.197)*
Girls												
All Children	1,752	1.89	*(0.054)*	393	2.06	*(0.116)*	700	1.91	*(0.069)*	659	1.70	*(0.089)*
All NSLP Participants	806	1.97	*(0.079)*	235	2.10	*(0.153)*	389	1.99	*(0.098)*	182	1.81	*(0.154)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	2.00	*(0.101)*	154	2.14	*(0.180)*	255	2.04	*(0.141)*	124	1.82	*(0.201)*
Nonparticipants	494	** 1.66	*(0.084)*	83	1.98 u	*(0.186)*	168	1.69	*(0.141)*	243	* 1.31	*(0.092)*
Higher-income[2]												
NSLP Participants	273	1.91	*(0.096)*	81	2.03 u	*(0.146)*	134	1.90	*(0.128)*	58	1.81 u	*(0.216)*
Nonparticipants	397	1.94	*(0.100)*	69	2.01 u	*(0.217)*	122	1.92	*(0.138)*	206	1.89	*(0.158)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-26—Riboflavin (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	>97	*(0.28)*	779	>97	*(0.00)*	1,360	>97	*(0.15)*	1,407	96.5	*(0.83)*
All NSLP Participants	1,741	>97	*(0.26)*	473	>97	*(0.00)*	794	>97	*(0.17)*	474	>97	*(0.76)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	>97	*(0.31)*	321	>97	*(0.00)*	512	>97	*(0.29)*	304	>97	*(0.88)*
Nonparticipants	950	** 95.9	*(1.05)*	161	>97	*(0.02)*	315	>97	*(1.13)*	474	** 88.6	*(2.97)*
Higher-income[3]												
NSLP Participants	604	>97	*(0.42)*	152	>97	*(0.00)*	282	>97	*(0.11)*	170	>97	*(1.26)*
Nonparticipants	761	>97	*(0.38)*	129	>97	*(0.00)*	224	>97	*(0.25)*	408	>97	*(1.12)*
	Boys											
All Children	1,794	>97	*(0.23)*	386	>97	*(0.00)*	660	>97	*(0.08)*	748	>97	*(0.68)*
All NSLP Participants	935	>97	*(0.34)*	238	>97	*(0.00)*	405	>97	*(0.00)*	292	>97	*(1.03)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(0.40)*	167	>97	*(0.00)*	257	>97	*(0.00)*	180	>97	*(1.21)*
Nonparticipants	456	>97	*(1.06)*	78	>97	*(0.04)*	147	>97	*(1.84)*	231	94.9 u	*(2.60)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.44)*	71	>97	*(0.00)*	148	>97	*(0.00)*	112	>97	*(1.33)*
Nonparticipants	364	>97	*(0.41)*	60	>97	*(0.00)*	102	>97	*(0.00)*	202	>97	*(1.25)*
	Girls											
All Children	1,752	>97	*(0.55)*	393	>97	*(0.00)*	700	>97	*(0.30)*	659	95.0	*(1.64)*
All NSLP Participants	806	>97	*(0.36)*	235	>97	*(0.00)*	389	>97	*(0.39)*	182	>97	*(1.01)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	>97	*(0.44)*	154	>97	*(0.00)*	255	>97	*(0.62)*	124	>97	*(1.19)*
Nonparticipants	494	** 93.9	*(1.71)*	83	>97	*(0.00)*	168	>97	*(1.02)*	243	** 83.0	*(5.08)*
Higher-income[3]												
NSLP Participants	273	>97	*(0.95)*	81	>97	*(0.00)*	134	>97	*(0.26)*	58	>97	*(2.88)*
Nonparticipants	397	>97	*(0.62)*	69	>97	*(0.00)*	122	>97	*(0.46)*	206	>97	*(1.83)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-27—Riboflavin (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	0.5	1.56	1.72	1.84	2.02	2.37	2.77	2.99	3.15	3.39	0.5	1.33	1.46	1.56	1.71	2.02	2.37	2.58	2.72	2.95
9-13 years	0.8	1.47	1.64	1.75	1.93	2.29	2.68	2.92	3.10	3.37	0.8	1.13	1.27	1.37	1.53	1.86	2.23	2.45	2.61	2.84
14-18 years	1.1	1.30	1.52	1.67	1.91	2.43	3.10	3.51	3.81	4.28	0.9	0.90	1.04	1.14	1.30	1.63	2.03	2.27	2.45	2.73
All NSLP Participants																				
5-8 years	0.5	1.81	1.94	2.04	2.19	2.50	2.87	3.10	3.27	3.53	0.5	1.40	1.53	1.62	1.77	2.06	2.39	2.58	2.72	2.93
9-13 years	0.8	1.57	1.73	1.85	2.03	2.40	2.82	3.07	3.25	3.55	0.8	1.18	1.33	1.44	1.60	1.94	2.32	2.55	2.70	2.95
14-18 years	1.1	1.41	1.61	1.75	1.98	2.52	3.21	3.63	3.91	4.30	0.9	1.06	1.19	1.28	1.44	1.77	2.14	2.35	2.50	2.74
Income-eligible Participants																				
5-8 years	0.5	1.82	1.96	2.07	2.23	2.56	2.94	3.18	3.36	3.65	0.5	1.41	1.53	1.62	1.77	2.09	2.45	2.67	2.82	3.04
9-13 years	0.8	1.43	1.58	1.70	1.87	2.24	2.67	2.93	3.12	3.42	0.8	1.19	1.35	1.47	1.65	2.01	2.39	2.62	2.77	3.02
14-18 years	1.1	1.33	1.50	1.62	1.81	2.25	2.84	3.21	3.47	3.86	0.9	1.09	1.21	1.31	1.46	1.77	2.13	2.35	2.50	2.75
Income-eligible Nonparticipants																				
5-8 years	0.5	1.26 u	* 1.41 u	* 1.52 u	1.68 u	1.98 u	2.27 u	2.43 u	2.54 u	* 2.69 u	0.5	1.16 u	1.30 u	1.41 u	1.57 u	1.91 u	2.32 u	2.57 u	2.75 u	3.05 u
9-13 years	0.8	1.12	1.28	1.39	1.56	1.91	2.29	2.51	2.67	2.92	0.8	0.98	1.10	1.19	1.33	1.63	1.98	2.20	2.35	2.59
14-18 years	1.1	1.10	1.28	1.40	1.59	1.99	2.57	2.93	3.19	3.58	0.9	* 0.68	* 0.79	* 0.87	* 1.00	1.26	1.55	1.75	1.90	2.11
Higher-income Participants																				
5-8 years	0.5	1.77 u	1.90 u	1.99 u	2.13 u	2.42 u	2.75 u	2.95 u	3.09 u	3.31 u	0.5	1.38 u	1.52 u	1.62 u	1.76 u	2.03 u	2.30 u	2.44 u	2.54 u	2.68 u
9-13 years	0.8	1.78	1.94	2.07	2.26	2.63	3.03	3.26	3.43	3.71	0.8	1.17	1.29	1.39	1.53	1.84	2.21	2.43	2.58	2.83
14-18 years	1.1	1.48	1.74	1.92	2.22	2.82	3.50	3.90	4.18	4.61	0.9	0.99 u	1.13 u	1.24 u	1.42 u	1.80 u	2.17 u	2.36 u	2.50 u	2.70 u
Higher-income Nonparticipants																				
5-8 years	0.5	1.35 u	1.48 u	1.59 u	1.78 u	2.20 u	2.71 u	2.98 u	3.15 u	3.38 u	0.5	1.24 u	1.38 u	1.47 u	1.63 u	1.95 u	2.33 u	2.56 u	2.72 u	2.99 u
9-13 years	0.8	1.61	1.77	1.87	2.03	2.31	2.64	2.84	2.99	3.23	0.8	1.13	1.27	1.38	1.54	1.89	2.26	2.47	2.61	2.82
14-18 years	1.1	1.40	1.63	1.80	2.07	2.63	3.30	3.73	4.04	4.56	0.9	1.01	1.16	1.27	1.45	1.83	2.26	2.52	2.71	3.00

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-28—Thiamin (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	1.64	*(0.034)*	779	1.57	*(0.052)*	1,360	1.62	*(0.061)*	1,407	1.73	*(0.062)*
All NSLP Participants	1,741	1.70	*(0.055)*	473	1.57	*(0.070)*	794	1.66	*(0.085)*	474	1.87	*(0.124)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	1.68	*(0.070)*	321	1.60	*(0.091)*	512	1.66	*(0.120)*	304	1.77	*(0.145)*
Nonparticipants	950	** 1.41	*(0.055)*	161	1.42	*(0.077)*	315	1.37	*(0.119)*	474	* 1.44	*(0.082)*
Higher-income[2]												
NSLP Participants	604	1.71	*(0.067)*	152	1.51	*(0.075)*	282	1.66	*(0.082)*	170	1.96	*(0.170)*
Nonparticipants	761	1.72	*(0.064)*	129	1.61	*(0.103)*	224	1.73	*(0.130)*	408	1.80	*(0.097)*
						Boys						
All Children	1,794	1.80	*(0.053)*	386	1.65	*(0.073)*	660	1.76	*(0.103)*	748	1.98	*(0.098)*
All NSLP Participants	935	1.82	*(0.076)*	238	1.64	*(0.084)*	405	1.82	*(0.143)*	292	2.02	*(0.156)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	1.79	*(0.095)*	167	1.71	*(0.122)*	257	1.79	*(0.208)*	180	1.86	*(0.149)*
Nonparticipants	456	* 1.52	*(0.088)*	78	* 1.40 u	*(0.101)*	147	1.44	*(0.194)*	231	1.73	*(0.143)*
Higher-income[2]												
NSLP Participants	331	1.84	*(0.092)*	71	1.50 u	*(0.104)*	148	1.85	*(0.124)*	112	2.17	*(0.224)*
Nonparticipants	364	1.92	*(0.105)*	60	1.75 u	*(0.162)*	102	1.89	*(0.227)*	202	2.12	*(0.140)*
						Girls						
All Children	1,752	1.46	*(0.039)*	393	1.48	*(0.073)*	700	1.47	*(0.062)*	659	1.42	*(0.067)*
All NSLP Participants	806	1.51	*(0.081)*	235	1.50	*(0.111)*	389	1.46	*(0.074)*	182	1.57	*(0.205)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	1.54	*(0.113)*	154	1.49	*(0.134)*	255	1.51	*(0.097)*	124	1.62	*(0.299)*
Nonparticipants	494	1.31	*(0.061)*	83	1.45	*(0.118)*	168	1.28	*(0.106)*	243	1.19	*(0.088)*
Higher-income[2]												
NSLP Participants	273	1.45	*(0.085)*	81	1.52	*(0.108)*	134	1.40	*(0.096)*	58	1.44 u	*(0.212)*
Nonparticipants	397	1.53	*(0.078)*	69	1.48 u	*(0.127)*	122	1.61	*(0.142)*	206	1.50	*(0.134)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-29—Thiamin (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	>97	*(0.50)*	779	>97	*(0.00)*	1,360	>97	*(0.13)*	1,407	93.4	*(1.51)*
All NSLP Participants	1,741	>97	*(0.49)*	473	>97	*(0.00)*	794	>97	*(0.14)*	474	96.9 u	*(1.48)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	>97	*(0.53)*	321	>97	*(0.00)*	512	>97	*(0.19)*	304	>97	*(1.58)*
Nonparticipants	950	*** 93.7	*(1.37)*	161	>97	*(0.15)*	315	>97	*(1.00)*	474	*** 82.0	*(4.02)*
Higher-income[3]												
NSLP Participants	604	>97	*(0.97)*	152	>97	*(0.00)*	282	>97	*(0.16)*	170	95.8 u	*(2.93)*
Nonparticipants	761	>97	*(0.72)*	129	>97	*(0.00)*	224	>97	*(0.11)*	408	95.5 u	*(2.19)*
	Boys											
All Children	1,794	>97	*(0.40)*	386	>97	*(0.00)*	660	>97	*(0.15)*	748	96.6	*(1.19)*
All NSLP Participants	935	>97	*(0.49)*	238	>97	*(0.00)*	405	>97	*(0.06)*	292	>97	*(1.49)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(0.46)*	167	>97	*(0.00)*	257	>97	*(0.27)*	180	>97	*(1.36)*
Nonparticipants	456	96.6 u	*(1.39)*	78	>97	*(0.27)*	147	>97	*(1.60)*	231	90.7	*(3.87)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.93)*	71	>97	*(0.00)*	148	>97	*(0.00)*	112	>97	*(2.81)*
Nonparticipants	364	>97	*(0.33)*	60	>97	*(0.00)*	102	>97	*(0.00)*	202	>97	*(0.99)*
	Girls											
All Children	1,752	96.4	*(1.00)*	393	>97	*(0.00)*	700	>97	*(0.23)*	659	89.5	*(3.02)*
All NSLP Participants	806	>97	*(1.10)*	235	>97	*(0.00)*	389	>97	*(0.31)*	182	95.0 u	*(3.31)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	>97	*(1.19)*	154	>97	*(0.00)*	255	>97	*(0.28)*	124	>97	*(3.59)*
Nonparticipants	494	** 91.2	*(2.25)*	83	>97	*(0.05)*	168	>97	*(1.01)*	243	** 74.3	*(6.74)*
Higher-income[3]												
NSLP Participants	273	96.9 u	*(2.43)*	81	>97	*(0.00)*	134	>97	*(0.38)*	58	90.8 u	*(7.35)*
Nonparticipants	397	>97	*(1.38)*	69	>97	*(0.00)*	122	>97	*(0.21)*	206	93.2 u	*(4.17)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-30—Thiamin (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	0.5	1.09	1.20	1.28	1.40	1.63	1.87	2.01	2.12	2.29	0.5	1.01	1.10	1.16	1.26	1.46	1.69	1.82	1.91	2.06
9-13 years	0.7	1.13	1.24	1.33	1.46	1.72	2.02	2.20	2.33	2.53	0.7	0.95	1.05	1.11	1.22	1.43	1.68	1.83	1.94	2.11
14-18 years	1.0	1.08	1.24	1.36	1.54	1.91	2.34	2.61	2.81	3.15	0.9	0.78	0.89	0.97	1.10	1.38	1.69	1.86	1.99	2.19
All NSLP Participants																				
5-8 years	0.5	1.18	1.26	1.31	1.40	1.60	1.82	1.96	2.06	2.23	0.5	1.03	1.11	1.17	1.27	1.47	1.70	1.84	1.93	2.08
9-13 years	0.7	1.19	1.31	1.39	1.52	1.78	2.08	2.26	2.39	2.59	0.7	0.96	1.05	1.11	1.22	1.43	1.68	1.83	1.93	2.08
14-18 years	1.0	1.17	1.33	1.45	1.61	1.94	2.36	2.63	2.82	3.12	0.9	0.90	1.01	1.09	1.22	1.51	1.85	2.06	2.22	2.47
Income-eligible Participants																				
5-8 years	0.5	1.21	1.30	1.36	1.46	1.67	1.92	2.07	2.18	2.35	0.5	0.99	1.08	1.14	1.24	1.45	1.70	1.85	1.96	2.12
9-13 years	0.7	1.12	1.25	1.33	1.46	1.74	2.07	2.28	2.43	2.65	0.7	0.99	1.08	1.15	1.26	1.48	1.73	1.87	1.98	2.13
14-18 years	1.0	1.14	1.28	1.37	1.51	1.78	2.13	2.37	2.54	2.84	0.9	0.99	1.09	1.17	1.29	1.56	1.89	2.10	2.25	2.47
Income-eligible Nonparticipants																				
5-8 years	0.5	0.89 u	1.00 u	1.08 u	1.19 u	1.40 u	1.60 u	1.71 u	1.78 u	1.89 u	0.5	0.91	1.01	1.08	1.19	1.42	1.67	1.82	1.92	2.08
9-13 years	0.7	0.87	0.98	1.05	1.17	1.42	1.69	1.84	1.94	2.09	0.7	0.83	0.91	0.97	1.06	1.25	1.47	1.60	1.69	1.85
14-18 years	1.0	0.87	1.02	1.13	1.31	1.68	2.09	2.32	2.50	2.77	0.9	0.64	0.72	0.79	0.89	1.13	1.42	1.60	1.72	1.92
Higher-income Participants																				
5-8 years	0.5	1.12 u	1.19 u	1.24 u	1.31 u	1.47 u	1.66 u	1.77 u	1.86 u	1.99 u	0.5	1.09	1.18	1.24	1.33	1.50	1.69	1.79	1.87	1.97
9-13 years	0.7	1.30	1.40	1.47	1.58	1.81	2.07	2.23	2.34	2.51	0.7	0.91	1.00	1.06	1.16	1.36	1.61	1.76	1.86	2.01
14-18 years	1.0	1.20	1.39	1.52	1.72	2.11	2.56	2.84	3.05	3.38	0.9	0.80 u	0.91 u	1.00 u	1.13 u	1.40 u	1.69 u	1.86 u	1.99 u	2.20 u
Higher-income Nonparticipants																				
5-8 years	0.5	1.13 u	1.24 u	1.33 u	1.46 u	1.71 u	2.00 u	2.18 u	2.31 u	2.51 u	0.5	0.99 u	1.08 u	1.15 u	1.25 u	1.45 u	1.68 u	1.81 u	1.90 u	2.05 u
9-13 years	0.7	1.26	1.37	1.44	1.56	1.81	2.13	2.33	2.49	2.76	0.7	1.05	1.14	1.21	1.32	1.55	1.84	2.02	2.15	2.36
14-18 years	1.0	1.16	1.32	1.44	1.62	2.01	2.49	2.80	3.03	3.44	0.9	0.85	0.97	1.05	1.19	1.46	1.76	1.94	2.07	2.28

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-31—Calcium (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	994	*(19.6)*	779	1026	*(31.5)*	1,360	995	*(36.7)*	1,407	960	*(33.3)*
All NSLP Participants	1,741	1064	*(28.8)*	473	1072	*(41.7)*	794	1065	*(44.9)*	474	1055	*(61.2)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	1039	*(40.2)*	321	1082	*(57.0)*	512	1038	*(62.6)*	304	997	*(86.1)*
Nonparticipants	950	***817	*(37.8)*	161	* 889	*(74.2)*	315	* 830	*(70.9)*	474	** 731	*(47.7)*
Higher-income[2]												
NSLP Participants	604	1093	*(40.3)*	152	1055	*(64.3)*	282	1106	*(63.1)*	170	1118	*(80.9)*
Nonparticipants	761	989	*(37.0)*	129	970	*(64.2)*	224	962	*(68.2)*	408	1035	*(59.3)*
						Boys						
All Children	1,794	1100	*(27.2)*	386	1112	*(37.2)*	660	1069	*(49.7)*	748	1119	*(52.7)*
All NSLP Participants	935	1153	*(37.1)*	238	1174	*(56.3)*	405	1134	*(53.3)*	292	1149	*(80.5)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	1093	*(49.2)*	167	1161	*(67.1)*	257	1052	*(67.1)*	180	1066	*(113.8)*
Nonparticipants	456	* 918	*(60.1)*	78	954 u	*(111.8)*	147	883	*(113.6)*	231	917	*(83.7)*
Higher-income[2]												
NSLP Participants	331	1226	*(58.8)*	71	1196 u	*(111.6)*	148	1248	*(89.2)*	112	1232	*(103.9)*
Nonparticipants	364	1111	*(59.2)*	60	1049 u	*(89.3)*	102	1058	*(114.0)*	202	1228	*(102.0)*
						Girls						
All Children	1,752	874	*(27.8)*	393	938	*(51.1)*	700	914	*(54.3)*	659	769	*(36.7)*
All NSLP Participants	806	942	*(43.8)*	235	976	*(61.2)*	389	982	*(75.4)*	182	866	*(88.4)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	971	*(64.2)*	154	1007	*(91.2)*	255	1023	*(110.0)*	124	882	*(129.1)*
Nonparticipants	494	***713	*(41.9)*	83	808	*(91.3)*	168	* 762	*(69.7)*	243	* 568	*(51.2)*
Higher-income[2]												
NSLP Participants	273	896	*(53.3)*	81	927	*(69.3)*	134	916	*(86.9)*	58	842 u	*(115.4)*
Nonparticipants	397	874	*(46.0)*	69	889 u	*(92.2)*	122	882	*(81.0)*	206	851	*(63.1)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-32—Calcium (mg): Mean Usual Intake as a Percent of Adequate Intake (AI)

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error
						Both sexes[1]						
All Children	3,546	92.8	*(1.82)*	779	128.3	*(3.94)*	1,360	76.6	*(2.82)*	1,407	73.9	*(2.56)*
All NSLP Participants	1,741	98.9	*(2.60)*	473	134.0	*(5.21)*	794	81.9	*(3.45)*	474	81.1	*(4.71)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	97.2	*(3.61)*	321	135.3	*(7.13)*	512	79.9	*(4.82)*	304	76.7	*(6.63)*
Nonparticipants	950	*** 77.0	*(3.78)*	161	* 111.1	*(9.27)*	315	* 63.9	*(5.45)*	474	** 56.2	*(3.67)*
Higher-income[2]												
NSLP Participants	604	100.9	*(3.74)*	152	131.9	*(8.04)*	282	85.1	*(4.85)*	170	86.0	*(6.22)*
Nonparticipants	761	91.5	*(3.53)*	129	121.2	*(8.02)*	224	74.0	*(5.25)*	408	79.6	*(4.56)*
						Boys						
All Children	1,794	102.3	*(2.42)*	386	139.0	*(4.65)*	660	82.2	*(3.82)*	748	86.0	*(4.05)*
All NSLP Participants	935	107.3	*(3.39)*	238	146.8	*(7.04)*	405	87.3	*(4.10)*	292	88.4	*(6.19)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	102.5	*(4.37)*	167	145.2	*(8.39)*	257	80.9	*(5.16)*	180	82.0	*(8.75)*
Nonparticipants	456	* 85.8	*(5.89)*	78	119.3 u	*(13.97)*	147	67.9	*(8.74)*	231	70.5	*(6.44)*
Higher-income[2]												
NSLP Participants	331	113.3	*(5.80)*	71	149.5 u	*(13.95)*	148	96.0	*(6.86)*	112	94.7	*(7.99)*
Nonparticipants	364	102.2	*(5.40)*	60	131.2 u	*(11.16)*	102	81.4	*(8.77)*	202	94.5	*(7.85)*
						Girls						
All Children	1,752	82.2	*(2.71)*	393	117.3	*(6.39)*	700	70.3	*(4.18)*	659	59.1	*(2.83)*
All NSLP Participants	806	88.0	*(3.91)*	235	122.0	*(7.65)*	389	75.5	*(5.80)*	182	66.6	*(6.80)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	90.7	*(5.76)*	154	125.8	*(11.40)*	255	78.7	*(8.46)*	124	67.8	*(9.93)*
Nonparticipants	494	** 67.7	*(4.39)*	83	101.0	*(11.42)*	168	* 58.6	*(5.36)*	243	* 43.7	*(3.94)*
Higher-income[2]												
NSLP Participants	273	83.6	*(4.68)*	81	115.9	*(8.66)*	134	70.5	*(6.68)*	58	64.8 u	*(8.88)*
Nonparticipants	397	81.4	*(4.64)*	69	111.1 u	*(11.52)*	122	67.8	*(6.23)*	206	65.5	*(4.85)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-33—Calcium (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	800	682	765	823	913	1094	1291	1404	1483	1603	800	557	630	682	763	925	1100	1197	1265	1365
9-13 years	1300	641	721	777	865	1043	1246	1366	1452	1585	1300	499	569	619	701	879	1088	1211	1301	1448
14-18 years	1300	549	645	713	822	1058	1354	1539	1673	1884	1300	367	436	487	569	741	941	1058	1139	1264
All NSLP Participants																				
5-8 years	800	803	881	934	1010	1149	1312	1420	1503	1637	800	628	695	743	816	963	1124	1213	1275	1367
9-13 years	1300	695	778	838	929	1107	1309	1433	1524	1667	1300	533	611	668	756	941	1161	1299	1402	1570
14-18 years	1300	617	702	764	864	1095	1380	1549	1671	1863	1300	432	505	561	653	850	1058	1170	1245	1357
Income-eligible Participants																				
5-8 years	800	801	872	919	992	1137	1308	1411	1486	1602	800	647	716	765	840	991	1156	1251	1317	1419
9-13 years	1300	642	720	774	859	1029	1221	1333	1413	1538	1300	543	627	686	779	974	1211	1362	1476	1667
14-18 years	1300	625	694	741	818	1010	1260	1410	1518	1690	1300	438	507	564	661	867	1076	1188	1266	1389
Income-eligible Nonparticipants																				
5-8 years	800	516 u	597 u	651 u	732 u	911 u	1141 u	1283 u	1384 u	1535 u	800	427	489	533	605	762	964	1094	1189	1342
9-13 years	1300	480	563	619	701	858	1052	1163	1234	1340	1300	410	474	520	593	742	910	1007	1076	1182
14-18 years	1300	* 438	519	578	672	869	1118	1275	1387	1555	1300	254	305	343	404	539	700	798	869	983
Higher-income Participants																				
5-8 years	800	808 u	890 u	944 u	1020 u	1155 u	1334 u	1469 u	1573 u	1735 u	800	591	659	707	781	926	1072	1148	1197	1267
9-13 years	1300	790	872	930	1023	1216	1439	1571	1666	1816	1300	517	589	641	723	892	1083	1195	1275	1398
14-18 years	1300	614	720	798	922	1184	1490	1673	1805	2011	1300	418 u	491 u	547 u	639 u	832 u	1037 u	1142 u	1209 u	1300 u
Higher-income Nonparticipants																				
5-8 years	800	626 u	701 u	755 u	841 u	1020 u	1226 u	1348 u	1436 u	1575 u	800	501 u	576 u	630 u	712 u	875 u	1051 u	1150 u	1219 u	1324 u
9-13 years	1300	664	736	786	863	1028	1229	1347	1429	1549	1300	508	570	614	685	844	1037	1156	1242	1383
14-18 years	1300	562	669	750	881	1169	1505	1704	1849	2090	1300	440	513	566	650	825	1024	1140	1223	1351

[1] Adequate Intake (AI) is the approximate intake of the nutrient that appears to be adequate for all individuals in the population group. Mean intake at or above the AI implies a low prevalence of inadequate intake.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-34—Iron (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	15.2	*(0.35)*	779	14.6	*(0.61)*	1,360	15.0	*(0.53)*	1,407	16.1	*(0.68)*
All NSLP Participants	1,741	15.7	*(0.57)*	473	14.7	*(0.86)*	794	15.4	*(0.76)*	474	17.1	*(1.28)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	15.6	*(0.71)*	321	15.3	*(1.04)*	512	15.2	*(1.03)*	304	16.2	*(1.53)*
Nonparticipants	950	* 13.5	*(0.59)*	161	13.9	*(1.01)*	315	13.5	*(1.25)*	474	12.9	*(0.73)*
Higher-income[2]												
NSLP Participants	604	15.8	*(0.76)*	152	13.8	*(1.06)*	282	15.7	*(0.93)*	170	18.1	*(1.81)*
Nonparticipants	761	15.7	*(0.62)*	129	14.4	*(1.14)*	224	15.5	*(1.07)*	408	17.2	*(1.02)*
						Boys						
All Children	1,794	16.8	*(0.53)*	386	15.4	*(0.75)*	660	16.4	*(0.91)*	748	18.8	*(1.08)*
All NSLP Participants	935	17.2	*(0.80)*	238	15.5	*(0.84)*	405	16.8	*(1.24)*	292	19.3	*(1.87)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	17.0	*(1.00)*	167	16.3	*(0.91)*	257	16.0	*(1.71)*	180	18.7	*(2.27)*
Nonparticipants	456	14.5	*(0.91)*	78	* 13.1	*(1.09)*	147	14.5	*(2.11)*	231	15.8	*(1.31)*
Higher-income[2]												
NSLP Participants	331	17.4	*(1.09)*	71	14.2 u	*(1.55)*	148	17.9	*(1.44)*	112	20.0	*(2.51)*
Nonparticipants	364	17.5	*(1.05)*	60	15.7 u	*(1.78)*	102	16.9	*(2.00)*	202	20.0	*(1.62)*
						Girls						
All Children	1,752	13.4	*(0.43)*	393	13.8	*(0.97)*	700	13.6	*(0.47)*	659	12.8	*(0.72)*
All NSLP Participants	806	13.4	*(0.62)*	235	13.9	*(1.46)*	389	13.7	*(0.74)*	182	12.6	*(0.88)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	13.5	*(0.86)*	154	14.3	*(1.84)*	255	14.2	*(1.04)*	124	12.1	*(1.49)*
Nonparticipants	494	12.5	*(0.72)*	83	14.9	*(1.83)*	168	12.3	*(0.89)*	243	10.4	*(0.73)*
Higher-income[2]												
NSLP Participants	273	13.2	*(0.70)*	81	13.3	*(1.45)*	134	12.9	*(0.98)*	58	13.3 u	*(1.19)*
Nonparticipants	397	14.0	*(0.72)*	69	13.1 u	*(1.43)*	122	14.3	*(1.00)*	206	14.6	*(1.28)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-35—Iron (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	96.0	*(0.34)*	779	>97	*(0.00)*	1,360	>97	*(0.05)*	1,407	92.4	*(0.68)*
All NSLP Participants	1,741	>97	*(0.33)*	473	>97	*(0.00)*	794	>97	*(0.06)*	474	95.5	*(0.57)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	96.1	*(0.60)*	321	>97	*(0.00)*	512	>97	*(0.16)*	304	93.9 u	*(0.96)*
Nonparticipants	950	***91.4	*(0.75)*	161	>97	*(0.15)*	315	>97	*(0.29)*	474	***80.9	*(1.70)*
Higher-income[3]												
NSLP Participants	604	>97	*(0.34)*	152	>97	*(0.00)*	282	>97	*(0.05)*	170	>97	*(0.75)*
Nonparticipants	761	>97	*(0.60)*	129	>97	*(0.00)*	224	>97	*(0.12)*	408	95.1	*(1.18)*
	Boys											
All Children	1,794	>97	*(0.13)*	386	>97	*(0.00)*	660	>97	*(0.01)*	748	>97	*(0.39)*
All NSLP Participants	935	>97	*(0.16)*	238	>97	*(0.00)*	405	>97	*(0.00)*	292	>97	*(0.48)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(0.12)*	167	>97	*(0.00)*	257	>97	*(0.25)*	180	>97	*(0.26)*
Nonparticipants	456	>97	*(0.59)*	78	>97	*(0.27)*	147	>97	*(0.51)*	231	>97	*(1.69)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.30)*	71	>97	*(0.00)*	148	>97	*(0.00)*	112	>97	*(0.91)*
Nonparticipants	364	>97	*(0.05)*	60	>97	*(0.00)*	102	>97	*(0.00)*	202	>97	*(0.15)*
	Girls											
All Children	1,752	91.8	*(0.71)*	393	>97	*(0.00)*	1,379	>97	*(0.10)*	1,290	84.0	*(1.42)*
All NSLP Participants	806	93.6	*(0.72)*	235	>97	*(0.00)*	389	>97	*(0.12)*	182	87.6	*(1.42)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	91.8	*(1.28)*	154	>97	*(0.00)*	255	>97	*(0.18)*	124	84.0	*(2.55)*
Nonparticipants	494	***82.9	*(1.42)*	83	>97	*(0.00)*	168	>97	*(0.12)*	243	***66.2	*(2.83)*
Higher-income[3]												
NSLP Participants	273	96.1 u	*(0.68)*	81	>97	*(0.00)*	134	>97	*(0.12)*	58	92.5 u	*(1.36)*
Nonparticipants	397	95.2 u	*(1.15)*	69	>97	*(0.00)*	122	>97	*(0.23)*	206	90.6	*(2.29)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. The EAR cut-point method was used for all groups except females age 9-18. The probability approach was used for girls of childbearing age because the distribution of nutrient requirements is not symmetrical.

2 Estimates for both sexes are computed as the weighted average of estimates for males and females.

3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-37—Magnesium (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	238	*(4.5)*	779	230	*(7.1)*	1,360	239	*(8.0)*	1,407	246	*(8.3)*
All NSLP Participants	1,741	244	*(6.7)*	473	236	*(9.7)*	794	245	*(9.6)*	474	253	*(15.0)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	238	*(8.1)*	321	236	*(10.4)*	512	236	*(11.8)*	304	242	*(18.7)*
Nonparticipants	950	* 210	*(9.5)*	161	206	*(14.0)*	315	208	*(19.7)*	474	217	*(14.6)*
Higher-income[2]												
NSLP Participants	604	253	*(10.2)*	152	234	*(16.1)*	282	258	*(17.3)*	170	265	*(19.5)*
Nonparticipants	761	247	*(8.6)*	129	233	*(15.0)*	224	248	*(18.2)*	408	260	*(10.1)*
						Boys						
All Children	1,794	261	*(6.8)*	386	243	*(8.6)*	660	260	*(12.9)*	748	280	*(13.3)*
All NSLP Participants	935	264	*(9.1)*	238	250	*(9.5)*	405	266	*(14.7)*	292	275	*(21.0)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	253	*(10.6)*	167	250	*(8.5)*	257	245	*(17.2)*	180	263	*(25.6)*
Nonparticipants	456	232	*(15.8)*	78	* 209	*(18.6)*	147	230	*(33.2)*	231	259	*(27.8)*
Higher-income[2]												
NSLP Participants	331	278	*(15.2)*	71	251 u	*(24.8)*	148	296	*(27.4)*	112	286	*(26.6)*
Nonparticipants	364	276	*(15.1)*	60	252 u	*(23.8)*	102	272	*(35.4)*	202	304	*(14.4)*
						Girls						
All Children	1,752	212	*(5.7)*	393	217	*(11.4)*	700	214	*(9.0)*	659	205	*(9.0)*
All NSLP Participants	806	217	*(8.7)*	235	222	*(16.5)*	389	218	*(11.7)*	182	209	*(16.6)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	218	*(11.8)*	154	223	*(18.7)*	255	226	*(15.9)*	124	206	*(25.8)*
Nonparticipants	494	* 188	*(9.5)*	83	203	*(21.4)*	168	* 180	*(14.2)*	243	181	*(12.3)*
Higher-income[2]												
NSLP Participants	273	214	*(10.6)*	81	220	*(20.8)*	134	207	*(17.3)*	58	214 u	*(16.6)*
Nonparticipants	397	220	*(9.2)*	69	215 u	*(18.1)*	122	227	*(15.1)*	206	218	*(14.1)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-38—Magnesium (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	62.2	*(1.75)*	779	>97	*(0.22)*	1,360	70.3	*(4.25)*	1,407	16.2	*(2.98)*
All NSLP Participants	1,741	63.4	*(2.38)*	473	>97	*(0.10)*	794	73.8	*(4.70)*	474	16.1 u	*(5.35)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	61.7	*(3.21)*	321	>97	*(0.11)*	512	71.8	*(7.23)*	304	13.1 u	*(6.29)*
Nonparticipants	950	52.6	*(4.33)*	161	>97	*(1.72)*	315	48.7	*(11.82)*	474	11.1 u	*(4.61)*
Higher-income[3]												
NSLP Participants	604	64.8	*(3.36)*	152	>97	*(0.15)*	282	74.7	*(7.12)*	170	19.5 u	*(7.07)*
Nonparticipants	761	66.1	*(2.64)*	129	>97	*(0.58)*	224	77.2	*(6.62)*	408	21.3	*(4.18)*
	Boys											
All Children	1,794	68.5	*(2.30)*	386	>97	*(0.22)*	660	82.0	*(4.76)*	748	23.1	*(4.96)*
All NSLP Participants	935	68.9	*(2.96)*	238	>97	*(0.00)*	405	85.2	*(4.78)*	292	20.9 u	*(7.50)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	64.8	*(4.33)*	167	>97	*(0.00)*	257	77.4	*(9.45)*	180	16.7 u	*(8.80)*
Nonparticipants	456	60.7	*(7.09)*	78	>97	*(2.80)*	147	65.6	*(18.80)*	231	18.7 u	*(8.96)*
Higher-income[3]												
NSLP Participants	331	73.0	*(3.64)*	71	>97	*(0.00)*	148	92.8 u	*(4.85)*	112	25.4 u	*(9.84)*
Nonparticipants	364	73.2	*(3.37)*	60	>97	*(0.00)*	102	87.5 u	*(7.58)*	202	31.5	*(6.61)*
	Girls											
All Children	1,752	55.0	*(2.62)*	393	>97	*(0.39)*	700	57.3	*(7.23)*	659	7.9 u	*(2.73)*
All NSLP Participants	806	55.5	*(3.48)*	235	>97	*(0.19)*	389	59.9	*(8.63)*	182	6.4 u	*(5.68)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	57.5	*(4.61)*	154	>97	*(0.21)*	255	65.4	*(11.10)*	124	7.0 u	*(8.07)*
Nonparticipants	494	* 43.3	*(4.28)*	83	>97	*(1.66)*	168	* 27.0 u	*(12.00)*	243	4.5 u	*(3.60)*
Higher-income[3]												
NSLP Participants	273	52.0	*(5.39)*	81	>97	*(0.28)*	134	50.6 u	*(15.30)*	58	5.3 u	*(4.36)*
Nonparticipants	397	59.8	*(3.95)*	69	>97	*(1.17)*	122	68.6	*(10.40)*	206	11.6 u	*(5.21)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-39—Magnesium (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	110	163	179	190	206	239	274	295	312	339	110	141	155	166	182	214	248	268	283	306
9-13 years	200	165	182	194	213	251	298	327	350	386	200	140	153	163	178	209	246	268	283	307
14-18 years	340	152	174	190	216	270	334	372	399	442	300	114	130	142	160	197	241	268	288	322
All NSLP Participants																				
5-8 years	110	178	192	201	216	246	277	297	311	335	110	150	164	174	190	220	251	270	284	305
9-13 years	200	172	188	200	219	258	304	333	354	390	200	142	155	165	180	213	251	273	289	314
14-18 years	340	155	175	189	212	264	327	363	389	430	300	126	141	152	169	204	244	267	283	309
Income-eligible Participants																				
5-8 years	110	181	195	205	220	248	277	293	306	326	110	150	165	175	190	220	253	273	287	308
9-13 years	200	160	176	187	204	238	278	303	322	352	200	143	158	169	186	221	261	284	299	323
14-18 years	340	155	172	185	205	251	311	347	373	413	300	121	137	148	164	199	239	265	284	315
Income-eligible Nonparticipants																				
5-8 years	110	125	143	155	172	205	240	262	279	306	110	124	137	146	162	195	234	259	277	308
9-13 years	200	136	153	165	184	224	270	296	315	343	200	121	132	139	150	174	203	222	236	259
14-18 years	340	130	150	164	187	240	312	360	395	452	300	96	111	121	138	172	214	241	261	295
Higher-income Participants																				
5-8 years	110	173 u	186 u	195 u	209 u	241 u	282 u	307 u	325 u	356 u	110	150	163	173	188	217	248	265	278	297
9-13 years	200	191	209	222	243	286	338	371	395	435	200	141	154	162	175	201	233	254	269	295
14-18 years	340	155	179	196	222	278	341	379	405	447	300	135 u	151 u	162 u	179 u	212 u	247 u	267 u	281 u	302 u
Higher-income Nonparticipants																				
5-8 years	110	164 u	178 u	189 u	206 u	243 u	288 u	316 u	337 u	371 u	110	133 u	148 u	159 u	175 u	210 u	249 u	271 u	288 u	313 u
9-13 years	200	177	194	205	224	261	306	337	362	407	200	150	164	175	191	224	261	281	295	315
14-18 years	340	171	197	215	244	300	356	389	412	450	300	122	138	150	169	209	257	286	308	342

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-40—Phosphorus (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	1280	*(21.5)*	779	1250	*(38.5)*	1,360	1268	*(36.7)*	1,407	1324	*(36.2)*
All NSLP Participants	1,741	1358	*(33.9)*	473	1298	*(55.0)*	794	1338	*(48.5)*	474	1438	*(70.8)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	1323	*(44.2)*	321	1299	*(65.0)*	512	1292	*(64.4)*	304	1378	*(96.8)*
Nonparticipants	950	*** 1086	*(41.9)*	161	* 1091	*(70.7)*	315	* 1078	*(86.4)*	474	** 1088	*(56.5)*
Higher-income[2]												
NSLP Participants	604	1401	*(45.0)*	152	1293	*(69.0)*	282	1408	*(71.7)*	170	1502	*(91.8)*
Nonparticipants	761	1288	*(37.3)*	129	1227	*(75.0)*	224	1250	*(67.6)*	408	1388	*(47.8)*
Boys												
All Children	1,794	1417	*(31.9)*	386	1338	*(49.1)*	660	1372	*(55.4)*	748	1542	*(60.8)*
All NSLP Participants	935	1468	*(44.3)*	238	1396	*(59.6)*	405	1434	*(64.4)*	292	1576	*(100.2)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	1397	*(59.6)*	167	1381	*(72.6)*	257	1318	*(83.6)*	180	1494	*(141.2)*
Nonparticipants	456	* 1204	*(69.7)*	78	1130	*(109.2)*	147	1184	*(142.0)*	231	1299	*(106.3)*
Higher-income[2]												
NSLP Participants	331	1559	*(64.9)*	71	1423 u	*(105.5)*	148	1595	*(108.3)*	112	1657	*(123.0)*
Nonparticipants	364	1462	*(58.8)*	60	1340 u	*(119.2)*	102	1364	*(103.5)*	202	1685	*(78.4)*
Girls												
All Children	1,752	1125	*(27.4)*	393	1161	*(59.6)*	700	1152	*(47.2)*	659	1060	*(31.4)*
All NSLP Participants	806	1197	*(45.5)*	235	1206	*(90.8)*	389	1222	*(73.6)*	182	1162	*(70.9)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	1222	*(59.5)*	154	1221	*(106.5)*	255	1262	*(99.5)*	124	1182	*(103.3)*
Nonparticipants	494	*** 962	*(40.6)*	83	1043	*(81.8)*	168	** 942	*(74.5)*	243	* 902	*(50.7)*
Higher-income[2]												
NSLP Participants	273	1154	*(53.0)*	81	1174	*(90.2)*	134	1160	*(84.5)*	58	1129 u	*(100.6)*
Nonparticipants	397	1124	*(46.4)*	69	1113 u	*(90.5)*	122	1153	*(88.9)*	206	1106	*(56.1)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-41—Phosphorus (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	80.6	*(1.55)*	779	>97	*(0.00)*	1,360	72.4	*(3.85)*	1,407	69.5	*(2.54)*
All NSLP Participants	1,741	86.9	*(2.02)*	473	>97	*(0.00)*	794	79.5	*(4.27)*	474	81.3	*(4.27)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	85.4	*(3.13)*	321	>97	*(0.00)*	512	76.7	*(6.30)*	304	79.8	*(6.91)*
Nonparticipants	950	***65.2	*(4.35)*	161	>97	*(0.36)*	315	*48.6	*(11.41)*	474	***47.5	*(5.95)*
Higher-income[3]												
NSLP Participants	604	87.8	*(2.49)*	152	>97	*(0.00)*	282	81.2	*(5.36)*	170	82.2	*(5.18)*
Nonparticipants	761	81.7	*(2.86)*	129	>97	*(0.00)*	224	72.5	*(7.22)*	408	72.7	*(4.44)*
	Boys											
All Children	1,794	90.8	*(1.81)*	386	>97	*(0.00)*	660	85.1	*(4.53)*	748	87.4	*(2.88)*
All NSLP Participants	935	93.2	*(2.13)*	238	>97	*(0.00)*	405	89.9	*(4.10)*	292	89.9	*(4.90)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	89.7	*(3.50)*	167	>97	*(0.00)*	257	81.7	*(7.63)*	180	87.6	*(7.12)*
Nonparticipants	456	78.6	*(6.79)*	78	>97	*(0.66)*	147	64.7	*(18.30)*	231	71.9	*(8.28)*
Higher-income[3]												
NSLP Participants	331	96.2 u	*(1.78)*	71	>97	*(0.00)*	148	97.0 u	*(2.59)*	112	91.7 u	*(4.68)*
Nonparticipants	364	93.4	*(2.92)*	60	>97	*(0.00)*	102	87.9 u	*(7.96)*	202	92.4 u	*(3.35)*
	Girls											
All Children	1,752	68.7	*(2.61)*	393	>97	*(0.00)*	700	58.4	*(6.37)*	659	47.8	*(4.41)*
All NSLP Participants	806	77.0	*(3.86)*	235	>97	*(0.00)*	389	66.9	*(8.04)*	182	64.2	*(8.26)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	79.2	*(5.84)*	154	>97	*(0.00)*	255	71.0	*(10.30)*	124	66.7	*(14.20)*
Nonparticipants	494	***51.1	*(4.72)*	83	>97	*(0.00)*	168	**27.7 u	*(11.20)*	243	*26.1 u	*(8.49)*
Higher-income[3]												
NSLP Participants	273	73.1	*(6.06)*	81	>97	*(0.00)*	134	60.3	*(12.00)*	58	59.2 u	*(13.60)*
Nonparticipants	397	71.1	*(4.72)*	69	>97	*(0.00)*	122	59.6	*(11.50)*	206	54.0	*(8.06)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-42—Phosphorus (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	405	909	992	1051	1140	1320	1516	1628	1706	1827	405	794	864	914	991	1145	1313	1411	1480	1587
9-13 years	1055	909	995	1056	1152	1351	1568	1689	1775	1908	1055	729	803	856	938	1114	1325	1456	1552	1706
14-18 years	1055	887	1008	1094	1226	1496	1805	1993	2131	2354	1055	599	686	748	844	1039	1252	1374	1460	1592
All NSLP Participants																				
5-8 years	405	1018	1090	1142	1221	1379	1553	1654	1724	1834	405	852	919	966	1039	1188	1353	1449	1517	1622
9-13 years	1055	967	1054	1116	1213	1408	1621	1748	1841	1992	1055	765	845	903	992	1182	1410	1550	1652	1814
14-18 years	1055	940	1053	1132	1255	1514	1832	2032	2180	2422	1055	709	801	866	967	1158	1346	1447	1518	1629
Income-eligible Participants																				
5-8 years	405	1006	1079	1130	1209	1366	1537	1635	1703	1809	405	871	935	980	1052	1198	1365	1464	1536	1648
9-13 years	1055	896	971	1024	1110	1291	1495	1614	1699	1837	1055	756	847	913	1018	1236	1472	1608	1707	1866
14-18 years	1055	922	1019	1088	1195	1431	1736	1927	2065	2277	1055	737	829	893	990	1172	1358	1463	1539	1662
Income-eligible Nonparticipants																				
5-8 years	405	679	776	840	935	1113	1304	1418	1502	1637	405	667	734	781	856	1010	1193	1307	1392	1531
9-13 years	1055	731	822	884	977	1160	1370	1493	1580	1712	1055	611	668	709	774	914	1076	1172	1243	1362
14-18 years	1055	729	836	910	1025	1255	1523	1690	1815	2021	1055	494	571	626	710	878	1065	1178	1260	1394
Higher-income Participants																				
5-8 years	405	1035 u	1112 u	1166 u	1248 u	1403 u	1577 u	1685 u	1764 u	1884 u	405	813	885	936	1015	1169	1328	1413	1469	1550
9-13 years	1055	1111	1201	1265	1363	1561	1789	1927	2029	2194	1055	785	847	891	963	1120	1318	1441	1531	1669
14-18 years	1055	959	1094	1186	1324	1597	1919	2128	2289	2559	1055	684 u	767 u	828 u	926 u	1125 u	1329 u	1432 u	1497 u	1586 u
Higher-income Nonparticipants																				
5-8 years	405	885 u	956 u	1011 u	1101 u	1300 u	1538 u	1678 u	1777 u	1929 u	405	739 u	813 u	864 u	943 u	1100 u	1268 u	1363 u	1430 u	1531 u
9-13 years	1055	949	1029	1087	1176	1353	1541	1644	1714	1816	1055	740	812	864	947	1121	1324	1447	1536	1677
14-18 years	1055	974	1117	1217	1365	1645	1963	2157	2296	2512	1055	632	722	786	886	1086	1304	1428	1515	1648

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-43—Potassium (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	2371	*(46.4)*	779	2325	*(77.2)*	1,360	2336	*(78.3)*	1,407	2454	*(85.6)*
All NSLP Participants	1,741	2537	*(73.0)*	473	2479	*(101.8)*	794	2527	*(98.9)*	474	2605	*(167.8)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	*** 2501	*(92.1)*	321	** 2521	*(108.0)*	512	* 2466	*(128.6)*	304	2516	*(220.8)*
Nonparticipants	950	2047	*(81.8)*	161	2024	*(132.1)*	315	2000	*(174.8)*	474	2117	*(108.0)*
Higher-income[2]												
NSLP Participants	604	2578	*(95.9)*	152	2410	*(159.8)*	282	2617	*(141.4)*	170	2708	*(194.2)*
Nonparticipants	761	* 2289	*(67.8)*	129	2192	*(139.0)*	224	** 2138	*(102.0)*	408	2541	*(109.0)*
						Boys						
All Children	1,794	2596	*(69.1)*	386	2456	*(88.7)*	660	2529	*(122.0)*	748	2806	*(142.1)*
All NSLP Participants	935	2720	*(98.4)*	238	2629	*(94.0)*	405	2703	*(145.7)*	292	2827	*(240.3)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	* 2652	*(130.7)*	167	** 2709	*(114.4)*	257	2523	*(187.8)*	180	2727	*(326.4)*
Nonparticipants	456	2233	*(131.7)*	78	2080	*(184.2)*	147	2183	*(293.4)*	231	2436	*(184.8)*
Higher-income[2]												
NSLP Participants	331	2793	*(134.2)*	71	2489 u	*(205.5)*	148	2955	*(223.9)*	112	2932	*(264.5)*
Nonparticipants	364	2581	*(109.5)*	60	2352 u	*(233.8)*	102	* 2353	*(158.9)*	202	3044	*(168.7)*
						Girls						
All Children	1,752	2114	*(59.0)*	393	2192	*(127.0)*	700	2122	*(95.0)*	659	2028	*(78.8)*
All NSLP Participants	806	2271	*(88.2)*	235	2338	*(176.4)*	389	2313	*(129.1)*	182	2160	*(150.4)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	** 2302	*(110.5)*	154	2342	*(180.7)*	255	2402	*(173.1)*	124	2159	*(218.5)*
Nonparticipants	494	1851	*(86.1)*	83	1954	*(187.9)*	168	** 1764	*(129.6)*	243	1837	*(121.6)*
Higher-income[2]												
NSLP Participants	273	2223	*(110.0)*	81	2338	*(241.2)*	134	2165	*(140.5)*	58	2166 u	*(178.3)*
Nonparticipants	397	2015	*(80.8)*	69	2030 u	*(148.4)*	122	1956	*(131.8)*	206	2062	*(139.5)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-44—Potassium (mg): Mean Usual Intake as a Percent of Adequate Intake (AI)

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error
						Both sexes[1]						
All Children	3,546	55.1	*(1.08)*	779	61.2	*(2.03)*	1,360	51.9	*(1.74)*	1,407	52.2	*(1.82)*
All NSLP Participants	1,741	58.9	*(1.65)*	473	65.2	*(2.68)*	794	56.2	*(2.20)*	474	55.4	*(3.57)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	*** 58.2	*(2.06)*	321	** 66.4	*(2.84)*	512	* 54.8	*(2.86)*	304	53.5	*(4.70)*
Nonparticipants	950	47.6	*(1.91)*	161	53.3	*(3.48)*	315	44.4	*(3.88)*	474	45.0	*(2.30)*
Higher-income[2]												
NSLP Participants	604	59.7	*(2.22)*	152	63.4	*(4.21)*	282	58.1	*(3.14)*	170	57.6	*(4.13)*
Nonparticipants	761	* 53.0	*(1.62)*	129	57.7	*(3.66)*	224	** 47.5	*(2.27)*	408	54.1	*(2.32)*
						Boys						
All Children	1,794	60.1	*(1.56)*	386	64.6	*(2.33)*	660	56.2	*(2.71)*	748	59.7	*(3.02)*
All NSLP Participants	935	63.1	*(2.17)*	238	69.2	*(2.47)*	405	60.1	*(3.24)*	292	60.2	*(5.11)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	61.7	*(2.87)*	167	71.3	*(3.01)*	257	56.1	*(4.17)*	180	58.0	*(6.94)*
Nonparticipants	456	* 51.7	*(3.03)*	78	** 54.7	*(4.85)*	147	48.5	*(6.52)*	231	51.8	*(3.93)*
Higher-income[2]												
NSLP Participants	331	64.5	*(3.08)*	71	65.5 u	*(5.41)*	148	65.7	*(4.98)*	112	62.4	*(5.63)*
Nonparticipants	364	59.6	*(2.64)*	60	61.9 u	*(6.15)*	102	* 52.3	*(3.53)*	202	64.8	*(3.59)*
						Girls						
All Children	1,752	49.3	*(1.43)*	393	57.7	*(3.34)*	700	47.2	*(2.11)*	659	43.1	*(1.68)*
All NSLP Participants	806	53.0	*(2.10)*	235	61.5	*(4.64)*	389	51.4	*(2.87)*	182	46.0	*(3.20)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	53.7	*(2.56)*	154	61.6	*(4.76)*	255	53.4	*(3.85)*	124	45.9	*(4.65)*
Nonparticipants	494	** 43.2	*(2.09)*	83	51.4	*(4.94)*	168	** 39.2	*(2.88)*	243	39.1	*(2.59)*
Higher-income[2]												
NSLP Participants	273	51.9	*(2.66)*	81	61.5	*(6.35)*	134	48.1	*(3.12)*	58	46.1 u	*(3.79)*
Nonparticipants	397	46.9	*(1.90)*	69	53.4 u	*(3.91)*	122	43.5	*(2.93)*	206	43.9	*(2.97)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-45—Potassium (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years ...	3800	1618	1785	1902	2081	2437	2808	3009	3147	3356	3800	1354	1511	1623	1797	2150	2541	2768	2927	3174
9-13 years ..	4500	1585	1759	1884	2077	2470	2910	3174	3367	3679	4500	1375	1512	1609	1761	2075	2433	2644	2795	3029
14-18 years	4700	1501	1728	1894	2158	2711	3352	3733	4006	4435	4700	1174	1331	1442	1615	1970	2377	2620	2797	3078
All NSLP Participants																				
5-8 years ...	3800	1881	2030	2134	2293	2606	2940	3128	3259	3458	3800	1484	1645	1762	1945	2309	2695	2914	3068	3303
9-13 years ..	4500	1732	1904	2028	2221	2629	3100	3385	3594	3932	4500	1512	1660	1766	1932	2269	2646	2866	3022	3265
14-18 years	4700	1562	1774	1928	2177	2715	3356	3745	4027	4475	4700	1426	1570	1670	1822	2126	2460	2655	2794	3013
Income-eligible Participants																				
5-8 years ...	3800	1939	2098	2209	2374	2692	3021	3206	3336	3538	3800	1480	1653	1775	1961	2315	2694	2915	3070	3303
9-13 years ..	4500	1582	1744	1861	2045	2438	2897	3186	3404	3765	4500	1567	1725	1836	2010	2360	2749	2973	3132	3377
14-18 years	4700	1484	1674	1823	2076	2643	3270	3627	3885	4295	4700	1378	1528	1632	1792	2114	2475	2690	2846	3093
Income-eligible Nonparticipants																				
5-8 years ...	3800	1289	1464	* 1576	* 1737	* 2034	2368	2584	2750	3031	3800	1124	1264	1364	1523	1861	2279	* 2550	2756	3100
9-13 years ..	4500	1208	1373	1499	1702	2120	2576	2852	3057	3397	4500	1156	1268	1346	* 1466	* 1713	* 2003	* 2185	2321	2546
14-18 years	4700	1321	1509	1641	1849	2299	2878	3257	3544	4018	4700	986	1150	1255	1413	1796	2204	2414	2576	2846
Higher-income Participants																				
5-8 years ...	3800	1795 u	1931 u	2026 u	2173 u	2463 u	2777 u	2955 u	3080 u	3271 u	3800	1485	1633	1742	1916	2284	2703	2947	3117	3379
9-13 years ..	4500	1989	2167	2294	2492	2899	3357	3625	3817	4115	4500	1439	1570	1664	1810	2117	2472	2682	2831	3059
14-18 years	4700	1615	1839	2004	2266	2824	3480	3877	4164	4618	4700	1489 u	1626 u	1722 u	1868 u	2150 u	2447 u	2612 u	2725 u	2897 u
Higher-income Nonparticipants																				
5-8 years ...	3800	1430 u	1609 u	1738 u	1941 u	2344 u	2755 u	2968 u	3107 u	3303 u	3800	1246 u	1396 u	1503 u	1667 u	1996 u	2356 u	2562 u	2706 u	2927 u
9-13 years ..	4500	1640	1790	1893	2048	2343	2647	2814	2927	3098	4500	1273	1403	1495	1637	1924	2241	2423	2552	2750
14-18 years	4700	1655	1915	2101	2391	2979	3626	3998	4259	4660	4700	1181	1334	1445	1620	1987	2421	2687	2883	3198

[1] Adequate Intake (AI) is the approximate intake of the nutrient that appears to be adequate for all individuals in the population group. Mean intake at or above the AI implies a low prevalence of inadequate intake.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-46—Sodium (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	3196	*(59.6)*	779	2919	*(85.0)*	1,360	3204	*(103.8)*	1,407	3466	*(118.2)*
All NSLP Participants	1,741	3359	*(94.7)*	473	2985	*(114.2)*	794	3336	*(134.8)*	474	3756	*(223.8)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	3273	*(110.3)*	321	2958	*(140.5)*	512	3291	*(177.9)*	304	3569	*(241.8)*
Nonparticipants	950	** 2832	*(96.4)*	161	2761	*(134.3)*	315	2836	*(196.0)*	474	* 2899	*(163.3)*
Higher-income[2]												
NSLP Participants	604	3481	*(168.4)*	152	3035	*(166.6)*	282	3438	*(331.0)*	170	3974	*(341.6)*
Nonparticipants	761	3223	*(95.5)*	129	2882	*(184.6)*	224	3189	*(169.6)*	408	3602	*(138.1)*
						Boys						
All Children	1,794	3518	*(97.9)*	386	3103	*(141.3)*	660	3485	*(168.3)*	748	3968	*(195.1)*
All NSLP Participants	935	3605	*(138.6)*	238	3114	*(189.9)*	405	3623	*(210.8)*	292	4078	*(305.6)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	3495	*(167.3)*	167	3137	*(248.0)*	257	3474	*(280.3)*	180	3875	*(335.2)*
Nonparticipants	456	3063	*(149.6)*	78	2925	*(174.0)*	147	3037	*(310.0)*	231	3227	*(271.1)*
Higher-income[2]												
NSLP Participants	331	3747	*(252.8)*	71	3070 u	*(250.2)*	148	3884	*(559.9)*	112	4284	*(438.7)*
Nonparticipants	364	3674	*(162.7)*	60	3162 u	*(296.3)*	102	3504	*(315.7)*	202	4363	*(222.6)*
						Girls						
All Children	1,752	2828	*(61.9)*	393	2731	*(93.1)*	700	2893	*(114.6)*	659	2858	*(112.1)*
All NSLP Participants	806	2989	*(114.0)*	235	2865	*(131.3)*	389	2988	*(153.8)*	182	3113	*(277.8)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	2974	*(134.6)*	154	2787	*(139.2)*	255	3082	*(207.2)*	124	3050	*(318.8)*
Nonparticipants	494	* 2581	*(116.8)*	83	2556	*(209.9)*	168	2576	*(203.4)*	243	2611	*(193.3)*
Higher-income[2]												
NSLP Participants	273	3022	*(189.5)*	81	3003	*(222.4)*	134	2843	*(199.2)*	58	3226 u	*(488.4)*
Nonparticipants	397	2800	*(106.5)*	69	2597 u	*(218.7)*	122	2923	*(163.7)*	206	2878	*(166.6)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-47—Sodium (mg): Mean Usual Intake as a Percent of Adequate Intake (AI)

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error
	Both sexes[1]											
All Children	3,546	229.1	*(4.21)*	779	243.2	*(7.08)*	1,360	213.6	*(6.92)*	1,407	231.0	*(7.88)*
All NSLP Participants	1,741	240.4	*(6.59)*	473	248.8	*(9.51)*	794	222.4	*(8.99)*	474	250.4	*(14.92)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	234.5	*(7.71)*	321	246.5	*(11.71)*	512	219.4	*(11.86)*	304	238.0	*(16.12)*
Nonparticipants	950	** 204.0	*(6.80)*	161	230.1	*(11.19)*	315	189.0	*(13.07)*	474	* 193.3	*(10.88)*
Higher-income[2]												
NSLP Participants	604	248.8	*(11.56)*	152	252.9	*(13.89)*	282	229.2	*(22.07)*	170	264.9	*(22.77)*
Nonparticipants	761	230.8	*(7.06)*	129	240.2	*(15.38)*	224	212.6	*(11.31)*	408	240.1	*(9.20)*
	Boys											
All Children	1,794	251.6	*(6.93)*	386	258.6	*(11.78)*	660	232.4	*(11.22)*	748	264.6	*(13.01)*
All NSLP Participants	935	257.5	*(9.76)*	238	259.5	*(15.82)*	405	241.5	*(14.05)*	292	271.9	*(20.37)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	250.3	*(11.89)*	167	261.4	*(20.67)*	257	231.6	*(18.69)*	180	258.3	*(22.35)*
Nonparticipants	456	220.3	*(10.38)*	78	243.8	*(14.50)*	147	202.4	*(20.67)*	231	215.1	*(18.07)*
Higher-income[2]												
NSLP Participants	331	266.7	*(17.35)*	71	255.9 u	*(20.85)*	148	259.0	*(37.33)*	112	285.6	*(29.25)*
Nonparticipants	364	262.4	*(11.90)*	60	263.5 u	*(24.69)*	102	233.6	*(21.05)*	202	290.9	*(14.84)*
	Girls											
All Children	1,752	203.6	*(4.40)*	393	227.6	*(7.76)*	700	192.8	*(7.64)*	659	190.5	*(7.47)*
All NSLP Participants	806	215.0	*(7.91)*	235	238.7	*(10.94)*	389	199.2	*(10.25)*	182	207.5	*(18.52)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	213.6	*(9.26)*	154	232.2	*(11.60)*	255	205.5	*(13.81)*	124	203.4	*(21.25)*
Nonparticipants	494	* 186.2	*(8.53)*	83	213.0	*(17.49)*	168	171.7	*(13.56)*	243	174.1	*(12.89)*
Higher-income[2]												
NSLP Participants	273	218.0	*(13.16)*	81	250.2	*(18.53)*	134	189.5	*(13.28)*	58	215.1 u	*(32.56)*
Nonparticipants	397	201.0	*(7.97)*	69	216.4 u	*(18.22)*	122	194.8	*(10.91)*	206	191.9	*(11.11)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-48—Sodium (mg): Percent of Children with Usual Intake Above the Tolerable Upper Intake Level (UL)

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
						Both sexes[1]						
All Children	3,546	91.9	*(1.14)*	779	>97	*(0.92)*	1,360	90.8	*(2.13)*	1,407	87.8	*(2.52)*
All NSLP Participants	1,741	95.3	*(1.10)*	473	>97	*(0.73)*	794	93.2	*(2.20)*	474	94.2	*(2.35)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	95.1	*(1.62)*	321	>97	*(1.43)*	512	93.6	*(2.96)*	304	93.9 u	*(3.56)*
Nonparticipants	950	*** 81.6	*(3.44)*	161	91.6 u	*(4.45)*	315	* 79.4	*(6.03)*	474	* 73.9	*(7.09)*
Higher-income[2]												
NSLP Participants	604	95.4	*(1.63)*	152	>97	*(0.86)*	282	92.3	*(3.29)*	170	95.0 u	*(3.49)*
Nonparticipants	761	92.2	*(2.02)*	129	95.4 u	*(2.61)*	224	92.1 u	*(3.24)*	408	89.2	*(4.42)*
						Boys						
All Children	1,794	>97	*(0.75)*	386	>97	*(0.93)*	660	96.8	*(1.66)*	748	96.6	*(1.19)*
All NSLP Participants	935	>97	*(0.78)*	238	>97	*(0.61)*	405	>97	*(1.77)*	292	>97	*(1.36)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	>97	*(1.38)*	167	>97	*(0.62)*	257	96.2 u	*(3.32)*	180	>97	*(2.35)*
Nonparticipants	456	90.0	*(3.67)*	78	94.8 u	*(3.83)*	147	89.5 u	*(7.91)*	231	85.6	*(6.56)*
Higher-income[2]												
NSLP Participants	331	>97	*(0.69)*	71	>97	*(1.44)*	148	>97	*(0.93)*	112	>97	*(1.15)*
Nonparticipants	364	>97	*(0.66)*	60	>97	*(0.90)*	102	>97	*(1.53)*	202	>97	*(0.87)*
						Girls						
All Children	1,752	85.5	*(2.31)*	393	95.3 u	*(1.60)*	700	84.2	*(4.08)*	659	77.1	*(5.38)*
All NSLP Participants	806	90.6	*(2.64)*	235	>97	*(1.29)*	389	87.9	*(4.36)*	182	86.7	*(6.49)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	91.7	*(3.48)*	154	96.0 u	*(2.74)*	255	90.7	*(5.08)*	124	88.4 u	*(8.73)*
Nonparticipants	494	** 72.4	*(5.84)*	83	87.5 u	*(8.79)*	168	* 66.3	*(9.30)*	243	63.5	*(12.00)*
Higher-income[2]												
NSLP Participants	273	89.3	*(4.62)*	81	>97	*(0.99)*	134	83.3	*(7.56)*	58	85.9 u	*(11.60)*
Nonparticipants	397	86.2	*(3.86)*	69	91.5 u	*(5.18)*	122	86.7 u	*(5.84)*	206	80.2	*(8.59)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-49—Sodium (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	1200	2167	2348	2477	2675	3069	3490	3729	3897	4157	1200	1913	2066	2175	2344	2687	3071	3295	3454	3701
9-13 years	1500	2324	2547	2703	2944	3412	3938	4268	4513	4907	1500	1856	2047	2181	2389	2815	3309	3613	3837	4198
14-18 years	1500	2433	2708	2905	3214	3853	4593	5042	5371	5899	1500	1798	1988	2125	2341	2792	3304	3603	3814	4143
All NSLP Participants																				
5-8 years	1200	2245	2411	2530	2717	3091	3483	3696	3842	4061	1200	2027	2194	2313	2495	2846	3206	3406	3546	3767
9-13 years	1500	2424	2674	2840	3079	3525	4075	4441	4711	5128	1500	1930	2136	2280	2496	2921	3406	3706	3927	4283
14-18 years	1500	2538	2788	2981	3299	3977	4724	5161	5477	5988	1500	2011	2204	2344	2565	3029	3569	3894	4129	4501
Income-eligible Participants																				
5-8 years	1200	2259	2424	2543	2730	3109	3510	3731	3882	4112	1200	1938	2088	2199	2379	2759	3162	3374	3514	3724
9-13 years	1500	2289	2539	2715	2975	3442	3893	4190	4432	4837	1500	2016	2223	2357	2558	2998	3530	3847	4075	4428
14-18 years	1500	2448	2676	2845	3127	3768	4516	4936	5224	5661	1500	2074	2255	2388	2595	3004	3433	3691	3882	4204
Income-eligible Nonparticipants																				
5-8 years	1200	1889	2106	2250	2467	2884	3334	3602	3795	4105	1200	1685	1841	1952	2128	2495	2918	3169	3351	3636
9-13 years	1500	2000	2185	2317	2525	2979	3486	3759	3950	4255	1500	1590	1748	1866	2055	2462	2960	3280	3526	3946
14-18 years	1500	1959	2167	2318	2562	3103	3756	4151	4438	4907	1500	1604	1770	1894	2095	2535	3044	3339	3548	3878
Higher-income Participants																				
5-8 years	1200	2220 u	2395 u	2515 u	2698 u	3052 u	3423 u	3628 u	3770 u	3983 u	1200	2169	2331	2445	2621	2970	3349	3565	3717	3950
9-13 years	1500	2633	2852	3002	3236	3733	4377	4792	5106	5624	1500	1888	2048	2165	2352	2753	3235	3532	3751	4104
14-18 years	1500	2673	2939	3137	3455	4135	4939	5435	5802	6404	1500	1944 u	2165 u	2326 u	2581 u	3122 u	3757 u	4141 u	4420 u	4862 u
Higher-income Nonparticipants																				
5-8 years	1200	2212 u	2375 u	2493 u	2681 u	3080 u	3554 u	3844 u	4055 u	4394 u	1200	1803 u	1935 u	2031 u	2186 u	2519 u	2922 u	3173 u	3358 u	3656 u
9-13 years	1500	2452	2645	2782	2997	3439	3940	4235	4446	4777	1500	1917	2109	2243	2448	2860	3328	3609	3814	4141
14-18 years	1500	2769	3079	3293	3619	4265	4996	5440	5765	6292	1500	1851	2049	2189	2406	2837	3306	3574	3761	4048

[1] Adequate Intake (AI) is the approximate intake of the nutrient that appears to be adequate for all individuals in the population group. Mean intake at or above the AI implies a low prevalence of inadequate intake.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-50—Zinc (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	11.4	*(0.26)*	779	10.7	*(0.46)*	1,360	11.3	*(0.42)*	1,407	12.3	*(0.45)*
All NSLP Participants	1,741	12.3	*(0.42)*	473	11.2	*(0.66)*	794	11.9	*(0.59)*	474	13.8	*(0.88)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	11.9	*(0.55)*	321	11.4	*(0.85)*	512	11.8	*(0.80)*	304	12.5	*(1.16)*
Nonparticipants	950	** 9.8	*(0.46)*	161	9.3	*(0.66)*	315	10.1	*(1.01)*	474	10.0	*(0.65)*
Higher-income[2]												
NSLP Participants	604	12.7	*(0.59)*	152	10.8	*(0.81)*	282	12.0	*(0.70)*	170	15.3	*(1.41)*
Nonparticipants	761	* 11.2	*(0.46)*	129	10.4	*(0.89)*	224	10.8	*(0.78)*	408	12.5	*(0.70)*
						Boys						
All Children	1,794	13.0	*(0.40)*	386	11.5	*(0.63)*	660	12.7	*(0.72)*	748	14.9	*(0.74)*
All NSLP Participants	935	13.6	*(0.60)*	238	12.1	*(0.83)*	405	13.2	*(0.97)*	292	15.6	*(1.29)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	13.1	*(0.85)*	167	12.5	*(1.24)*	257	12.8	*(1.36)*	180	14.1	*(1.77)*
Nonparticipants	456	11.2	*(0.76)*	78	9.7	*(0.96)*	147	11.2	*(1.64)*	231	12.7	*(1.23)*
Higher-income[2]												
NSLP Participants	331	14.0	*(0.80)*	71	11.2	*(0.92)*	148	13.9	*(1.07)*	112	17.1	*(1.96)*
Nonparticipants	364	13.1	*(0.75)*	60	11.1 u	*(1.29)*	102	12.7	*(1.46)*	202	15.5	*(1.12)*
						Girls						
All Children	1,752	9.6	*(0.30)*	393	9.9	*(0.68)*	700	9.7	*(0.40)*	659	9.2	*(0.44)*
All NSLP Participants	806	10.2	*(0.44)*	235	10.3	*(1.02)*	389	10.2	*(0.55)*	182	10.2	*(0.62)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	10.2	*(0.54)*	154	10.3	*(1.17)*	255	10.6	*(0.73)*	124	9.8	*(0.86)*
Nonparticipants	494	** 8.4	*(0.47)*	83	8.8	*(0.88)*	168	8.8	*(0.92)*	243	* 7.6	*(0.59)*
Higher-income[2]												
NSLP Participants	273	10.2	*(0.59)*	81	10.4	*(1.31)*	134	9.5	*(0.78)*	58	10.8 u	*(0.91)*
Nonparticipants	397	9.4	*(0.56)*	69	9.6	*(1.24)*	122	9.2	*(0.73)*	206	9.6	*(0.87)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-51—Zinc (mg): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	92.8	*(0.94)*	779	>97	*(0.00)*	1,360	94.3	*(1.65)*	1,407	84.1	*(2.29)*
All NSLP Participants	1,741	96.5	*(0.88)*	473	>97	*(0.00)*	794	96.6	*(1.51)*	474	93.0	*(2.18)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	95.4	*(1.64)*	321	>97	*(0.00)*	512	96.2	*(2.02)*	304	90.0	*(4.52)*
Nonparticipants	950	** 84.5	*(2.94)*	161	>97	*(0.18)*	315	85.3	*(6.24)*	474	** 68.1	*(6.19)*
Higher-income[3]												
NSLP Participants	604	>97	*(1.26)*	152	>97	*(0.00)*	282	96.2 u	*(2.81)*	170	95.6 u	*(2.50)*
Nonparticipants	761	* 92.3	*(1.92)*	129	>97	*(0.08)*	224	92.2	*(3.97)*	408	* 84.7	*(4.14)*
	Boys											
All Children	1,794	>97	*(0.66)*	386	>97	*(0.00)*	660	96.8	*(1.26)*	748	95.2	*(1.51)*
All NSLP Participants	935	>97	*(0.80)*	238	>97	*(0.00)*	405	>97	*(1.14)*	292	95.6 u	*(2.13)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	96.4	*(1.90)*	167	>97	*(0.00)*	257	96.2 u	*(2.84)*	180	93.1 u	*(4.97)*
Nonparticipants	456	92.8	*(3.14)*	78	>97	*(0.24)*	147	89.6 u	*(7.59)*	231	88.9	*(5.42)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.98)*	71	>97	*(0.00)*	148	>97	*(0.36)*	112	96.9 u	*(2.96)*
Nonparticipants	364	>97	*(0.90)*	60	>97	*(0.00)*	102	>97	*(2.12)*	202	>97	*(1.62)*
	Girls											
All Children	1,752	87.5	*(1.89)*	393	>97	*(0.00)*	700	91.5	*(3.18)*	659	70.8	*(4.71)*
All NSLP Participants	806	94.3	*(1.93)*	235	>97	*(0.00)*	389	95.0	*(3.05)*	182	87.9	*(4.95)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	93.7	*(3.06)*	154	>97	*(0.00)*	255	96.3 u	*(2.86)*	124	84.8	*(8.79)*
Nonparticipants	494	** 76.6	*(4.97)*	83	>97	*(0.28)*	168	79.8	*(10.40)*	243	* 49.9	*(10.60)*
Higher-income[3]												
NSLP Participants	273	94.7 u	*(2.71)*	81	>97	*(0.00)*	134	91.8 u	*(6.54)*	58	92.3 u	*(4.69)*
Nonparticipants	397	86.7	*(3.55)*	69	>97	*(0.16)*	122	87.6 u	*(7.10)*	206	* 72.5	*(7.92)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-52—Zinc (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	4.0	7.9	8.5	9.0	9.7	11.1	12.9	14.0	14.8	16.1	4.0	6.4	7.0	7.4	8.1	9.6	11.3	12.4	13.1	14.2
9-13 years	7.0	7.5	8.3	8.9	9.9	12.1	15.0	16.7	17.9	19.7	7.0	6.6	7.1	7.6	8.2	9.6	11.1	11.9	12.6	13.5
14-18 years	8.5	8.5	9.6	10.4	11.6	14.3	17.6	19.5	21.0	23.3	7.3	4.9	5.6	6.2	7.0	8.8	10.9	12.2	13.2	14.9
All NSLP Participants																				
5-8 years	4.0	8.6	9.2	9.6	10.3	11.7	13.5	14.6	15.4	16.8	4.0	6.8	7.4	7.9	8.6	10.1	11.8	12.8	13.5	14.5
9-13 years	7.0	7.9	8.7	9.3	10.3	12.6	15.5	17.3	18.6	20.5	7.0	7.0	7.6	8.0	8.7	10.1	11.6	12.4	13.0	13.9
14-18 years	8.5	8.7	9.8	10.7	12.0	14.9	18.5	20.7	22.4	25.1	7.3	6.3	7.0	7.6	8.5	10.1	11.8	12.8	13.5	14.6
Income-eligible Participants																				
5-8 years	4.0	8.6	9.3	9.7	10.5	12.1	14.1	15.3	16.3	17.8	4.0	6.9	7.5	8.0	8.6	10.1	11.7	12.7	13.4	14.4
9-13 years	7.0	7.3	8.0	8.6	9.5	12.1	15.3	17.1	18.4	20.6	7.0	7.2	7.9	8.4	9.1	10.5	12.1	13.0	13.5	14.4
14-18 years	8.5	8.1	9.1	9.8	11.1	13.6	16.5	18.3	19.6	21.8	7.3	6.0	6.7	7.3	8.1	9.6	11.3	12.3	13.0	14.2
Income-eligible Nonparticipants																				
5-8 years	4.0	6.8	7.4	7.9	8.5	9.6	10.9	11.6	12.1	13.0	4.0	5.5	6.0	6.4	7.1	8.5	10.2	11.2	12.0	13.2
9-13 years	7.0	6.1	6.9	7.5	8.5	10.6	13.3	15.1	16.3	18.1	7.0	5.7	6.3	6.7	7.3	8.5	10.0	10.8	11.5	12.6
14-18 years	8.5	7.4	8.3	9.0	10.0	12.3	14.9	16.5	17.7	19.6	7.3	4.0	4.6	5.1	5.8	7.3	9.0	10.1	11.0	12.4
Higher-income Participants																				
5-8 years	4.0	8.4	8.9	9.3	9.8	10.9	12.3	13.1	13.7	14.6	4.0	6.7	7.3	7.7	8.5	10.2	12.1	13.1	13.9	15.1
9-13 years	7.0	9.0	9.8	10.4	11.4	13.4	15.9	17.5	18.6	20.3	7.0	6.6	7.2	7.5	8.1	9.4	10.8	11.6	12.1	13.0
14-18 years	8.5	9.2	10.6	11.5	13.1	16.4	20.4	22.8	24.5	27.3	7.3	6.8 u	7.6 u	8.2 u	9.0 u	10.7 u	12.4 u	13.4 u	14.1 u	15.1 u
Higher-income Nonparticipants																				
5-8 years	4.0	7.2 u	7.9 u	8.4 u	9.2 u	10.8 u	12.7 u	13.8 u	14.6 u	15.9 u	4.0	6.1	6.7	7.1	7.8	9.3	11.1	12.2	13.0	14.3
9-13 years	7.0	7.7	8.5	9.1	10.1	12.2	14.7	16.3	17.4	19.3	7.0	6.3	6.8	7.2	7.8	9.0	10.4	11.2	11.7	12.6
14-18 years	8.5	9.3	10.4	11.1	12.4	15.0	18.0	19.9	21.3	23.6	7.3	5.0	5.7	6.2	7.1	9.0	11.4	13.0	14.1	15.9

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-53—Dietary Fiber (g): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	13.4	*(0.31)*	779	12.9	*(0.51)*	1,360	13.8	*(0.56)*	1,407	13.6	*(0.52)*
All NSLP Participants	1,741	13.9	*(0.42)*	473	13.1	*(0.57)*	794	14.3	*(0.63)*	474	14.2	*(0.92)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	13.5	*(0.51)*	321	13.2	*(0.64)*	512	14.2	*(0.83)*	304	13.2	*(1.13)*
Nonparticipants	950	11.9	*(0.72)*	161	11.9	*(0.97)*	315	12.1	*(1.68)*	474	11.8	*(0.92)*
Higher-income[2]												
NSLP Participants	604	14.3	*(0.61)*	152	13.1	*(0.81)*	282	14.6	*(0.96)*	170	15.2	*(1.34)*
Nonparticipants	761	13.8	*(0.56)*	129	13.1	*(1.22)*	224	13.7	*(0.84)*	408	14.5	*(0.82)*
Boys												
All Children	1,794	14.4	*(0.48)*	386	13.4	*(0.76)*	660	14.7	*(0.92)*	748	15.1	*(0.80)*
All NSLP Participants	935	14.6	*(0.56)*	238	13.2	*(0.55)*	405	15.4	*(0.97)*	292	15.4	*(1.24)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	14.2	*(0.63)*	167	13.4	*(0.62)*	257	14.8	*(1.27)*	180	14.2	*(1.27)*
Nonparticipants	456	12.8	*(1.20)*	78	11.7 u	*(1.28)*	147	13.1	*(2.84)*	231	13.7	*(1.77)*
Higher-income[2]												
NSLP Participants	331	15.1	*(0.84)*	71	12.7 u	*(0.81)*	148	16.2	*(1.52)*	112	16.5	*(1.83)*
Nonparticipants	364	15.0	*(0.99)*	60	14.7 u	*(2.24)*	102	14.4	*(1.53)*	202	15.9	*(1.24)*
Girls												
All Children	1,752	12.3	*(0.36)*	393	12.4	*(0.66)*	700	12.7	*(0.61)*	659	11.9	*(0.62)*
All NSLP Participants	806	12.7	*(0.58)*	235	13.1	*(0.97)*	389	13.0	*(0.75)*	182	11.8	*(1.22)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	12.7	*(0.87)*	154	12.9	*(1.11)*	255	13.5	*(1.04)*	124	11.6	*(2.14)*
Nonparticipants	494	11.0	*(0.68)*	83	12.2	*(1.50)*	168	10.8	*(1.14)*	243	10.1	*(0.76)*
Higher-income[2]												
NSLP Participants	273	12.7	*(0.67)*	81	13.4 u	*(1.36)*	134	12.4	*(0.94)*	58	12.2 u	*(1.18)*
Nonparticipants	397	12.6	*(0.55)*	69	11.4 u	*(0.96)*	122	13.2	*(0.84)*	206	13.2	*(1.07)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-54—Dietary Fiber (g): Mean Usual Intake as a Percent of Adequate Intake (AI)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error
						Both sexes[2]						
All Children	3,546	47.4	*(1.07)*	779	51.6	*(2.02)*	1,360	48.2	*(1.92)*	1,407	42.5	*(1.58)*
All NSLP Participants	1,741	48.2	*(1.37)*	473	52.5	*(2.27)*	794	49.8	*(2.16)*	474	42.1	*(2.69)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	47.5	*(1.78)*	321	52.6	*(2.57)*	512	49.7	*(2.88)*	304	40.0	*(3.71)*
Nonparticipants	950	42.4	*(2.44)*	161	47.5	*(3.89)*	315	42.1	*(5.51)*	474	37.6	*(2.68)*
Higher-income[3]												
NSLP Participants	604	49.0	*(1.94)*	152	52.3	*(3.24)*	282	50.3	*(3.20)*	170	44.5	*(3.65)*
Nonparticipants	761	49.2	*(2.08)*	129	52.4	*(4.90)*	224	48.7	*(2.86)*	408	46.5	*(2.65)*
						Boys						
All Children	1,794	46.9	*(1.58)*	386	53.4	*(3.04)*	660	47.5	*(2.96)*	748	39.7	*(2.11)*
All NSLP Participants	935	47.6	*(1.68)*	238	52.7	*(2.19)*	405	49.6	*(3.14)*	292	40.4	*(3.27)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	46.3	*(1.96)*	167	53.7	*(2.50)*	257	47.8	*(4.09)*	180	37.4	*(3.33)*
Nonparticipants	456	41.7	*(3.86)*	78	46.6 u	*(5.12)*	147	42.4	*(9.17)*	231	36.2	*(4.66)*
Higher-income[3]												
NSLP Participants	331	48.9	*(2.54)*	71	51.0 u	*(3.23)*	148	52.2	*(4.90)*	112	43.4	*(4.81)*
Nonparticipants	364	49.0	*(3.57)*	60	58.9 u	*(8.95)*	102	46.4	*(4.94)*	202	41.8	*(3.27)*
						Girls						
All Children	1,752	48.1	*(1.42)*	393	49.7	*(2.66)*	700	48.9	*(2.36)*	659	45.8	*(2.37)*
All NSLP Participants	806	49.4	*(2.24)*	235	52.4	*(3.89)*	389	50.2	*(2.89)*	182	45.6	*(4.71)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	49.3	*(3.38)*	154	51.6	*(4.43)*	255	51.8	*(4.01)*	124	44.5	*(8.25)*
Nonparticipants	494	43.0	*(2.66)*	83	48.6	*(5.99)*	168	41.6	*(4.40)*	243	38.9	*(2.93)*
Higher-income[3]												
NSLP Participants	273	49.4	*(2.64)*	81	53.5 u	*(5.44)*	134	47.7	*(3.63)*	58	47.0 u	*(4.52)*
Nonparticipants	397	49.1	*(2.16)*	69	45.6 u	*(3.84)*	122	50.7	*(3.23)*	206	50.9	*(4.13)*

1 The AI is the level of total fiber shown to provide the greatest protection against coronary heart disease (IOM, 2006). Intakes of dietary fiber understate total fiber intake.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-55—Dietary Fiber (g): Distribution of Usual Intake[1]

	Percentiles																			
	Boys										Girls									
	AI (mg/d)[2]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AI (mg/d)[2]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	25	8.0	9.0	9.7	10.7	12.9	15.4	17.0	18.3	20.4	25	7.6	8.4	9.1	10.1	12.1	14.4	15.8	16.8	18.3
9-13 years	31	8.8	9.9	10.7	11.9	14.4	17.1	18.8	20.0	22.0	26	7.9	8.7	9.4	10.3	12.4	14.7	16.1	17.1	18.7
14-18 years	38	7.8	9.1	10.0	11.4	14.4	18.0	20.3	21.9	24.5	26	6.1	7.1	7.8	9.0	11.4	14.3	16.0	17.3	19.4
All NSLP Participants																				
5-8 years	25	9.2	9.9	10.4	11.3	12.9	14.8	16.0	16.8	18.2	25	8.4	9.3	9.9	10.9	12.9	15.1	16.3	17.2	18.6
9-13 years	31	9.5	10.6	11.3	12.6	15.0	17.7	19.4	20.6	22.5	26	8.2	9.0	9.6	10.6	12.7	15.1	16.5	17.5	19.1
14-18 years	38	8.6	9.7	10.6	11.9	14.7	18.0	20.2	21.8	24.5	26	6.4	7.3	8.0	9.1	11.4	14.0	15.6	16.8	18.8
Income-eligible Participants																				
5-8 years	25	9.4	10.1	10.6	11.4	13.0	15.0	16.3	17.2	18.7	25	8.1	9.0	9.7	10.7	12.7	15.0	16.2	17.0	18.2
9-13 years	31	8.9	10.0	10.8	12.0	14.5	17.1	18.7	20.0	22.0	26	8.2	9.1	9.8	10.9	13.2	15.7	17.2	18.2	19.9
14-18 years	38	8.7	9.6	10.2	11.3	13.5	16.4	18.2	19.6	22.0	26	5.7	6.6	7.3	8.5	11.0	13.9	15.7	17.1	19.4
Income-eligible Nonparticipants																				
5-8 years	25	***5.8 u	**6.7 u	*7.3 u	8.4 u	10.9 u	14.1 u	16.1 u	17.6 u	20.0 u	25	6.3	7.3	8.0	9.1	11.6	14.6	16.4	17.8	19.9
9-13 years	31	7.0	8.0	8.8	9.9	12.6	15.8	17.7	19.1	21.2	26	6.5	7.2	7.7	8.5	10.3	12.6	14.1	15.2	17.0
14-18 years	38	5.9	7.1	8.0	9.5	12.7	16.9	19.6	21.6	25.0	26	5.0	5.9	6.6	7.6	9.7	12.1	13.7	14.8	16.7
Higher-income Participants																				
5-8 years	25	8.7 u	9.5 u	10.0 u	10.9 u	12.6 u	14.4 u	15.5 u	16.2 u	17.3 u	25	8.7 u	9.6 u	10.2 u	11.2 u	13.1 u	15.2 u	16.5 u	17.5 u	19.1 u
9-13 years	31	10.2	11.3	12.1	13.3	15.8	18.6	20.3	21.5	23.5	26	8.0	8.8	9.4	10.3	12.1	14.2	15.4	16.3	17.7
14-18 years	38	8.6	10.0	11.0	12.6	15.9	19.6	21.9	23.7	26.5	26	7.5 u	8.4 u	9.0 u	9.9 u	11.9 u	14.2 u	15.5 u	16.5 u	18.0 u
Higher-income Nonparticipants																				
5-8 years	25	7.9 u	8.9 u	9.7 u	11.0 u	13.8 u	17.4 u	19.8 u	21.7 u	25.0 u	25	6.9 u	7.7 u	8.3 u	9.2 u	11.1 u	13.3 u	14.6 u	15.5 u	16.9 u
9-13 years	31	9.1	10.1	10.9	11.9	14.0	16.4	17.9	19.0	20.9	26	8.5	9.4	10.1	11.1	13.0	15.1	16.3	17.2	18.4
14-18 years	38	8.5	9.8	10.8	12.3	15.5	19.0	21.1	22.6	24.8	26	6.9	8.0	8.8	10.1	12.7	15.8	17.7	19.1	21.3

1 The AI is the level of total fiber shown to provide the greatest protection against coronary heart disease (IOM, 2006). Intakes of dietary fiber understate total fiber intake.
2 Adequate Intake (AI) is the approximate intake of the nutrient that appears to be adequate for all individuals in the population group. Mean intake at or above the AI implies a low prevalence of inadequate intake.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-56—Dietary Fiber (g/1,000 kcal): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,544	6.5	*(0.10)*	778	6.7	*(0.17)*	1,360	6.7	*(0.19)*	1,406	5.9	*(0.17)*
All NSLP Participants	1,741	6.5	*(0.13)*	473	6.8	*(0.22)*	794	6.8	*(0.24)*	474	5.7	*(0.20)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	6.5	*(0.18)*	321	7.0	*(0.28)*	512	6.9	*(0.33)*	304	5.7	*(0.32)*
Nonparticipants	948	6.3	*(0.27)*	160	6.7	*(0.49)*	315	6.3	*(0.53)*	473	6.0	*(0.39)*
Higher-income[2]												
NSLP Participants	604	6.4	*(0.19)*	152	6.6	*(0.34)*	282	6.7	*(0.32)*	170	5.8	*(0.30)*
Nonparticipants	761	6.5	*(0.20)*	129	6.8	*(0.44)*	224	6.7	*(0.28)*	408	6.2	*(0.32)*
Boys												
All Children	1,792	6.3	*(0.16)*	385	6.7	*(0.30)*	660	6.6	*(0.28)*	747	5.7	*(0.22)*
All NSLP Participants	935	6.4	*(0.18)*	238	6.7	*(0.36)*	405	6.8	*(0.33)*	292	5.7	*(0.23)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	6.5	*(0.25)*	167	6.9	*(0.47)*	257	6.9	*(0.52)*	180	5.8	*(0.22)*
Nonparticipants	454	6.1	*(0.40)*	77	6.4	*(0.65)*	147	6.2	*(0.86)*	230	5.8	*(0.53)*
Higher-income[2]												
NSLP Participants	331	6.1	*(0.22)*	71	6.2	*(0.42)*	148	6.6	*(0.36)*	112	5.6	*(0.36)*
Nonparticipants	364	6.3	*(0.32)*	60	6.9	*(0.70)*	102	6.5	*(0.49)*	202	5.6	*(0.42)*
Girls												
All Children	1,752	6.6	*(0.14)*	393	6.8	*(0.18)*	700	6.8	*(0.25)*	659	6.3	*(0.26)*
All NSLP Participants	806	6.6	*(0.19)*	235	7.0	*(0.25)*	389	6.9	*(0.35)*	182	5.9	*(0.36)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	6.5	*(0.30)*	154	7.0	*(0.32)*	255	6.9	*(0.38)*	124	5.5	*(0.78)*
Nonparticipants	494	6.5	*(0.35)*	83	7.0	*(0.74)*	168	6.5	*(0.48)*	243	6.1	*(0.56)*
Higher-income[2]												
NSLP Participants	273	6.8	*(0.32)*	81	6.9	*(0.53)*	134	6.8	*(0.55)*	58	6.5	*(0.58)*
Nonparticipants	397	6.7	*(0.26)*	69	6.6	*(0.53)*	122	6.9	*(0.32)*	206	6.7	*(0.48)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-57—Dietary Fiber (g/1,000 kcal): Percent of Children with Usual Intake Greater than Recommended Amount[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
						Both sexes[2]						
All Children	3,544	<3	*(0.02)*	778	<3	*(0.00)*	1,360	<3	*(0.00)*	1,406	<3	*(0.07)*
All NSLP Participants	1,741	<3	*(0.01)*	473	<3	*(0.02)*	794	<3	*(0.00)*	474	<3	*(0.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	<3	*(0.03)*	321	<3	*(0.10)*	512	<3	*(0.00)*	304	<3	*(0.00)*
Nonparticipants	948	<3	*(0.15)*	160	<3	*(0.41)*	315	<3	*(0.00)*	473	<3	*(0.20)*
Higher-income[3]												
NSLP Participants	604	<3	*(0.00)*	152	<3	*(0.00)*	282	<3	*(0.00)*	170	<3	*(0.00)*
Nonparticipants	761	<3	*(0.14)*	129	<3	*(0.42)*	224	<3	*(0.00)*	408	<3	*(0.03)*
						Boys						
All Children	1,792	<3	*(0.00)*	385	<3	*(0.00)*	660	<3	*(0.00)*	747	<3	*(0.00)*
All NSLP Participants	935	<3	*(0.02)*	238	<3	*(0.05)*	405	<3	*(0.00)*	292	<3	*(0.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	<3	*(0.07)*	167	<3	*(0.22)*	257	<3	*(0.00)*	180	<3	*(0.00)*
Nonparticipants	454	<3	*(0.09)*	77	<3	*(0.01)*	147	<3	*(0.00)*	230	<3	*(0.28)*
Higher-income[3]												
NSLP Participants	331	<3	*(0.00)*	71	<3	*(0.00)*	148	<3	*(0.00)*	112	<3	*(0.00)*
Nonparticipants	364	<3	*(0.27)*	60	<3	*(0.82)*	102	<3	*(0.00)*	202	<3	*(0.00)*
						Girls						
All Children	1,752	<3	*(0.05)*	393	<3	*(0.00)*	700	<3	*(0.00)*	659	<3	*(0.15)*
All NSLP Participants	806	<3	*(0.00)*	235	<3	*(0.00)*	389	<3	*(0.00)*	182	<3	*(0.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	<3	*(0.00)*	154	<3	*(0.00)*	255	<3	*(0.00)*	124	<3	*(0.00)*
Nonparticipants	494	<3	*(0.32)*	83	<3	*(0.91)*	168	<3	*(0.00)*	243	<3	*(0.29)*
Higher-income[3]												
NSLP Participants	273	<3	*(0.00)*	81	<3	*(0.00)*	134	<3	*(0.00)*	58	<3	*(0.00)*
Nonparticipants	397	<3	*(0.06)*	69	<3	*(0.18)*	122	<3	*(0.00)*	206	<3	*(0.06)*

1 The AIs for fiber are based on intake of 14g of total fiber per 1,000 kcal (IOM, 2006). Intakes of dietary fiber understate total fiber intake.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-58—Dietary Fiber (g/1,000 kcal): Distribution of Usual Intake

	Percentiles																		
	Boys										Girls								
	Guide-line[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	Guide-line[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	14	4.6	5.0	5.3	5.7	6.5	7.5	8.0	8.4	9.1	14	4.7	5.1	5.4	5.9	6.8	7.7	8.2	8.6	9.2
9-13 years	14	4.7	5.1	5.3	5.7	6.5	7.4	7.9	8.3	8.9	14	5.0	5.3	5.5	5.9	6.7	7.6	8.1	8.4	9.0
14-18 years	14	3.8	4.2	4.4	4.8	5.5	6.4	6.9	7.3	7.9	14	3.8	4.2	4.5	5.0	6.1	7.3	8.1	8.6	9.6
All NSLP Participants																				
5-8 years	14	4.9	5.2	5.4	5.8	6.6	7.4	7.9	8.3	8.9	14	5.1	5.5	5.8	6.1	6.9	7.7	8.2	8.5	9.1
9-13 years	14	5.0	5.3	5.5	5.9	6.7	7.6	8.0	8.4	8.9	14	5.1	5.4	5.6	6.0	6.8	7.6	8.2	8.5	9.1
14-18 years	14	4.1	4.4	4.6	4.9	5.6	6.3	6.7	7.0	7.6	14	3.6	4.1	4.4	4.9	5.8	6.9	7.5	8.0	8.7
Income-eligible Participants																				
5-8 years	14	5.1	5.4	5.6	6.0	6.8	7.7	8.2	8.6	9.2	14	5.2	5.6	5.8	6.2	6.9	7.7	8.2	8.5	9.0
9-13 years	14	5.0	5.4	5.6	6.0	6.9	7.7	8.2	8.5	9.1	14	5.1	5.4	5.6	6.0	6.8	7.7	8.2	8.6	9.2
14-18 years	14	4.4	4.6	4.8	5.0	5.6	6.3	6.8	7.1	7.7	14	3.0	3.5	3.8	4.3	5.3	6.6	7.3	7.9	8.7
Income-eligible Nonparticipants																				
5-8 years	14	4.2	4.5	4.8	5.2	6.2	7.3	8.0	8.5	9.3	14	4.3	4.8	5.1	5.6	6.7	8.2	9.1	9.8	10.8
9-13 years	14	4.3	4.6	4.8	5.2	6.0	7.0	7.6	8.0	8.6	14	4.5	4.8	5.1	5.5	6.3	7.3	7.9	8.3	9.0
14-18 years	14	3.4	3.8	4.1	4.6	5.6	6.7	7.5	8.0	8.9	14	3.5	4.0	4.3	4.8	5.8	7.1	8.0	8.6	9.7
Higher-income Participants																				
5-8 years	14	4.6	4.9	5.1	5.4	6.1	6.9	7.4	7.8	8.3	14	5.0	5.4	5.7	6.1	6.8	7.7	8.2	8.6	9.2
9-13 years	14	4.9	5.2	5.4	5.8	6.5	7.3	7.8	8.1	8.6	14	5.0	5.4	5.6	6.0	6.8	7.6	8.1	8.4	9.0
14-18 years	14	3.8	4.2	4.4	4.8	5.5	6.3	6.7	7.0	7.5	14	4.7	5.0	5.2	5.6	6.4	7.2	7.7	8.1	8.6
Higher-income Nonparticipants																				
5-8 years	14	4.7	5.1	5.4	5.8	6.8	7.8	8.5	9.0	9.9	14	4.5	4.8	5.1	5.5	6.4	7.5	8.1	8.6	9.4
9-13 years	14	4.6	5.0	5.2	5.6	6.4	7.2	7.7	8.0	8.6	14	5.1	5.4	5.7	6.1	6.8	7.6	8.1	8.4	8.9
14-18 years	14	3.8	4.2	4.4	4.8	5.6	6.3	6.8	7.1	7.6	14	4.1	4.6	4.9	5.5	6.5	7.7	8.5	9.0	9.9

[1] The AIs for fiber are based on intake of 14g of total fiber per 1,000 kcal (IOM, 2006). Intakes of dietary fiber understate total fiber intake.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-59—Total Fat (g): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	77	*(1.3)*	779	69	*(2.3)*	1,360	77	*(1.9)*	1,407	85	*(2.6)*
All NSLP Participants	1,741	81	*(2.2)*	473	71	*(3.3)*	794	79	*(3.1)*	474	92	*(4.8)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	78	*(2.7)*	321	69	*(3.9)*	512	77	*(4.1)*	304	89	*(5.9)*
Nonparticipants	950	* 70	*(2.3)*	161	67	*(3.5)*	315	69	*(4.4)*	474	* 73	*(4.1)*
Higher-income[2]												
NSLP Participants	604	84	*(3.0)*	152	74	*(3.5)*	282	83	*(4.6)*	170	95	*(7.0)*
Nonparticipants	761	77	*(2.2)*	129	66	*(3.5)*	224	76	*(4.3)*	408	88	*(3.4)*
						Boys						
All Children	1,794	84	*(2.0)*	386	72	*(3.4)*	660	83	*(2.6)*	748	97	*(4.1)*
All NSLP Participants	935	85	*(3.1)*	238	73	*(5.2)*	405	85	*(4.3)*	292	98	*(6.5)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	80	*(3.6)*	167	71	*(5.8)*	257	78	*(5.4)*	180	92	*(7.4)*
Nonparticipants	456	77	*(3.7)*	78	72	*(4.8)*	147	76	*(6.8)*	231	84	*(7.1)*
Higher-income[2]												
NSLP Participants	331	92	*(4.4)*	71	78 u	*(6.4)*	148	94	*(6.7)*	112	103	*(9.4)*
Nonparticipants	364	86	*(3.6)*	60	71 u	*(5.7)*	102	84	*(7.6)*	202	105	*(4.9)*
						Girls						
All Children	1,752	69	*(1.7)*	393	65	*(3.0)*	700	70	*(2.9)*	659	71	*(3.0)*
All NSLP Participants	806	74	*(2.9)*	235	69	*(4.1)*	389	73	*(4.5)*	182	81	*(6.1)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	76	*(4.2)*	154	68	*(5.2)*	255	75	*(6.4)*	124	85	*(9.7)*
Nonparticipants	494	** 62	*(2.8)*	83	61	*(5.2)*	168	61	*(4.7)*	243	* 63	*(4.5)*
Higher-income[2]												
NSLP Participants	273	70	*(3.4)*	81	70	*(3.3)*	134	68	*(5.9)*	58	73 u	*(7.7)*
Nonparticipants	397	67	*(2.5)*	69	60 u	*(3.9)*	122	70	*(4.7)*	206	72	*(4.6)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-60—Total Fat (% of energy intake): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error
						Both sexes[1]						
All Children	3,544	32.5	*(0.30)*	778	32.1	*(0.61)*	1,360	32.7	*(0.45)*	1,406	32.8	*(0.50)*
All NSLP Participants	1,741	32.9	*(0.40)*	473	32.4	*(0.77)*	794	33.0	*(0.61)*	474	33.3	*(0.68)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	32.9	*(0.51)*	321	32.1	*(0.89)*	512	32.6	*(0.82)*	304	33.9	*(0.96)*
Nonparticipants	948	32.6	*(0.64)*	160	33.1	*(1.39)*	315	32.0	*(1.08)*	473	32.9	*(0.75)*
Higher-income[2]												
NSLP Participants	604	33.1	*(0.64)*	152	33.0	*(1.12)*	282	33.6	*(1.07)*	170	32.6	*(1.12)*
Nonparticipants	761	32.0	*(0.54)*	129	31.0	*(0.99)*	224	32.4	*(0.90)*	408	32.6	*(0.91)*
						Boys						
All Children	1,792	32.5	*(0.44)*	385	32.0	*(1.04)*	660	32.7	*(0.59)*	747	32.8	*(0.56)*
All NSLP Participants	935	32.3	*(0.57)*	238	31.9	*(1.39)*	405	32.8	*(0.66)*	292	32.3	*(0.78)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	32.0	*(0.73)*	167	31.4	*(1.65)*	257	31.9	*(1.06)*	180	32.6	*(1.02)*
Nonparticipants	454	33.3	*(1.04)*	77	34.6 u	*(2.33)*	147	32.3	*(1.68)*	230	33.1	*(1.21)*
Higher-income[2]												
NSLP Participants	331	33.0	*(0.80)*	71	32.9 u	*(1.56)*	148	34.0	*(1.28)*	112	32.1	*(1.28)*
Nonparticipants	364	32.4	*(0.75)*	60	30.9 u	*(1.43)*	102	33.0	*(1.37)*	202	33.2	*(1.08)*
						Girls						
All Children	1,752	32.6	*(0.43)*	393	32.2	*(0.63)*	700	32.7	*(0.69)*	659	32.8	*(0.87)*
All NSLP Participants	806	33.8	*(0.61)*	235	32.9	*(0.72)*	389	33.3	*(1.08)*	182	35.1	*(1.30)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	34.1	*(0.81)*	154	32.9	*(0.75)*	255	33.4	*(1.27)*	124	36.0	*(1.92)*
Nonparticipants	494	* 31.8	*(0.63)*	83	31.2	*(1.16)*	168	31.6	*(1.20)*	243	32.7	*(0.92)*
Higher-income[2]												
NSLP Participants	273	33.3	*(1.10)*	81	33.0 u	*(1.59)*	134	33.0	*(1.82)*	58	33.8 u	*(2.27)*
Nonparticipants	397	31.7	*(0.77)*	69	31.1 u	*(1.36)*	122	31.9	*(1.20)*	206	31.9	*(1.46)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-61—Total Fat (% of energy intake): Percent of Children with Usual Intake Below the AMDR[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error
	Both sexes[2]											
All Children	3,544	<3	*(0.49)*	778	<3	*(1.04)*	1,360	<3	*(0.50)*	1,406	<3	*(0.93)*
All NSLP Participants	1,741	<3	*(0.56)*	473	<3	*(1.43)*	794	<3	*(0.60)*	474	<3	*(0.66)*
Income-eligible for Free/RP meals												
NSLP Participants	1,137	<3	*(0.89)*	321	<3	*(2.43)*	512	<3	*(1.10)*	304	<3	*(0.21)*
Nonparticipants	948	<3	*(0.80)*	160	<3	*(1.67)*	315	<3	*(1.37)*	473	<3	*(1.02)*
Higher-income												
NSLP Participants	604	<3	*(0.93)*	152	<3	*(1.72)*	282	<3	*(0.29)*	170	<3	*(2.21)*
Nonparticipants	761	<3	*(1.25)*	129	3.8 u	*(2.87)*	224	<3	*(0.92)*	408	3.5 u	*(2.29)*
	Boys											
All Children	1,792	<3	*(0.56)*	385	<3	*(1.54)*	660	<3	*(0.28)*	747	<3	*(0.61)*
All NSLP Participants	935	<3	*(0.92)*	238	<3	*(2.59)*	405	<3	*(0.30)*	292	<3	*(0.95)*
Income-eligible for Free/RP meals												
NSLP Participants	604	<3	*(1.66)*	167	<3	*(4.84)*	257	<3	*(1.21)*	180	<3	*(0.32)*
Nonparticipants	454	<3	*(0.60)*	77	<3	*(0.65)*	147	<3	*(1.07)*	230	<3	*(1.28)*
Higher-income												
NSLP Participants	331	<3	*(1.03)*	71	<3	*(0.82)*	148	<3	*(0.27)*	112	<3	*(3.01)*
Nonparticipants	364	<3	*(1.10)*	60	<3	*(3.24)*	102	<3	*(0.04)*	202	<3	*(0.81)*
	Girls											
All Children	1,752	<3	*(0.85)*	393	<3	*(1.38)*	700	<3	*(1.01)*	659	3.4 u	*(1.93)*
All NSLP Participants	806	<3	*(0.64)*	235	<3	*(1.33)*	389	<3	*(1.27)*	182	<3	*(0.56)*
Income-eligible for Free/RP meals												
NSLP Participants	533	<3	*(0.74)*	154	<3	*(1.07)*	255	<3	*(1.91)*	124	<3	*(0.17)*
Nonparticipants	494	<3	*(1.63)*	83	3.3 u	*(3.68)*	168	<3	*(2.81)*	243	<3	*(1.55)*
Higher-income												
NSLP Participants	273	<3	*(1.27)*	81	3.6 u	*(3.19)*	134	<3	*(0.58)*	58	<3	*(2.04)*
Nonparticipants	397	4.4 u	*(2.22)*	69	5.6 u	*(4.77)*	122	<3	*(1.70)*	206	6.2 u	*(4.41)*

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-62—Total Fat (% of energy intake): Percent of Children with Usual Intake Above the AMDR[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error
	Both sexes[2]											
All Children	3,544	22.8	*(2.68)*	778	19.4	*(4.89)*	1,360	21.7	*(4.70)*	1,406	27.5	*(4.28)*
All NSLP Participants	1,741	25.4	*(3.64)*	473	21.8	*(6.01)*	794	25.0	*(6.34)*	474	29.5	*(6.52)*
Income-eligible for Free/RP meals												
NSLP Participants	1,137	24.2	*(4.21)*	321	17.7	*(5.18)*	512	21.4 u	*(7.11)*	304	33.5	*(9.09)*
Nonparticipants	948	25.3	*(6.13)*	160	30.5 u	*(13.46)*	315	17.2 u	*(10.25)*	473	28.5	*(7.17)*
Higher-income												
NSLP Participants	604	28.4	*(6.74)*	152	29.3 u	*(11.00)*	282	31.7 u	*(13.35)*	170	24.2 u	*(10.37)*
Nonparticipants	761	19.0	*(4.69)*	129	11.4 u	*(5.99)*	224	18.1 u	*(9.96)*	408	27.3	*(7.80)*
	Boys											
All Children	1,792	20.8	*(3.96)*	385	16.9 u	*(7.92)*	660	19.7 u	*(6.88)*	747	25.8	*(5.54)*
All NSLP Participants	935	18.4	*(4.81)*	238	14.6 u	*(9.41)*	405	20.5 u	*(7.77)*	292	19.8 u	*(7.73)*
Income-eligible for Free/RP meals												
NSLP Participants	604	14.0 u	*(5.13)*	167	10.3 u	*(7.40)*	257	11.3 u	*(8.62)*	180	20.6 u	*(10.40)*
Nonparticipants	454	31.1 u	*(10.37)*	77	44.4 u	*(23.40)*	147	18.4 u	*(17.00)*	230	30.9 u	*(11.50)*
Higher-income												
NSLP Participants	331	27.0 u	*(8.83)*	71	24.5 u	*(16.60)*	148	37.0 u	*(17.40)*	112	19.2 u	*(10.90)*
Nonparticipants	364	19.4 u	*(7.67)*	60	8.2 u	*(6.87)*	102	20.0 u	*(18.10)*	202	30.0 u	*(12.10)*
	Girls											
All Children	1,752	25.1	*(3.61)*	393	21.9	*(5.68)*	700	23.8	*(6.34)*	659	29.7	*(6.68)*
All NSLP Participants	806	35.8	*(5.87)*	235	28.4	*(7.60)*	389	30.3 u	*(10.40)*	182	48.9	*(12.00)*
Income-eligible for Free/RP meals												
NSLP Participants	533	37.7	*(7.26)*	154	24.8	*(7.26)*	255	33.0 u	*(11.60)*	124	55.5 u	*(17.00)*
Nonparticipants	494	* 18.4	*(4.83)*	83	13.1 u	*(7.81)*	168	15.7 u	*(8.34)*	243	26.3 u	*(8.91)*
Higher-income												
NSLP Participants	273	31.4 u	*(11.59)*	81	33.6 u	*(14.60)*	134	24.7 u	*(20.80)*	58	36.1 u	*(23.70)*
Nonparticipants	397	18.6 u	*(5.78)*	69	14.7 u	*(9.85)*	122	16.6 u	*(10.20)*	206	24.7 u	*(9.95)*

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

2 Estimates for both sexes are computed as the weighted average of estimates for males and females.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-63—Total Fat (% of energy intake): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	25-35	26.9	28.0	28.8	29.9	32.0	34.1	35.2	36.0	37.2	25-35	26.2	27.6	28.5	29.8	32.2	34.6	35.9	36.9	38.2
9-13 years	25-35	28.2	29.3	29.9	30.9	32.7	34.5	35.5	36.2	37.2	25-35	27.2	28.5	29.3	30.5	32.7	34.9	36.0	36.8	38.0
14-18 years	25-35	27.2	28.4	29.3	30.5	32.8	35.1	36.3	37.1	38.3	25-35	25.8	27.3	28.3	29.8	32.6	35.7	37.4	38.7	40.6
All NSLP Participants																				
5-8 years	25-35	26.9	28.1	28.9	30.0	32.0	33.9	35.0	35.7	36.7	25-35	26.9	28.3	29.2	30.5	32.9	35.4	36.7	37.7	39.0
9-13 years	25-35	28.3	29.3	30.0	31.0	32.8	34.6	35.6	36.2	37.3	25-35	27.7	29.0	29.8	31.1	33.3	35.5	36.7	37.5	38.7
14-18 years	25-35	27.2	28.3	29.1	30.2	32.3	34.4	35.6	36.4	37.6	25-35	28.7	29.9	30.8	32.2	34.9	37.8	39.4	40.5	42.3
Income-eligible Participants																				
5-8 years	25-35	26.3	27.6	28.4	29.5	31.5	33.3	34.4	35.0	36.1	25-35	27.8	28.9	29.7	30.8	32.8	35.0	36.1	36.9	38.0
9-13 years	25-35	27.4	28.5	29.2	30.3	32.0	33.7	34.6	35.2	36.2	25-35	27.4	28.8	29.8	31.1	33.5	35.8	37.0	37.8	39.0
14-18 years	25-35	28.0	28.9	29.6	30.6	32.5	34.5	35.7	36.5	37.7	25-35	29.7	30.9	31.7	33.0	35.6	38.5	40.4	41.7	43.8
Income-eligible Nonparticipants																				
5-8 years	25-35	28.4 u	29.6 u	30.5 u	31.8 u	34.4 u	37.2 u	38.7 u	39.8 u	41.4 u	25-35	25.6	26.8	27.6	28.8	31.1	33.4	34.7	35.6	36.9
9-13 years	25-35	27.5	28.6	29.3	30.3	32.3	34.3	35.4	36.2	37.4	25-35	26.0	27.3	28.1	29.4	31.7	33.9	35.1	35.9	37.1
14-18 years	25-35	26.6	28.1	29.1	30.5	33.1	35.7	37.1	38.1	39.6	25-35	26.5	27.8	28.6	29.9	32.5	35.2	36.8	37.9	39.6
Higher-income Participants																				
5-8 years	25-35	28.0 u	29.1 u	29.9 u	31.0 u	33.0 u	35.0 u	36.0 u	36.7 u	37.7 u	25-35	25.6 u	27.2 u	28.2 u	29.8 u	33.0 u	36.2 u	37.7 u	38.8 u	40.3 u
9-13 years	25-35	29.4	30.4	31.1	32.2	34.1	36.0	37.0	37.6	38.6	25-35	28.3	29.3	30.0	31.1	33.0	35.0	36.1	36.8	37.9
14-18 years	25-35	26.4	27.7	28.6	29.9	32.2	34.4	35.5	36.3	37.5	25-35	27.9 u	29.2 u	30.0 u	31.3 u	33.7 u	36.2 u	37.6 u	38.5 u	39.9 u
Higher-income Nonparticipants																				
5-8 years	25-35	26.1 u	27.1 u	27.8 u	28.8 u	30.8 u	32.8 u	33.9 u	34.7 u	35.8 u	25-35	24.8 u	26.3 u	27.3 u	28.7 u	31.2 u	33.6 u	34.9 u	35.9 u	37.2 u
9-13 years	25-35	29.1	29.9	30.5	31.3	32.9	34.6	35.5	36.2	37.2	25-35	26.7	27.9	28.6	29.8	31.9	34.1	35.2	36.0	37.2
14-18 years	25-35	27.8	29.1	29.9	31.1	33.3	35.5	36.6	37.3	38.4	25-35	24.6	26.1	27.1	28.6	31.6	35.0	36.9	38.2	40.3

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-64—Saturated Fat (g): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	27	*(0.5)*	779	25	*(0.9)*	1,360	28	*(0.8)*	1,407	29	*(0.9)*
All NSLP Participants	1,741	29	*(0.9)*	473	26	*(1.2)*	794	29	*(1.3)*	474	33	*(1.8)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	29	*(1.1)*	321	26	*(1.7)*	512	28	*(1.9)*	304	31	*(2.3)*
Nonparticipants	950	** 24	*(0.9)*	161	24	*(1.6)*	315	25	*(1.6)*	474	** 24	*(1.3)*
Higher-income[2]												
NSLP Participants	604	30	*(1.1)*	152	26	*(1.3)*	282	30	*(1.4)*	170	34	*(2.7)*
Nonparticipants	761	** 26	*(0.8)*	129	23	*(1.4)*	224	26	*(1.6)*	408	29	*(1.3)*
						Boys						
All Children	1,794	30	*(0.8)*	386	26	*(1.3)*	660	30	*(1.2)*	748	34	*(1.5)*
All NSLP Participants	935	31	*(1.2)*	238	27	*(1.8)*	405	31	*(1.8)*	292	34	*(2.5)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	29	*(1.6)*	167	27	*(2.4)*	257	29	*(2.6)*	180	32	*(3.0)*
Nonparticipants	456	27	*(1.3)*	78	27	*(2.2)*	147	27	*(2.4)*	231	29	*(2.2)*
Higher-income[2]												
NSLP Participants	331	33	*(1.6)*	71	27 u	*(2.4)*	148	34	*(1.9)*	112	37	*(3.6)*
Nonparticipants	364	30	*(1.2)*	60	25 u	*(2.2)*	102	29	*(2.2)*	202	36	*(1.9)*
						Girls						
All Children	1,752	24	*(0.7)*	393	23	*(1.3)*	700	25	*(1.1)*	659	24	*(1.1)*
All NSLP Participants	806	27	*(1.1)*	235	25	*(1.7)*	389	26	*(1.8)*	182	29	*(2.2)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	28	*(1.6)*	154	25	*(2.4)*	255	27	*(2.6)*	124	30	*(3.4)*
Nonparticipants	494	** 21	*(1.1)*	83	21	*(2.2)*	168	22	*(2.0)*	243	** 20	*(1.5)*
Higher-income[2]												
NSLP Participants	273	25	*(1.4)*	81	25	*(1.3)*	134	24	*(2.0)*	58	27 u	*(3.4)*
Nonparticipants	397	23	*(1.1)*	69	21 u	*(1.8)*	122	24	*(2.3)*	206	23	*(1.6)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-65—Saturated Fat (% of energy intake): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error
						Both sexes[1]						
All Children	3,544	11.5	*(0.13)*	778	11.7	*(0.27)*	1,360	11.8	*(0.21)*	1,406	11.1	*(0.20)*
All NSLP Participants	1,741	11.9	*(0.18)*	473	11.9	*(0.31)*	794	12.1	*(0.31)*	474	11.8	*(0.30)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	12.0	*(0.24)*	321	12.0	*(0.39)*	512	12.1	*(0.48)*	304	12.0	*(0.38)*
Nonparticipants	948	11.5	*(0.28)*	160	12.0	*(0.56)*	315	11.7	*(0.55)*	473	* 10.8	*(0.29)*
Higher-income[2]												
NSLP Participants	604	11.8	*(0.28)*	152	11.8	*(0.52)*	282	12.1	*(0.42)*	170	11.5	*(0.53)*
Nonparticipants	761	* 10.9	*(0.26)*	129	10.9	*(0.54)*	224	11.1	*(0.46)*	408	10.8	*(0.36)*
						Boys						
All Children	1,792	11.7	*(0.17)*	385	11.8	*(0.40)*	660	12.0	*(0.27)*	747	11.4	*(0.21)*
All NSLP Participants	935	11.8	*(0.24)*	238	11.9	*(0.51)*	405	12.2	*(0.40)*	292	11.4	*(0.33)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	11.8	*(0.35)*	167	11.9	*(0.66)*	257	12.1	*(0.71)*	180	11.5	*(0.40)*
Nonparticipants	454	12.1	*(0.44)*	77	12.8 u	*(0.89)*	147	11.8	*(0.84)*	230	11.6	*(0.47)*
Higher-income[2]												
NSLP Participants	331	11.8	*(0.34)*	71	11.9 u	*(0.71)*	148	12.3	*(0.50)*	112	11.2	*(0.55)*
Nonparticipants	364	11.3	*(0.33)*	60	10.9 u	*(0.64)*	102	11.5	*(0.54)*	202	11.4	*(0.51)*
						Girls						
All Children	1,752	11.3	*(0.20)*	393	11.6	*(0.35)*	700	11.6	*(0.33)*	659	10.8	*(0.35)*
All NSLP Participants	806	12.1	*(0.28)*	235	11.9	*(0.35)*	389	11.9	*(0.48)*	182	12.5	*(0.60)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	12.3	*(0.35)*	154	12.1	*(0.42)*	255	12.0	*(0.61)*	124	12.8	*(0.76)*
Nonparticipants	494	** 10.8	*(0.32)*	83	10.9	*(0.61)*	168	11.5	*(0.65)*	243	** 10.1	*(0.36)*
Higher-income[2]												
NSLP Participants	273	11.8	*(0.53)*	81	11.6 u	*(0.75)*	134	11.8	*(0.71)*	58	12.1 u	*(1.21)*
Nonparticipants	397	10.7	*(0.41)*	69	10.9 u	*(0.86)*	122	10.8	*(0.72)*	206	10.3	*(0.51)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-66—Saturated Fat (% of energy intake): Percent of Children Meeting Dietary Guidelines Recommendation[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,544	15.0	*(2.19)*	778	12.9 u	*(3.87)*	1,360	10.9 u	*(3.28)*	1,406	21.2	*(4.21)*
All NSLP Participants	1,741	7.8	*(2.28)*	473	7.8 u	*(3.84)*	794	7.2 u	*(3.82)*	474	8.4 u	*(4.18)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	6.4 u	*(2.79)*	321	5.4 u	*(4.51)*	512	8.8 u	*(5.99)*	304	4.8 u	*(3.64)*
Nonparticipants	948	** 20.2	*(3.98)*	160	14.2 u	*(7.24)*	315	15.2 u	*(7.42)*	473	*** 31.4	*(5.85)*
Higher-income[3]												
NSLP Participants	604	10.1 u	*(3.97)*	152	12.3 u	*(6.43)*	282	5.2 u	*(3.92)*	170	12.8 u	*(9.32)*
Nonparticipants	761	* 26.9	*(5.55)*	129	30.0 u	*(11.46)*	224	21.7 u	*(9.45)*	408	29.2	*(7.52)*
	Boys											
All Children	1,792	9.9	*(2.55)*	385	10.2 u	*(5.69)*	660	8.6 u	*(3.63)*	747	11.0 u	*(3.64)*
All NSLP Participants	935	7.4 u	*(3.20)*	238	6.9 u	*(6.46)*	405	6.9 u	*(4.31)*	292	8.6 u	*(5.68)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	7.3 u	*(4.44)*	167	6.9 u	*(8.65)*	257	9.5 u	*(8.42)*	180	5.5 u	*(5.57)*
Nonparticipants	454	10.3 u	*(4.54)*	77	4.2 u	*(4.71)*	147	13.5 u	*(10.70)*	230	13.1 u	*(6.75)*
Higher-income[3]												
NSLP Participants	331	7.5 u	*(4.67)*	71	6.0 u	*(7.18)*	148	4.2 u	*(3.65)*	112	12.5 u	*(11.60)*
Nonparticipants	364	16.9 u	*(6.68)*	60	27.4 u	*(15.70)*	102	12.0 u	*(8.43)*	202	11.4 u	*(9.32)*
	Girls											
All Children	1,752	20.8	*(3.73)*	393	15.6 u	*(5.25)*	700	13.5 u	*(5.61)*	659	33.6	*(8.18)*
All NSLP Participants	806	8.1 u	*(3.20)*	235	8.7 u	*(4.32)*	389	7.7 u	*(6.63)*	182	7.9 u	*(5.35)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	5.3 u	*(3.19)*	154	4.0 u	*(3.10)*	255	8.1 u	*(8.51)*	124	3.7 u	*(2.65)*
Nonparticipants	494	*** 30.4	*(6.77)*	83	26.8 u	*(15.20)*	168	17.4 u	*(9.91)*	243	*** 47.4	*(9.24)*
Higher-income[3]												
NSLP Participants	273	12.7 u	*(6.60)*	81	18.0 u	*(10.40)*	134	6.7 u	*(7.75)*	58	13.6 u	*(15.10)*
Nonparticipants	397	* 36.2	*(8.63)*	69	32.5 u	*(16.70)*	122	30.0 u	*(15.90)*	206	46.1	*(11.70)*

1 Recommended intake of saturated fat is less than 10 percent of total calories.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-67—Saturated Fat (% of energy intake): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	Guide-line (%)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	Guide-line (%)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	< 10	9.5	10.0	10.3	10.8	11.7	12.7	13.2	13.6	14.1	< 10	9.1	9.6	10.0	10.5	11.5	12.6	13.2	13.6	14.3
9-13 years	< 10	9.6	10.1	10.5	11.0	11.9	12.9	13.5	13.9	14.5	< 10	9.2	9.7	10.1	10.6	11.6	12.5	13.0	13.4	13.9
14-18 years	< 10	9.5	9.9	10.2	10.6	11.4	12.2	12.6	12.9	13.3	< 10	8.0	8.6	9.0	9.6	10.7	12.0	12.7	13.2	13.9
All NSLP Participants																				
5-8 years	< 10	9.8	10.3	10.6	11.0	11.9	12.8	13.2	13.5	14.0	< 10	9.6	10.1	10.4	11.0	11.9	12.9	13.4	13.8	14.4
9-13 years	< 10	9.8	10.3	10.6	11.2	12.2	13.2	13.7	14.1	14.7	< 10	9.7	10.2	10.6	11.0	12.0	12.8	13.3	13.6	14.1
14-18 years	< 10	9.7	10.1	10.3	10.7	11.4	12.1	12.4	12.7	13.1	< 10	9.6	10.2	10.6	11.2	12.4	13.7	14.4	14.9	15.7
Income-eligible Participants																				
5-8 years	< 10	9.8	10.2	10.6	11.0	11.9	12.7	13.2	13.4	13.9	< 10	10.1	10.6	10.9	11.3	12.1	12.9	13.4	13.7	14.2
9-13 years	< 10	9.5	10.0	10.4	11.0	12.1	13.2	13.8	14.2	14.8	< 10	9.6	10.2	10.5	11.1	12.0	12.9	13.4	13.7	14.2
14-18 years	< 10	10.0	10.3	10.5	10.9	11.5	12.1	12.5	12.7	13.1	< 10	10.2	10.8	11.1	11.7	12.7	13.8	14.5	15.1	15.9
Income-eligible Nonparticipants																				
5-8 years	< 10	10.1 u	10.7 u	11.1 u	11.6 u	12.8 u	14.0 u	14.6 u	15.1 u	15.8 u	< 10	8.7	9.2	9.5	9.9	10.8	11.8	12.3	12.6	13.2
9-13 years	< 10	9.3	9.8	10.1	10.7	11.7	12.8	13.5	14.0	14.7	< 10	8.9	9.5	9.8	10.4	11.5	12.6	13.2	13.6	14.3
14-18 years	< 10	9.3	9.8	10.1	10.6	11.6	12.5	13.0	13.3	13.8	< 10	** 7.6	** 8.2	*** 8.5	*** 9.1	** 10.1	11.1	11.7	12.1	12.8
Higher-income Participants																				
5-8 years	< 10	9.9 u	10.3 u	10.6 u	11.1 u	11.9 u	12.8 u	13.2 u	13.6 u	14.0 u	< 10	8.8 u	9.4 u	9.8 u	10.4 u	11.5 u	12.7 u	13.4 u	13.8 u	14.5 u
9-13 years	< 10	10.1	10.6	10.9	11.4	12.3	13.2	13.7	14.1	14.6	< 10	9.8	10.3	10.6	11.0	11.8	12.7	13.1	13.4	13.9
14-18 years	< 10	9.5	9.9	10.1	10.5	11.2	11.9	12.4	12.6	13.1	< 10	9.1 u	9.7 u	10.1 u	10.7 u	11.9 u	13.3 u	14.2 u	14.7 u	15.6 u
Higher-income Nonparticipants																				
5-8 years	< 10	8.7 u	9.2 u	9.4 u	9.9 u	10.8 u	11.8 u	12.4 u	12.8 u	13.5 u	< 10	8.1 u	8.7 u	9.1 u	9.6 u	10.8 u	12.0 u	12.7 u	13.2 u	14.0 u
9-13 years	< 10	9.4	9.9	10.2	10.6	11.5	12.4	12.9	13.2	13.8	< 10	8.5	9.0	9.3	9.8	10.7	11.8	12.3	12.7	13.3
14-18 years	< 10	9.5	9.9	10.2	10.6	11.4	12.1	12.5	12.8	13.2	< 10	7.6	8.2	8.5	9.1	10.2	11.4	12.1	12.5	13.3

[1] Recommended intake of saturated fat is less than 10 percent of total calories.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-68—Linoleic Acid (g): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	13.1	*(0.38)*	779	11.5	*(0.50)*	1,360	13.0	*(0.73)*	1,407	14.9	*(0.69)*
All NSLP Participants	1,741	13.0	*(0.48)*	473	11.4	*(0.64)*	794	12.6	*(0.75)*	474	15.0	*(1.03)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	12.7	*(0.60)*	321	11.0	*(0.74)*	512	12.1	*(0.79)*	304	15.1	*(1.43)*
Nonparticipants	950	12.1	*(0.61)*	161	12.1	*(1.22)*	315	11.4	*(0.97)*	474	12.8	*(0.93)*
Higher-income[2]												
NSLP Participants	604	13.6	*(0.70)*	152	12.2	*(0.96)*	282	13.7	*(1.35)*	170	14.9	*(1.27)*
Nonparticipants	761	14.4	*(0.93)*	129	11.6	*(0.88)*	224	15.4	*(2.44)*	408	16.1	*(0.94)*
Boys												
All Children	1,794	14.0	*(0.61)*	386	11.8	*(0.84)*	660	13.7	*(1.21)*	748	16.3	*(1.07)*
All NSLP Participants	935	13.5	*(0.66)*	238	11.5	*(0.99)*	405	13.1	*(1.14)*	292	15.8	*(1.28)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	12.5	*(0.71)*	167	10.7	*(1.14)*	257	11.7	*(0.98)*	180	15.2	*(1.51)*
Nonparticipants	456	13.3	*(0.99)*	78	13.1 u	*(2.06)*	147	12.4	*(1.53)*	231	14.3	*(1.49)*
Higher-income[2]												
NSLP Participants	331	14.9	*(1.07)*	71	13.0 u	*(1.76)*	148	15.3	*(2.08)*	112	16.3	*(1.71)*
Nonparticipants	364	15.7	*(1.79)*	60	12.3 u	*(1.35)*	102	16.7	*(4.92)*	202	18.0	*(1.40)*
Girls												
All Children	1,752	12.2	*(0.42)*	393	11.1	*(0.53)*	700	12.3	*(0.77)*	659	13.2	*(0.83)*
All NSLP Participants	806	12.3	*(0.71)*	235	11.4	*(0.84)*	389	12.1	*(0.93)*	182	13.5	*(1.73)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	12.9	*(1.09)*	154	11.2	*(0.97)*	255	12.6	*(1.28)*	124	14.9	*(2.88)*
Nonparticipants	494	10.8	*(0.61)*	83	10.9	*(0.98)*	168	10.0	*(1.02)*	243	11.6	*(1.17)*
Higher-income[2]												
NSLP Participants	273	11.5	*(0.72)*	81	11.5	*(0.90)*	134	11.6	*(1.48)*	58	11.6 u	*(1.30)*
Nonparticipants	397	13.1	*(0.81)*	69	10.8 u	*(1.14)*	122	14.2	*(1.73)*	206	14.3	*(1.27)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-69—Linoleic Acid (g): Mean Usual Intake as a Percent of Adequate Intake (AI)

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error
						Both sexes[1]						
All Children	3,546	114.5	*(3.19)*	779	114.6	*(4.98)*	1,360	118.4	*(6.44)*	1,407	110.3	*(4.99)*
All NSLP Participants	1,741	111.8	*(3.97)*	473	114.0	*(6.43)*	794	114.4	*(6.71)*	474	106.8	*(7.47)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	110.2	*(5.14)*	321	109.8	*(7.45)*	512	110.8	*(7.39)*	304	109.9	*(11.39)*
Nonparticipants	950	107.0	*(5.49)*	161	121.2	*(12.22)*	315	102.2	*(8.47)*	474	97.7	*(7.14)*
Higher-income[2]												
NSLP Participants	604	115.8	*(5.79)*	152	122.2	*(9.59)*	282	122.2	*(11.77)*	170	102.8	*(8.31)*
Nonparticipants	761	126.2	*(8.06)*	129	115.8	*(8.82)*	224	140.8	*(20.96)*	408	121.6	*(7.29)*
						Boys						
All Children	1,794	111.6	*(4.93)*	386	118.4	*(8.37)*	660	114.1	*(10.11)*	748	102.1	*(6.67)*
All NSLP Participants	935	107.6	*(5.29)*	238	114.6	*(9.86)*	405	109.2	*(9.52)*	292	98.9	*(7.99)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	99.9	*(5.62)*	167	107.0	*(11.40)*	257	97.8	*(8.12)*	180	94.9	*(9.45)*
Nonparticipants	456	107.9	*(8.63)*	78	131.0 u	*(20.56)*	147	103.5	*(12.78)*	231	89.2	*(9.33)*
Higher-income[2]												
NSLP Participants	331	119.9	*(8.99)*	71	130.4 u	*(17.56)*	148	127.1	*(17.34)*	112	101.8	*(10.69)*
Nonparticipants	364	125.3	*(14.89)*	60	123.2 u	*(13.47)*	102	139.3	*(40.98)*	202	112.8	*(8.77)*
						Girls						
All Children	1,752	118.1	*(4.01)*	393	110.6	*(5.30)*	700	123.2	*(7.70)*	659	120.2	*(7.52)*
All NSLP Participants	806	119.0	*(6.67)*	235	113.5	*(8.36)*	389	120.8	*(9.33)*	182	122.7	*(15.71)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	124.5	*(10.19)*	154	112.5	*(9.67)*	255	125.7	*(12.82)*	124	135.3	*(26.19)*
Nonparticipants	494	104.8	*(5.89)*	83	108.9	*(9.78)*	168	100.5	*(10.21)*	243	105.1	*(10.61)*
Higher-income[2]												
NSLP Participants	273	111.9	*(7.01)*	81	114.7	*(8.96)*	134	115.7	*(14.81)*	58	105.0 u	*(11.80)*
Nonparticipants	397	126.9	*(7.93)*	69	108.3 u	*(11.35)*	122	141.9	*(17.27)*	206	130.0	*(11.53)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-70—Linoleic Acid (g): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	10	8.1	8.8	9.3	10.1	11.6	13.4	14.4	15.2	16.4	10	7.2	7.9	8.4	9.2	10.8	12.7	13.8	14.6	15.8
9-13 years	12	7.9	8.8	9.5	10.6	13.0	16.0	18.0	19.4	21.8	10	7.1	7.9	8.5	9.6	11.8	14.5	16.2	17.4	19.5
14-18 years	16	8.1	9.4	10.4	12.0	15.7	19.9	22.4	24.2	26.9	11	7.5	8.4	9.1	10.3	12.7	15.6	17.4	18.7	20.9
All NSLP Participants																				
5-8 years	10	7.9	8.5	9.0	9.7	11.2	12.9	13.9	14.7	15.9	10	7.5	8.2	8.7	9.5	11.1	13.0	14.1	14.9	16.2
9-13 years	12	7.8	8.7	9.3	10.3	12.5	15.3	17.0	18.3	20.3	10	7.0	7.8	8.4	9.4	11.5	14.2	15.8	17.1	19.0
14-18 years	16	7.9	9.1	10.0	11.6	15.0	19.2	21.8	23.6	26.4	11	7.8	8.7	9.4	10.5	12.8	15.8	17.7	19.1	21.4
Income-eligible Participants																				
5-8 years	10	7.5	8.1	8.5	9.2	10.5	12.0	12.8	13.5	14.4	10	7.0	7.8	8.3	9.1	10.9	12.9	14.3	15.3	16.8
9-13 years	12	7.1	7.9	8.4	9.3	11.3	13.6	15.1	16.2	18.0	10	7.0	7.9	8.6	9.8	12.2	14.9	16.6	17.8	19.6
14-18 years	16	7.4	8.5	9.4	10.9	14.4	18.6	21.1	22.9	25.7	11	8.3	9.3	10.1	11.3	14.1	17.6	19.8	21.4	24.0
Income-eligible Nonparticipants																				
5-8 years	10	8.1 u	9.0 u	9.7 u	10.7 u	12.7 u	15.1 u	16.6 u	17.6 u	19.3 u	10	6.9	7.6	8.1	9.0	10.6	12.6	13.7	14.5	15.7
9-13 years	12	7.5	8.5	9.1	10.1	12.2	14.4	15.8	16.7	18.2	10	5.7	6.4	6.9	7.8	9.6	11.9	13.2	14.3	15.9
14-18 years	16	6.6	7.8	8.7	10.1	13.5	17.6	20.0	21.8	24.5	11	6.8	7.6	8.2	9.1	11.2	13.5	14.9	16.0	17.9
Higher-income Participants																				
5-8 years	10	8.6 u	9.3 u	9.8 u	10.7 u	12.6 u	14.9 u	16.3 u	17.3 u	19.0 u	10	8.2	8.9	9.3	10.0	11.3	12.8	13.6	14.2	15.1
9-13 years	12	8.9	10.0	10.7	12.0	14.7	17.9	19.9	21.3	23.7	10	6.9	7.6	8.2	9.0	10.9	13.4	15.0	16.3	18.4
14-18 years	16	8.6	9.9	10.8	12.2	15.4	19.5	22.1	23.9	26.9	11	7.3 u	8.0 u	8.6 u	9.4 u	11.2 u	13.3 u	14.6 u	15.5 u	16.9 u
Higher-income Nonparticipants																				
5-8 years	10	9.1 u	9.8 u	10.2 u	10.9 u	12.2 u	13.7 u	14.5 u	15.0 u	15.9 u	10	6.9 u	7.7 u	8.2 u	9.0 u	10.7 u	12.5 u	13.5 u	14.2 u	15.3 u
9-13 years	12	9.1	10.1	10.9	12.2	15.2	19.6 u	22.6 u	25.0 u	29.2 u	10	8.5	9.4	10.2	11.3	13.6	16.5	18.3	19.6	21.9
14-18 years	16	9.8	11.3	12.3	14.0	17.5	21.4	23.8	25.5	28.3	11	8.0	9.0	9.8	11.0	13.6	16.9	18.9	20.5	22.9

[1] Adequate Intake (AI) is the approximate intake of the nutrient that appears to be adequate for all individuals in the population group. Mean intake at or above the AI implies a low prevalence of inadequate intake.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-71—Linoleic Acid (% of energy intake): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,544	5.54	*(0.119)*	778	5.37	*(0.210)*	1,360	5.51	*(0.211)*	1,406	5.75	*(0.195)*
All NSLP Participants	1,741	5.25	*(0.122)*	473	5.18	*(0.207)*	794	5.22	*(0.212)*	474	5.37	*(0.213)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	5.23	*(0.163)*	321	5.08	*(0.285)*	512	5.11	*(0.226)*	304	5.51	*(0.328)*
Nonparticipants	948	5.71	*(0.241)*	160	6.01	*(0.538)*	315	5.35	*(0.382)*	473	5.79	*(0.298)*
Higher-income[2]												
NSLP Participants	604	5.32	*(0.181)*	152	5.34	*(0.300)*	282	5.38	*(0.335)*	170	5.23	*(0.302)*
Nonparticipants	761	* 6.01	*(0.251)*	129	5.55	*(0.363)*	224	6.41	*(0.535)*	408	6.07	*(0.376)*
						Boys						
All Children	1,792	5.35	*(0.190)*	385	5.27	*(0.370)*	660	5.32	*(0.350)*	747	5.47	*(0.254)*
All NSLP Participants	935	5.04	*(0.179)*	238	4.92	*(0.348)*	405	4.99	*(0.310)*	292	5.20	*(0.264)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	4.90	*(0.212)*	167	4.72	*(0.420)*	257	4.72	*(0.306)*	180	5.26	*(0.371)*
Nonparticipants	454	5.74	*(0.387)*	77	6.26	*(0.925)*	147	5.48	*(0.610)*	230	5.49	*(0.346)*
Higher-income[2]												
NSLP Participants	331	5.26	*(0.265)*	71	5.28	*(0.524)*	148	5.34	*(0.471)*	112	5.16	*(0.368)*
Nonparticipants	364	5.84	*(0.390)*	60	5.53	*(0.539)*	102	6.24	*(0.955)*	202	5.74	*(0.372)*
						Girls						
All Children	1,752	5.76	*(0.140)*	393	5.47	*(0.195)*	700	5.73	*(0.218)*	659	6.09	*(0.302)*
All NSLP Participants	806	5.54	*(0.171)*	235	5.41	*(0.234)*	389	5.49	*(0.279)*	182	5.70	*(0.360)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	5.64	*(0.267)*	154	5.43	*(0.386)*	255	5.56	*(0.336)*	124	5.92	*(0.623)*
Nonparticipants	494	5.64	*(0.234)*	83	5.70	*(0.359)*	168	5.19	*(0.380)*	243	6.05	*(0.471)*
Higher-income[2]												
NSLP Participants	273	5.40	*(0.255)*	81	5.40	*(0.316)*	134	5.42	*(0.464)*	58	5.38	*(0.521)*
Nonparticipants	397	6.17	*(0.329)*	69	5.57	*(0.486)*	122	6.55	*(0.568)*	206	6.39	*(0.644)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-72—Linoleic Acid (% of energy intake): Percent of Children with Usual Intake Below the AMDR

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error
						Both sexes[1]						
All Children	3,544	28.8	*(6.35)*	778	25.1 u	*(16.42)*	1,360	30.2	*(8.49)*	1,406	31.0	*(4.83)*
All NSLP Participants	1,741	42.2	*(8.50)*	473	44.7 u	*(21.32)*	794	42.7	*(11.89)*	474	39.3	*(7.59)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	47.9	*(8.23)*	321	56.8 u	*(19.74)*	512	51.1	*(11.08)*	304	35.7	*(10.08)*
Nonparticipants	948	* 23.0	*(7.92)*	160	* 8.2	*(6.70)*	315	32.4 u	*(21.01)*	473	28.1	*(8.00)*
Higher-income[2]												
NSLP Participants	604	33.9	*(10.15)*	152	23.4 u	*(23.67)*	282	33.2 u	*(15.60)*	170	45.2	*(11.22)*
Nonparticipants	761	15.7 u	*(5.53)*	129	15.6 u	*(13.16)*	224	9.0 u	*(7.63)*	408	22.8	*(6.73)*
						Boys						
All Children	1,792	33.2 u	*(11.73)*	385	22.9 u	*(31.10)*	660	38.1 u	*(14.90)*	747	38.3	*(7.55)*
All NSLP Participants	935	53.7	*(15.83)*	238	61.0 u	*(42.40)*	405	53.5 u	*(19.40)*	292	46.6	*(9.76)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	66.6	*(13.97)*	167	84.2 u	*(35.80)*	257	70.3	*(18.20)*	180	45.2	*(12.40)*
Nonparticipants	454	* 21.0	*(12.08)*	77	* 0.2	*(3.31)*	147	24.0 u	*(33.90)*	230	38.7	*(10.60)*
Higher-income[2]												
NSLP Participants	331	35.5 u	*(17.09)*	71	20.9 u	*(44.90)*	148	36.2 u	*(21.70)*	112	49.4	*(12.60)*
Nonparticipants	364	15.4 u	*(8.82)*	60	4.9 u	*(19.00)*	102	13.2 u	*(15.50)*	202	28.2 u	*(9.90)*
						Girls						
All Children	1,752	23.6	*(4.37)*	393	27.3 u	*(9.67)*	700	21.5 u	*(6.95)*	659	22.2	*(5.53)*
All NSLP Participants	806	27.9	*(6.68)*	235	29.3 u	*(11.20)*	389	29.7 u	*(11.80)*	182	24.7 u	*(11.70)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	26.5 u	*(9.08)*	154	30.5 u	*(17.90)*	255	29.2 u	*(11.50)*	124	19.6 u	*(17.20)*
Nonparticipants	494	26.9 u	*(9.18)*	83	18.3 u	*(14.50)*	168	43.2 u	*(20.00)*	243	18.8 u	*(11.80)*
Higher-income[2]												
NSLP Participants	273	30.0 u	*(12.51)*	81	25.7 u	*(19.40)*	134	29.4 u	*(22.10)*	58	34.8 u	*(23.30)*
Nonparticipants	397	16.4 u	*(6.96)*	69	26.4 u	*(18.20)*	122	5.5 u	*(5.18)*	206	17.6 u	*(9.16)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-73—Linoleic Acid (% of energy intake): Percent of Children with Usual Intake Above the AMDR

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error
						Both sexes[1]						
All Children	3,544	<3	*(0.19)*	778	<3	*(0.00)*	1,360	<3	*(0.00)*	1,406	<3	*(0.57)*
All NSLP Participants	1,741	<3	*(0.01)*	473	<3	*(0.00)*	794	<3	*(0.00)*	474	<3	*(0.04)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	<3	*(0.06)*	321	<3	*(0.00)*	512	<3	*(0.06)*	304	<3	*(0.17)*
Nonparticipants	948	<3	*(0.16)*	160	<3	*(0.00)*	315	<3	*(0.11)*	473	<3	*(0.48)*
Higher-income[2]												
NSLP Participants	604	<3	*(0.08)*	152	<3	*(0.00)*	282	<3	*(0.00)*	170	<3	*(0.24)*
Nonparticipants	761	<3	*(0.80)*	129	<3	*(0.00)*	224	<3	*(1.24)*	408	<3	*(2.05)*
						Boys						
All Children	1,792	<3	*(0.07)*	385	<3	*(0.00)*	660	<3	*(0.00)*	747	<3	*(0.20)*
All NSLP Participants	935	<3	*(0.02)*	238	<3	*(0.00)*	405	<3	*(0.00)*	292	<3	*(0.05)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	<3	*(0.07)*	167	<3	*(0.00)*	257	<3	*(0.00)*	180	<3	*(0.22)*
Nonparticipants	454	<3	*(0.15)*	77	<3	*(0.00)*	147	<3	*(0.19)*	230	<3	*(0.42)*
Higher-income[2]												
NSLP Participants	331	<3	*(0.11)*	71	<3	*(0.00)*	148	<3	*(0.00)*	112	<3	*(0.34)*
Nonparticipants	364	<3	*(0.79)*	60	<3	*(0.00)*	102	<3	*(2.29)*	202	<3	*(0.40)*
						Girls						
All Children	1,752	<3	*(0.41)*	393	<3	*(0.00)*	700	<3	*(0.00)*	659	<3	*(1.23)*
All NSLP Participants	806	<3	*(0.00)*	235	<3	*(0.00)*	389	<3	*(0.00)*	182	<3	*(0.00)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	<3	*(0.10)*	154	<3	*(0.00)*	255	<3	*(0.13)*	124	<3	*(0.28)*
Nonparticipants	494	<3	*(0.27)*	83	<3	*(0.00)*	168	<3	*(0.00)*	243	<3	*(0.81)*
Higher-income[2]												
NSLP Participants	273	<3	*(0.00)*	81	<3	*(0.00)*	134	<3	*(0.00)*	58	<3	*(0.00)*
Nonparticipants	397	<3	*(1.38)*	69	<3	*(0.00)*	122	<3	*(1.23)*	206	<3	*(3.98)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-74—Linoleic Acid (% of energy intake): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	5-10	4.7	4.8	4.9	5.0	5.2	5.5	5.6	5.7	5.9	5-10	4.3	4.5	4.7	5.0	5.4	6.0	6.2	6.5	6.8
9-13 years	5-10	4.1	4.3	4.5	4.7	5.2	5.8	6.2	6.4	6.8	5-10	4.4	4.6	4.8	5.1	5.6	6.3	6.7	6.9	7.3
14-18 years	5-10	3.7	4.0	4.2	4.6	5.4	6.2	6.8	7.1	7.7	5-10	4.2	4.5	4.7	5.1	5.9	6.9	7.5	7.9	8.6
All NSLP Participants																				
5-8 years	5-10	4.4	4.5	4.6	4.7	4.9	5.1	5.2	5.3	5.4	5-10	4.3	4.5	4.7	4.9	5.4	5.9	6.2	6.4	6.7
9-13 years	5-10	3.9	4.1	4.3	4.5	4.9	5.4	5.7	5.9	6.2	5-10	4.3	4.5	4.6	4.9	5.4	6.0	6.4	6.6	7.0
14-18 years	5-10	3.5	3.8	4.0	4.4	5.1	5.9	6.4	6.7	7.3	5-10	4.2	4.5	4.7	5.0	5.6	6.3	6.7	7.0	7.4
Income-eligible Participants																				
5-8 years	5-10	4.3	4.4	4.4	4.5	4.7	4.9	5.0	5.1	5.2	5-10	4.2	4.4	4.6	4.9	5.4	5.9	6.2	6.5	6.8
9-13 years	5-10	3.8	4.0	4.1	4.3	4.7	5.1	5.4	5.5	5.8	5-10	4.2	4.5	4.6	4.9	5.4	6.1	6.5	6.8	7.2
14-18 years	5-10	3.6	3.9	4.1	4.4	5.1	6.0	6.5	6.8	7.4	5-10	4.3	4.6	4.8	5.2	5.8	6.6	7.0	7.3	7.8
Income-eligible Nonparticipants																				
5-8 years	5-10	5.5	5.7	5.8	5.9	6.2	6.6	6.7	6.9	7.1	5-10	4.5	4.7	4.9	5.2	5.7	6.2	6.5	6.7	7.0
9-13 years	5-10	4.3	4.6	4.8	5.0	5.5	5.9	6.2	6.4	6.7	5-10	4.0	4.2	4.4	4.6	5.1	5.7	6.0	6.2	6.6
14-18 years	5-10	3.5	3.9	4.1	4.5	5.4	6.3	6.9	7.2	7.8	5-10	4.3	4.6	4.9	5.2	5.9	6.8	7.3	7.6	8.2
Higher-income Participants																				
5-8 years	5-10	4.7	4.8	4.9	5.0	5.3	5.5	5.6	5.7	5.9	5-10	4.5	4.6	4.8	5.0	5.4	5.8	6.0	6.2	6.4
9-13 years	5-10	4.1	4.4	4.5	4.8	5.3	5.8	6.2	6.4	6.8	5-10	4.3	4.5	4.7	4.9	5.4	5.9	6.2	6.4	6.7
14-18 years	5-10	3.5	3.8	4.0	4.3	5.0	5.9	6.4	6.8	7.4	5-10	4.0	4.3	4.5	4.8	5.3	6.0	6.3	6.5	6.9
Higher-income Nonparticipants																				
5-8 years	5-10	5.0	5.1	5.2	5.3	5.5	5.7	5.9	6.0	6.1	5-10	4.2	4.5	4.7	5.0	5.5	6.1	6.5	6.7	7.1
9-13 years	5-10	4.6	4.9	5.1	5.4	6.1	6.9	7.4	7.8	8.4	5-10	5.0	5.2	5.4	5.8	6.4	7.2	7.7	8.0	8.6
14-18 years	5-10	4.0	4.3	4.5	4.9	5.6	6.5	7.0	7.3	7.9	5-10	4.3	4.6	4.9	5.3	6.2	7.2	7.9	8.4	9.2

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-75—Linolenic Acid (g): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	1.29	*(0.03)*	779	1.16	*(0.05)*	1,360	1.21	*(0.04)*	1,407	1.50	*(0.07)*
All NSLP Participants	1,741	1.31	*(0.05)*	473	1.16	*(0.06)*	794	1.24	*(0.06)*	474	1.53	*(0.12)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	1.30	*(0.07)*	321	1.13	*(0.07)*	512	1.19	*(0.07)*	304	1.57	*(0.18)*
Nonparticipants	950	1.17	*(0.07)*	161	1.26	*(0.15)*	315	1.05	*(0.13)*	474	1.20	*(0.09)*
Higher-income[2]												
NSLP Participants	604	1.35	*(0.06)*	152	1.22	*(0.08)*	282	1.30	*(0.11)*	170	1.52	*(0.14)*
Nonparticipants	761	1.36	*(0.06)*	129	1.13	*(0.10)*	224	1.29	*(0.11)*	408	1.66	*(0.12)*
Boys												
All Children	1,794	1.37	*(0.05)*	386	1.21	*(0.09)*	660	1.26	*(0.07)*	748	1.63	*(0.11)*
All NSLP Participants	935	1.35	*(0.06)*	238	1.18	*(0.10)*	405	1.28	*(0.09)*	292	1.59	*(0.14)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	1.27	*(0.07)*	167	1.12	*(0.11)*	257	1.16	*(0.08)*	180	1.55	*(0.17)*
Nonparticipants	456	1.28	*(0.12)*	78	1.39	*(0.25)*	147	1.12	*(0.20)*	231	1.34	*(0.14)*
Higher-income[2]												
NSLP Participants	331	1.47	*(0.10)*	71	1.31 u	*(0.15)*	148	1.44	*(0.17)*	112	1.66	*(0.18)*
Nonparticipants	364	1.47	*(0.11)*	60	1.21 u	*(0.16)*	102	1.35	*(0.22)*	202	1.84	*(0.18)*
Girls												
All Children	1,752	1.20	*(0.04)*	393	1.10	*(0.05)*	700	1.16	*(0.05)*	659	1.34	*(0.09)*
All NSLP Participants	806	1.25	*(0.08)*	235	1.14	*(0.08)*	389	1.18	*(0.08)*	182	1.42	*(0.22)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	1.32	*(0.14)*	154	1.14	*(0.10)*	255	1.23	*(0.12)*	124	1.60	*(0.40)*
Nonparticipants	494	1.04	*(0.07)*	83	1.09	*(0.10)*	168	0.97	*(0.13)*	243	1.07	*(0.12)*
Higher-income[2]												
NSLP Participants	273	1.15	*(0.07)*	81	1.14	*(0.08)*	134	1.11	*(0.12)*	58	1.19 u	*(0.17)*
Nonparticipants	397	1.25	*(0.07)*	69	1.03 u	*(0.11)*	122	1.24	*(0.09)*	206	1.49	*(0.15)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-76—Linolenic Acid (g): Mean Usual Intake as a Percent of Adequate Intake (AI)

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error	Sample size	Percent of AI	Standard error
						Both sexes[1]						
All Children	3,546	116.6	*(2.89)*	779	128.7	*(5.77)*	1,360	110.3	*(3.98)*	1,407	110.9	*(5.17)*
All NSLP Participants	1,741	116.6	*(4.17)*	473	128.8	*(7.13)*	794	112.0	*(5.43)*	474	109.2	*(8.82)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	116.3	*(6.13)*	321	125.3	*(8.22)*	512	109.1	*(6.69)*	304	114.8	*(15.16)*
Nonparticipants	950	108.5	*(7.00)*	161	140.0	*(16.50)*	315	94.8	*(11.00)*	474	90.9	*(6.93)*
Higher-income[2]												
NSLP Participants	604	118.9	*(5.39)*	152	135.9	*(9.37)*	282	115.8	*(9.44)*	170	105.0	*(9.20)*
Nonparticipants	761	122.9	*(5.73)*	129	125.0	*(10.91)*	224	118.5	*(9.73)*	408	125.5	*(9.01)*
						Boys						
All Children	1,794	114.0	*(4.42)*	386	134.9	*(9.79)*	660	105.4	*(5.82)*	748	101.9	*(6.91)*
All NSLP Participants	935	112.4	*(5.22)*	238	131.2	*(11.16)*	405	106.8	*(7.11)*	292	99.5	*(8.49)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	105.8	*(5.72)*	167	124.0	*(11.71)*	257	97.0	*(6.49)*	180	96.6	*(10.86)*
Nonparticipants	456	110.4	*(11.34)*	78	154.8	*(28.32)*	147	93.4	*(16.88)*	231	83.5	*(8.58)*
Higher-income[2]												
NSLP Participants	331	123.0	*(8.16)*	71	145.7 u	*(16.72)*	148	119.7	*(13.82)*	112	103.7	*(11.36)*
Nonparticipants	364	120.7	*(9.40)*	60	134.9 u	*(18.23)*	102	112.5	*(18.08)*	202	114.8	*(11.48)*
						Girls						
All Children	1,752	119.9	*(3.72)*	393	122.3	*(5.99)*	700	115.7	*(5.38)*	659	121.6	*(7.80)*
All NSLP Participants	806	124.5	*(7.85)*	235	126.5	*(9.02)*	389	118.3	*(8.38)*	182	128.8	*(20.27)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	131.6	*(13.29)*	154	126.5	*(11.54)*	255	122.9	*(12.24)*	124	145.8	*(36.50)*
Nonparticipants	494	105.2	*(6.66)*	83	121.5	*(11.18)*	168	96.7	*(12.64)*	243	97.5	*(10.61)*
Higher-income[2]												
NSLP Participants	273	115.2	*(7.20)*	81	127.1	*(9.44)*	134	110.7	*(12.07)*	58	108.0 u	*(15.27)*
Nonparticipants	397	124.7	*(6.81)*	69	114.9 u	*(11.87)*	122	123.5	*(9.45)*	206	135.7	*(13.79)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-77—Linolenic Acid (g): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AI (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	0.9	0.75	0.83	0.89	0.98	1.17	1.40	1.54	1.65	1.82	0.9	0.71	0.78	0.83	0.91	1.07	1.26	1.38	1.46	1.58
9-13 years	1.2	0.79	0.86	0.92	1.02	1.22	1.46	1.62	1.73	1.90	1.0	0.73	0.80	0.86	0.94	1.12	1.33	1.46	1.56	1.70
14-18 years	1.6	0.87	1.00	1.09	1.24	1.56	1.95	2.19	2.36	2.64	1.1	0.70	0.80	0.87	1.00	1.26	1.60	1.81	1.97	2.23
All NSLP Participants																				
5-8 years	0.9	0.77	0.83	0.88	0.96	1.14	1.35	1.48	1.58	1.74	0.9	0.77	0.83	0.88	0.95	1.11	1.29	1.41	1.49	1.62
9-13 years	1.2	0.81	0.88	0.94	1.03	1.23	1.48	1.64	1.75	1.92	1.0	0.75	0.83	0.88	0.97	1.15	1.36	1.49	1.59	1.74
14-18 years	1.6	0.86	0.98	1.07	1.21	1.52	1.90	2.13	2.30	2.56	1.1	0.74	0.84	0.92	1.04	1.33	1.69	1.92	2.10	2.39
Income-eligible Participants																				
5-8 years	0.9	0.74	0.80	0.85	0.92	1.08	1.27	1.39	1.48	1.63	0.9	0.77	0.83	0.87	0.94	1.10	1.30	1.42	1.51	1.66
9-13 years	1.2	0.76	0.84	0.89	0.97	1.14	1.32	1.44	1.52	1.66	1.0	0.78	0.86	0.92	1.01	1.20	1.42	1.55	1.64	1.79
14-18 years	1.6	0.80	0.91	1.00	1.14	1.46	1.86	2.11	2.29	2.58	1.1	0.78	0.90	0.99	1.14	1.49	1.93	2.23	2.45	2.82 u
Income-eligible Nonparticipants																				
5-8 years	0.9	0.76	0.88	0.96	1.08	1.33	1.63	1.83	1.98	2.23	0.9	0.68	0.75	0.80	0.88	1.06	1.26	1.39	1.48	1.63
9-13 years	1.2	0.65	0.73	0.79	0.88	1.07	1.30	1.47	1.59	1.78	1.0	0.57	0.64	0.68	0.76	0.93	1.13	1.26	1.35	1.50
14-18 years	1.6	0.76	0.85	0.92	1.02	1.26	1.57	1.77	1.91	2.16	1.1	0.58	0.66	0.72	0.81	1.02	1.28	1.43	1.55	1.73
Higher-income Participants																				
5-8 years	0.9	0.83 u	0.91 u	0.97 u	1.06 u	1.26 u	1.51 u	1.66 u	1.77 u	1.95 u	0.9	0.79	0.86	0.90	0.98	1.12	1.29	1.39	1.46	1.57
9-13 years	1.2	0.88	0.98	1.04	1.15	1.39	1.67	1.84	1.96	2.16	1.0	0.71	0.78	0.82	0.90	1.07	1.27	1.39	1.49	1.64
14-18 years	1.6	0.91	1.04	1.13	1.28	1.60	1.97	2.19	2.35	2.60	1.1	0.70 u	0.78 u	0.84 u	0.94 u	1.14 u	1.39 u	1.54 u	1.66 u	1.84 u
Higher-income Nonparticipants																				
5-8 years	0.9	0.75 u	0.83 u	0.89 u	0.98 u	1.18 u	1.41 u	1.55 u	1.65 u	1.81 u	0.9	0.62 u	0.70 u	0.75 u	0.84 u	1.01 u	1.21 u	1.32 u	1.40 u	1.52 u
9-13 years	1.2	0.86	0.94	1.00	1.09	1.30	1.55	1.71	1.82	2.01	1.0	0.79	0.87	0.93	1.02	1.21	1.42	1.54	1.63	1.77
14-18 years	1.6	1.00	1.14	1.24	1.41	1.77	2.20	2.44	2.61	2.88	1.1	0.77	0.89	0.97	1.11	1.41	1.78	2.02	2.20	2.50

[1] Adequate Intake (AI) is the approximate intake of the nutrient that appears to be adequate for all individuals in the population group. Mean intake at or above the AI implies a low prevalence of inadequate intake.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-78—Linolenic Acid (% of energy intake): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,544	0.54	*(0.010)*	778	0.54	*(0.018)*	1,360	0.52	*(0.015)*	1,406	0.57	*(0.021)*
All NSLP Participants	1,741	0.53	*(0.012)*	473	0.53	*(0.018)*	794	0.52	*(0.018)*	474	0.54	*(0.024)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	0.54	*(0.018)*	321	0.53	*(0.021)*	512	0.52	*(0.021)*	304	0.57	*(0.046)*
Nonparticipants	948	0.55	*(0.027)*	160	0.61	*(0.069)*	315	0.48	*(0.030)*	473	0.54	*(0.032)*
Higher-income[2]												
NSLP Participants	604	0.53	*(0.017)*	152	0.54	*(0.027)*	282	0.52	*(0.029)*	170	0.52	*(0.032)*
Nonparticipants	761	0.57	*(0.024)*	129	0.53	*(0.038)*	224	0.56	*(0.036)*	408	0.62	*(0.049)*
						Boys						
All Children	1,792	0.53	*(0.016)*	385	0.53	*(0.032)*	660	0.50	*(0.023)*	747	0.55	*(0.025)*
All NSLP Participants	935	0.51	*(0.016)*	238	0.51	*(0.029)*	405	0.50	*(0.021)*	292	0.53	*(0.030)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	0.50	*(0.020)*	167	0.49	*(0.028)*	257	0.48	*(0.025)*	180	0.54	*(0.046)*
Nonparticipants	454	0.55	*(0.043)*	77	0.66	*(0.120)*	147	0.47	*(0.041)*	230	0.52	*(0.028)*
Higher-income[2]												
NSLP Participants	331	0.53	*(0.024)*	71	0.55	*(0.045)*	148	0.51	*(0.040)*	112	0.51	*(0.038)*
Nonparticipants	364	0.55	*(0.031)*	60	0.53	*(0.057)*	102	0.54	*(0.054)*	202	0.58	*(0.048)*
						Girls						
All Children	1,752	0.56	*(0.014)*	393	0.54	*(0.018)*	700	0.55	*(0.020)*	659	0.60	*(0.034)*
All NSLP Participants	806	0.56	*(0.019)*	235	0.55	*(0.023)*	389	0.55	*(0.032)*	182	0.58	*(0.043)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	0.58	*(0.036)*	154	0.56	*(0.032)*	255	0.57	*(0.034)*	124	0.62	*(0.096)*
Nonparticipants	494	0.54	*(0.026)*	83	0.56	*(0.035)*	168	0.50	*(0.045)*	243	0.56	*(0.055)*
Higher-income[2]												
NSLP Participants	273	0.53	*(0.026)*	81	0.54	*(0.032)*	134	0.52	*(0.043)*	58	0.53	*(0.059)*
Nonparticipants	397	0.59	*(0.036)*	69	0.53	*(0.051)*	122	0.57	*(0.048)*	206	0.66	*(0.084)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-79—Linolenic Acid (% of energy intake): Percent of Children with Usual Intake Below the AMDR

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error
						Both sexes[1]						
All Children	3,544	80.0	*(3.21)*	778	79.7	*(6.67)*	1,360	95.0	*(2.97)*	1,406	64.7	*(6.36)*
All NSLP Participants	1,741	84.0	*(3.52)*	473	83.7	*(6.48)*	794	95.6	*(2.84)*	474	72.4	*(7.95)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	82.6	*(5.65)*	321	84.5	*(8.76)*	512	>97	*(2.33)*	304	64.8	*(14.52)*
Nonparticipants	948	75.8	*(7.45)*	160	54.3 u	*(19.97)*	315	>97	*(3.05)*	473	74.7	*(9.97)*
Higher-income[2]												
NSLP Participants	604	84.1	*(5.24)*	152	80.2	*(10.59)*	282	91.5	*(6.40)*	170	80.6	*(9.83)*
Nonparticipants	761	74.0	*(6.74)*	129	80.5	*(13.51)*	224	89.8	*(8.38)*	408	51.3	*(12.66)*
						Boys						
All Children	1,792	80.3	*(4.94)*	385	78.2	*(11.00)*	660	90.6	*(5.66)*	747	72.0	*(8.28)*
All NSLP Participants	935	85.6	*(4.34)*	238	86.9	*(8.22)*	405	92.1	*(5.18)*	292	77.6	*(8.75)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	87.7	*(5.28)*	167	92.1	*(6.08)*	257	96.3	*(4.38)*	180	74.4	*(14.10)*
Nonparticipants	454	72.6	*(11.41)*	77	38.6 u	*(33.00)*	147	96.2	*(5.41)*	230	82.4	*(8.42)*
Higher-income[2]												
NSLP Participants	331	80.1	*(7.92)*	71	73.6	*(17.90)*	148	85.1	*(11.20)*	112	81.5	*(11.00)*
Nonparticipants	364	72.6	*(10.36)*	60	78.6	*(19.50)*	102	77.7	*(18.30)*	202	61.4	*(15.80)*
						Girls						
All Children	1,752	79.2	*(4.08)*	393	81.2	*(7.46)*	700	>97	*(0.00)*	659	56.0	*(9.87)*
All NSLP Participants	806	81.1	*(6.27)*	235	80.7	*(9.91)*	389	>97	*(0.00)*	182	62.1	*(16.20)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	75.5	*(11.53)*	154	77.3	*(16.10)*	255	>97	*(0.00)*	124	48.5 u	*(31.00)*
Nonparticipants	494	80.9	*(8.17)*	83	74.0	*(17.80)*	168	>97	*(0.00)*	243	68.0	*(17.20)*
Higher-income[2]												
NSLP Participants	273	88.2	*(7.84)*	81	86.1	*(12.00)*	134	>97	*(0.00)*	58	78.3	*(20.50)*
Nonparticipants	397	75.0	*(8.95)*	69	82.5	*(18.70)*	122	>97	*(0.09)*	206	41.7 u	*(19.60)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-80—Linolenic Acid (% of energy intake): Percent of Children with Usual Intake Above the AMDR

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error
						Both sexes[1]						
All Children	3,544	<3	*(0.06)*	778	<3	*(0.00)*	1,360	<3	*(0.00)*	1,406	<3	*(0.17)*
All NSLP Participants	1,741	<3	*(0.00)*	473	<3	*(0.00)*	794	<3	*(0.00)*	474	<3	*(0.00)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	<3	*(0.03)*	321	<3	*(0.00)*	512	<3	*(0.00)*	304	<3	*(0.09)*
Nonparticipants	948	<3	*(0.26)*	160	<3	*(0.80)*	315	<3	*(0.00)*	473	<3	*(0.00)*
Higher-income[2]												
NSLP Participants	604	<3	*(0.00)*	152	<3	*(0.00)*	282	<3	*(0.00)*	170	<3	*(0.00)*
Nonparticipants	761	<3	*(0.37)*	129	<3	*(0.00)*	224	<3	*(0.00)*	408	<3	*(1.12)*
						Boys						
All Children	1,792	<3	*(0.00)*	385	<3	*(0.00)*	660	<3	*(0.00)*	747	<3	*(0.00)*
All NSLP Participants	935	<3	*(0.00)*	238	<3	*(0.00)*	405	<3	*(0.00)*	292	<3	*(0.00)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	<3	*(0.00)*	167	<3	*(0.00)*	257	<3	*(0.00)*	180	<3	*(0.00)*
Nonparticipants	454	<3	*(0.48)*	77	<3	*(1.44)*	147	<3	*(0.00)*	230	<3	*(0.00)*
Higher-income[2]												
NSLP Participants	331	<3	*(0.00)*	71	<3	*(0.00)*	148	<3	*(0.00)*	112	<3	*(0.00)*
Nonparticipants	364	<3	*(0.00)*	60	<3	*(0.00)*	102	<3	*(0.00)*	202	<3	*(0.01)*
						Girls						
All Children	1,752	<3	*(0.12)*	393	<3	*(0.00)*	700	<3	*(0.00)*	659	<3	*(0.37)*
All NSLP Participants	806	<3	*(0.00)*	235	<3	*(0.00)*	389	<3	*(0.00)*	182	<3	*(0.00)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	<3	*(0.08)*	154	<3	*(0.00)*	255	<3	*(0.00)*	124	<3	*(0.23)*
Nonparticipants	494	<3	*(0.00)*	83	<3	*(0.00)*	168	<3	*(0.00)*	243	<3	*(0.00)*
Higher-income[2]												
NSLP Participants	273	<3	*(0.00)*	81	<3	*(0.00)*	134	<3	*(0.00)*	58	<3	*(0.00)*
Nonparticipants	397	<3	*(0.72)*	69	<3	*(0.00)*	122	<3	*(0.00)*	206	<3	*(2.18)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-81—Linolenic Acid (% of energy intake): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	0.6-1.2	0.40	0.42	0.44	0.47	0.52	0.59	0.63	0.66	0.70	0.6-1.2	0.44	0.46	0.48	0.50	0.54	0.58	0.61	0.63	0.66
9-13 years	0.6-1.2	0.39	0.41	0.43	0.45	0.49	0.54	0.58	0.60	0.63	0.6-1.2	0.54	0.54	0.54	0.55	0.55	0.55	0.55	0.55	0.55
14-18 years	0.6-1.2	0.39	0.42	0.44	0.47	0.54	0.61	0.66	0.69	0.74	0.6-1.2	0.42	0.45	0.47	0.51	0.58	0.67	0.73	0.78	0.85
All NSLP Participants																				
5-8 years	0.6-1.2	0.39	0.42	0.43	0.46	0.50	0.56	0.59	0.62	0.65	0.6-1.2	0.46	0.48	0.49	0.51	0.55	0.59	0.61	0.63	0.65
9-13 years	0.6-1.2	0.40	0.41	0.43	0.45	0.49	0.54	0.57	0.59	0.62	0.6-1.2	0.55	0.55	0.55	0.55	0.55	0.55	0.56	0.56	0.56
14-18 years	0.6-1.2	0.37	0.40	0.42	0.45	0.52	0.59	0.64	0.67	0.72	0.6-1.2	0.42	0.45	0.48	0.51	0.57	0.64	0.68	0.71	0.76
Income-eligible Participants																				
5-8 years	0.6-1.2	0.38	0.40	0.42	0.44	0.49	0.54	0.57	0.59	0.62	0.6-1.2	0.46	0.48	0.50	0.52	0.55	0.60	0.62	0.64	0.66
9-13 years	0.6-1.2	0.40	0.41	0.43	0.44	0.48	0.52	0.54	0.56	0.59	0.6-1.2	0.56	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
14-18 years	0.6-1.2	0.38	0.40	0.42	0.46	0.52	0.60	0.65	0.68	0.74	0.6-1.2	0.43	0.46	0.49	0.53	0.60	0.70	0.75	0.79	0.86
Income-eligible Nonparticipants																				
5-8 years	0.6-1.2	0.46	0.50	0.52	0.56	0.64	0.74	0.80	0.84	0.92	0.6-1.2	0.46	0.48	0.50	0.52	0.56	0.60	0.63	0.65	0.68
9-13 years	0.6-1.2	0.37	0.39	0.40	0.42	0.47	0.52	0.54	0.56	0.59	0.6-1.2	0.49	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
14-18 years	0.6-1.2	0.39	0.41	0.43	0.46	0.51	0.57	0.61	0.64	0.68	0.6-1.2	0.39	0.42	0.44	0.47	0.54	0.63	0.68	0.71	0.77
Higher-income Participants																				
5-8 years	0.6-1.2	0.42	0.44	0.46	0.49	0.54	0.60	0.64	0.66	0.70	0.6-1.2	0.44	0.46	0.48	0.50	0.53	0.57	0.60	0.61	0.64
9-13 years	0.6-1.2	0.39	0.42	0.43	0.46	0.51	0.56	0.60	0.62	0.66	0.6-1.2	0.52	0.52	0.52	0.52	0.52	0.52	0.53	0.53	0.53
14-18 years	0.6-1.2	0.37	0.40	0.42	0.44	0.51	0.58	0.62	0.64	0.69	0.6-1.2	0.41	0.43	0.45	0.47	0.53	0.59	0.63	0.65	0.69
Higher-income Nonparticipants																				
5-8 years	0.6-1.2	0.39	0.42	0.44	0.46	0.52	0.59	0.62	0.65	0.69	0.6-1.2	0.41	0.43	0.45	0.47	0.52	0.58	0.61	0.63	0.66
9-13 years	0.6-1.2	0.41	0.43	0.45	0.48	0.53	0.59	0.63	0.66	0.70	0.6-1.2	0.57	0.57	0.57	0.57	0.57	0.58	0.58	0.58	0.58
14-18 years	0.6-1.2	0.41	0.44	0.46	0.49	0.57	0.65	0.70	0.73	0.79	0.6-1.2	0.45	0.48	0.50	0.54	0.63	0.74	0.82	0.87	0.97

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-82—Protein (g): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	72	*(1.3)*	779	66	*(2.0)*	1,360	71	*(2.2)*	1,407	79	*(2.4)*
All NSLP Participants	1,741	77	*(2.1)*	473	69	*(2.8)*	794	75	*(3.0)*	474	86	*(4.7)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	75	*(2.8)*	321	69	*(3.6)*	512	74	*(4.3)*	304	83	*(6.5)*
Nonparticipants	950	** 63	*(2.9)*	161	61	*(4.4)*	315	60	*(6.1)*	474	* 67	*(4.3)*
Higher-income[2]												
NSLP Participants	604	78	*(2.6)*	152	69	*(4.0)*	282	77	*(3.6)*	170	89	*(5.9)*
Nonparticipants	761	* 72	*(2.1)*	129	65	*(4.4)*	224	69	*(3.3)*	408	82	*(3.1)*
Boys												
All Children	1,794	80	*(2.1)*	386	70	*(3.1)*	660	77	*(3.5)*	748	93	*(4.0)*
All NSLP Participants	935	83	*(3.0)*	238	74	*(3.7)*	405	82	*(4.6)*	292	94	*(6.9)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	80	*(4.2)*	167	74	*(5.1)*	257	78	*(6.6)*	180	90	*(9.6)*
Nonparticipants	456	70	*(5.0)*	78	61	*(6.7)*	147	67	*(10.4)*	231	81	*(8.1)*
Higher-income[2]												
NSLP Participants	331	86	*(3.7)*	71	73	*(5.4)*	148	87	*(5.4)*	112	98	*(8.0)*
Nonparticipants	364	81	*(3.5)*	60	69 u	*(7.4)*	102	75	*(5.6)*	202	100	*(5.0)*
Girls												
All Children	1,752	63	*(1.4)*	393	62	*(2.7)*	700	64	*(2.6)*	659	63	*(1.9)*
All NSLP Participants	806	67	*(2.1)*	235	64	*(4.1)*	389	67	*(3.8)*	182	70	*(3.1)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	68	*(3.2)*	154	63	*(5.1)*	255	70	*(5.2)*	124	71	*(6.1)*
Nonparticipants	494	** 56	*(2.6)*	83	61	*(5.4)*	168	** 52	*(3.7)*	243	* 55	*(3.9)*
Higher-income[2]												
NSLP Participants	273	66	*(3.0)*	81	65	*(5.7)*	134	64	*(4.5)*	58	69 u	*(5.2)*
Nonparticipants	397	63	*(2.4)*	69	60	*(4.5)*	122	63	*(3.9)*	206	64	*(3.8)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-83—Protein (g/kg body weight): Mean Usual Intake[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
	Both sexes[2]											
All Children	3,495	1.93	*(0.037)*	768	2.74	*(0.086)*	1,342	1.76	*(0.056)*	1,385	1.29	*(0.040)*
All NSLP Participants	1,714	2.03	*(0.056)*	464	2.77	*(0.115)*	782	1.90	*(0.084)*	468	1.43	*(0.086)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,120	2.04	*(0.079)*	315	2.81	*(0.156)*	505	1.90	*(0.114)*	300	1.42	*(0.137)*
Nonparticipants	937	* 1.74	*(0.094)*	161	2.68	*(0.227)*	310	* 1.44	*(0.152)*	466	* 1.11	*(0.068)*
Higher-income[3]												
NSLP Participants	594	2.02	*(0.065)*	149	2.70	*(0.137)*	277	1.90	*(0.100)*	168	1.45	*(0.097)*
Nonparticipants	752	1.89	*(0.077)*	127	2.72	*(0.198)*	223	1.68	*(0.109)*	402	1.30	*(0.057)*
	Boys											
All Children	1,771	2.07	*(0.058)*	381	2.83	*(0.138)*	654	1.93	*(0.082)*	736	1.44	*(0.066)*
All NSLP Participants	921	2.16	*(0.079)*	234	2.93	*(0.164)*	400	2.05	*(0.116)*	287	1.51	*(0.126)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	594	2.15	*(0.114)*	164	2.95	*(0.214)*	253	2.02	*(0.167)*	177	1.49	*(0.208)*
Nonparticipants	451	1.82	*(0.134)*	78	2.55	*(0.286)*	146	1.66	*(0.256)*	227	1.26	*(0.116)*
Higher-income[3]												
NSLP Participants	327	2.18	*(0.098)*	70	2.89	*(0.221)*	147	2.10	*(0.142)*	110	1.53	*(0.132)*
Nonparticipants	361	2.05	*(0.131)*	59	2.83 u	*(0.335)*	102	1.84	*(0.188)*	200	1.50	*(0.087)*
	Girls											
All Children	1,724	1.78	*(0.044)*	387	2.65	*(0.100)*	688	1.57	*(0.076)*	649	1.12	*(0.038)*
All NSLP Participants	793	1.87	*(0.071)*	230	2.62	*(0.162)*	382	1.71	*(0.122)*	181	1.28	*(0.062)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	526	1.92	*(0.098)*	151	2.68	*(0.225)*	252	1.76	*(0.154)*	123	1.31	*(0.107)*
Nonparticipants	486	1.65	*(0.128)*	83	2.83	*(0.365)*	164	** 1.16	*(0.106)*	239	* 0.97	*(0.078)*
Higher-income[3]												
NSLP Participants	267	1.80	*(0.078)*	79	2.53	*(0.167)*	130	1.63	*(0.138)*	58	1.24 u	*(0.092)*
Nonparticipants	391	1.75	*(0.084)*	68	2.60	*(0.206)*	121	1.53	*(0.123)*	202	1.11	*(0.075)*

1 For children, actual body weight is used if BMI is in healthy range, otherwise the weight that places the individual at the nearest endpoint of the healthy range was used. For children age 4-18 years, healthy range is defined as the 5th to 85th percentile of the CDC BMI-for-age growth chart.

2 Estimates for both sexes are computed as the weighted average of estimates for males and females.

3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-84—Protein (g/kg body weight): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
						Both sexes[2]						
All Children	3,495	>97	*(0.42)*	768	>97	*(0.00)*	1,342	>97	*(0.61)*	1,385	93.6	*(1.12)*
All NSLP Participants	1,714	>97	*(0.37)*	464	>97	*(0.00)*	782	>97	*(0.61)*	468	>97	*(0.92)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,120	>97	*(0.48)*	315	>97	*(0.00)*	505	>97	*(0.96)*	300	>97	*(1.07)*
Nonparticipants	937	** 92.5	*(1.92)*	161	>97	*(0.46)*	310	93.3	*(3.41)*	466	** 84.6	*(4.64)*
Higher-income[3]												
NSLP Participants	594	>97	*(0.64)*	149	>97	*(0.00)*	277	>97	*(0.22)*	168	>97	*(1.94)*
Nonparticipants	752	>97	*(0.82)*	127	>97	*(0.00)*	223	>97	*(1.00)*	402	93.3	*(2.26)*
						Boys						
All Children	1,771	>97	*(0.28)*	381	>97	*(0.00)*	654	>97	*(0.26)*	736	>97	*(0.81)*
All NSLP Participants	921	>97	*(0.42)*	234	>97	*(0.00)*	400	>97	*(0.19)*	287	>97	*(1.27)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	594	>97	*(0.45)*	164	>97	*(0.00)*	253	>97	*(0.26)*	177	>97	*(1.34)*
Nonparticipants	451	96.6 u	*(1.80)*	78	>97	*(0.82)*	146	96.2 u	*(3.98)*	227	94.0 u	*(3.49)*
Higher-income[3]												
NSLP Participants	327	>97	*(0.84)*	70	>97	*(0.00)*	147	>97	*(0.23)*	110	>97	*(2.53)*
Nonparticipants	361	>97	*(0.26)*	59	>97	*(0.00)*	102	>97	*(0.42)*	200	>97	*(0.65)*
						Girls						
All Children	1,724	95.4	*(0.86)*	387	>97	*(0.00)*	688	>97	*(1.26)*	649	89.0	*(2.26)*
All NSLP Participants	793	>97	*(0.58)*	230	>97	*(0.00)*	382	>97	*(1.33)*	181	>97	*(1.11)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	526	>97	*(0.90)*	151	>97	*(0.00)*	252	>97	*(2.03)*	123	>97	*(1.76)*
Nonparticipants	486	** 88.6	*(3.35)*	83	>97	*(0.00)*	164	89.5	*(5.88)*	239	** 76.3	*(8.15)*
Higher-income[3]												
NSLP Participants	267	>97	*(0.85)*	79	>97	*(0.00)*	130	>97	*(0.41)*	58	97.0 u	*(2.55)*
Nonparticipants	391	* 95.1	*(1.56)*	68	>97	*(0.00)*	121	>97	*(1.81)*	202	88.0	*(4.36)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-85—Protein (g/kg body weight): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	0.76	1.80	2.00	2.13	2.34	2.77	3.25	3.54	3.75	4.09	0.76	1.82	1.97	2.08	2.25	2.59	2.98	3.21	3.38	3.65
9-13 years	0.76	1.10	1.25	1.36	1.53	1.87	2.27	2.50	2.67	2.94	0.76	0.84	0.96	1.05	1.19	1.49	1.87	2.11	2.29	2.58
14-18 years	0.73	0.82	0.93	1.00	1.12	1.38	1.68	1.88	2.03	2.28	0.71	0.60	0.69	0.76	0.87	1.08	1.33	1.47	1.58	1.76
All NSLP Participants																				
5-8 years	0.76	1.97	2.12	2.23	2.42	2.84	3.35	3.64	3.85	4.17	0.76	1.86	2.00	2.10	2.26	2.58	2.94	3.15	3.30	3.53
9-13 years	0.76	1.21	1.37	1.47	1.64	1.99	2.39	2.62	2.80	3.10	0.76	0.91	1.04	1.14	1.29	1.63	2.06	2.31	2.50	2.79
14-18 years	0.73	0.85	0.96	1.03	1.16	1.42	1.77	2.00	2.17	2.45	0.71	0.80	0.90	0.97	1.07	1.27	1.48	1.59	1.67	1.78
Income-eligible Participants																				
5-8 years	0.76	1.98	2.12	2.23	2.41	2.85	3.38	3.68	3.89	4.22	0.76	1.86	2.02	2.13	2.30	2.64	3.02	3.24	3.39	3.62
9-13 years	0.76	1.17	1.32	1.42	1.58	1.95	2.38	2.61	2.79	3.11	0.76	0.87	1.03	1.14	1.32	1.68	2.13	2.42	2.62	2.93
14-18 years	0.73	0.84	0.93	1.00	1.10	1.36	1.74	2.01	2.21	2.57	0.71	0.82	0.92	0.99	1.10	1.31	1.52	1.63	1.69	1.79
Income-eligible Nonparticipants																				
5-8 years	0.76	1.35	1.59	1.76	2.01	2.50	3.03	3.35	3.58	3.94	0.76	1.75	1.94	2.07	2.27	2.72	3.26	3.61	3.87	4.31
9-13 years	0.76	0.81	0.96	1.08	1.26	1.59	1.99	2.28	2.49	2.77	0.76	0.66	0.75	0.81	0.91	* 1.10	** 1.34	** 1.50	** 1.62	* 1.84
14-18 years	0.73	0.71	0.81	0.88	0.99	1.22	1.49	1.65	1.77	1.97	0.71	0.52	* 0.60	** 0.64	** 0.72	* 0.92	1.13	1.30	1.44	1.67
Higher-income Participants																				
5-8 years	0.76	1.95	2.12	2.24	2.43	2.83	3.28	3.55	3.75	4.06	0.76	1.86	1.99	2.08	2.21	2.48	2.81	3.01	3.15	3.36
9-13 years	0.76	1.28	1.44	1.54	1.71	2.04	2.43	2.66	2.84	3.12	0.76	0.98	1.07	1.15	1.27	1.56	1.92	2.14	2.29	2.54
14-18 years	0.73	0.85	0.97	1.06	1.20	1.49	1.82	2.01	2.14	2.35	0.71	0.77 u	0.86 u	0.93 u	1.03 u	1.22 u	1.43 u	1.55 u	1.63 u	1.75 u
Higher-income Nonparticipants																				
5-8 years	0.76	1.80 u	2.00 u	2.14 u	2.35 u	2.78 u	3.25 u	3.53 u	3.72 u	4.02 u	0.76	1.76	1.92	2.03	2.20	2.56	2.95	3.18	3.34	3.59
9-13 years	0.76	1.09	1.23	1.33	1.48	1.80	2.16	2.37	2.52	2.75	0.76	0.85	0.97	1.05	1.19	1.47	1.81	2.02	2.18	2.43
14-18 years	0.73	0.90	1.01	1.08	1.19	1.44	1.73	1.91	2.04	2.27	0.71	0.59	0.68	0.75	0.85	1.07	1.32	1.47	1.59	1.76

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-86—Protein (% of energy intake): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error
						Both sexes[1]						
All Children	3,544	13.8	*(0.15)*	778	13.9	*(0.28)*	1,360	13.7	*(0.22)*	1,406	13.7	*(0.28)*
All NSLP Participants	1,741	14.1	*(0.22)*	473	14.2	*(0.36)*	794	14.2	*(0.33)*	474	14.0	*(0.46)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	14.3	*(0.34)*	321	14.4	*(0.48)*	512	14.2	*(0.40)*	304	14.3	*(0.81)*
Nonparticipants	948	13.3	*(0.36)*	160	13.7	*(0.60)*	315	* 12.8	*(0.57)*	473	13.6	*(0.71)*
Higher-income[2]												
NSLP Participants	604	13.9	*(0.32)*	152	13.7	*(0.56)*	282	14.3	*(0.54)*	170	13.8	*(0.54)*
Nonparticipants	761	13.5	*(0.25)*	129	13.6	*(0.52)*	224	13.3	*(0.38)*	408	13.6	*(0.41)*
						Boys						
All Children	1,792	14.0	*(0.23)*	385	14.0	*(0.44)*	660	14.0	*(0.34)*	747	14.1	*(0.39)*
All NSLP Participants	935	14.3	*(0.31)*	238	14.6	*(0.58)*	405	14.4	*(0.50)*	292	13.8	*(0.53)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	14.5	*(0.43)*	167	14.9	*(0.75)*	257	14.4	*(0.62)*	180	14.3	*(0.84)*
Nonparticipants	454	13.6	*(0.54)*	77	13.4	*(0.89)*	147	12.9	*(0.93)*	230	14.4	*(0.99)*
Higher-income[2]												
NSLP Participants	331	14.0	*(0.41)*	71	13.9 u	*(0.67)*	148	14.5	*(0.77)*	112	13.5	*(0.67)*
Nonparticipants	364	13.8	*(0.41)*	60	13.4 u	*(0.86)*	102	13.5	*(0.63)*	202	14.3	*(0.58)*
						Girls						
All Children	1,752	13.6	*(0.19)*	393	13.9	*(0.34)*	700	13.5	*(0.25)*	659	13.3	*(0.39)*
All NSLP Participants	806	14.1	*(0.36)*	235	13.8	*(0.45)*	389	13.9	*(0.40)*	182	14.4	*(0.89)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	14.1	*(0.61)*	154	14.0	*(0.61)*	255	13.9	*(0.47)*	124	14.4	*(1.67)*
Nonparticipants	494	13.2	*(0.45)*	83	14.1	*(0.75)*	168	12.5	*(0.52)*	243	12.9	*(1.00)*
Higher-income[2]												
NSLP Participants	273	14.0	*(0.49)*	81	13.5	*(0.88)*	134	14.0	*(0.72)*	58	14.5 u	*(0.91)*
Nonparticipants	397	13.3	*(0.31)*	69	13.8 u	*(0.57)*	122	13.1	*(0.45)*	206	13.0	*(0.58)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-87—Protein (% of energy intake): Percent of Children with Usual Intake Below the AMDR[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error
	Both sexes[2]											
All Children	3,544	<3	*(0.39)*	778	<3	*(0.20)*	1,360	<3	*(0.15)*	1,406	3.6 u	*(1.15)*
All NSLP Participants	1,741	<3	*(0.18)*	473	<3	*(0.17)*	794	<3	*(0.09)*	474	<3	*(0.50)*
Income-eligible for Free/RP meals												
NSLP Participants	1,137	<3	*(0.32)*	321	<3	*(0.10)*	512	<3	*(0.12)*	304	<3	*(0.96)*
Nonparticipants	948	3.3 u	*(1.63)*	160	<3	*(1.90)*	315	<3	*(1.73)*	473	7.1 u	*(4.22)*
Higher-income												
NSLP Participants	604	<3	*(0.36)*	152	<3	*(0.47)*	282	<3	*(0.12)*	170	<3	*(0.97)*
Nonparticipants	761	<3	*(0.68)*	129	<3	*(0.68)*	224	<3	*(0.40)*	408	4.0 u	*(1.92)*
	Boys											
All Children	1,792	<3	*(0.14)*	385	<3	*(0.24)*	660	<3	*(0.00)*	747	<3	*(0.34)*
All NSLP Participants	935	<3	*(0.18)*	238	<3	*(0.00)*	405	<3	*(0.00)*	292	<3	*(0.56)*
Income-eligible for Free/RP meals												
NSLP Participants	604	<3	*(0.18)*	167	<3	*(0.00)*	257	<3	*(0.00)*	180	<3	*(0.56)*
Nonparticipants	454	<3	*(1.41)*	77	<3	*(3.41)*	147	<3	*(2.14)*	230	<3	*(1.31)*
Higher-income												
NSLP Participants	331	<3	*(0.46)*	71	<3	*(0.40)*	148	<3	*(0.00)*	112	<3	*(1.35)*
Nonparticipants	364	<3	*(0.35)*	60	<3	*(0.97)*	102	<3	*(0.00)*	202	<3	*(0.41)*
	Girls											
All Children	1,752	<3	*(0.84)*	393	<3	*(0.33)*	700	<3	*(0.31)*	659	7.1 u	*(2.51)*
All NSLP Participants	806	<3	*(0.35)*	235	<3	*(0.33)*	389	<3	*(0.20)*	182	<3	*(1.00)*
Income-eligible for Free/RP meals												
NSLP Participants	533	<3	*(0.81)*	154	<3	*(0.20)*	255	<3	*(0.26)*	124	<3	*(2.42)*
Nonparticipants	494	5.1 u	*(2.76)*	83	<3	*(0.28)*	168	3.1 u	*(2.84)*	243	12.2 u	*(7.83)*
Higher-income												
NSLP Participants	273	<3	*(0.36)*	81	<3	*(0.82)*	134	<3	*(0.28)*	58	<3	*(0.65)*
Nonparticipants	397	<3	*(1.29)*	69	<3	*(0.95)*	122	<3	*(0.74)*	206	7.4 u	*(3.72)*

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

2 Estimates for both sexes are computed as the weighted average of estimates for males and females.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-88—Protein (% of energy intake): Percent of Children with Usual Intake Above the AMDR[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error
	Both sexes[2]											
All Children	3,544	<3	*(0.00)*	778	<3	*(0.00)*	1,360	<3	*(0.00)*	1,406	<3	*(0.00)*
All NSLP Participants	1,741	<3	*(0.00)*	473	<3	*(0.00)*	794	<3	*(0.00)*	474	<3	*(0.00)*
Income-eligible for Free/RP meals												
NSLP Participants	1,137	<3	*(0.00)*	321	<3	*(0.00)*	512	<3	*(0.00)*	304	<3	*(0.00)*
Nonparticipants	948	<3	*(0.01)*	160	<3	*(0.00)*	315	<3	*(0.00)*	473	<3	*(0.02)*
Higher-income												
NSLP Participants	604	<3	*(0.00)*	152	<3	*(0.00)*	282	<3	*(0.00)*	170	<3	*(0.00)*
Nonparticipants	761	<3	*(0.00)*	129	<3	*(0.00)*	224	<3	*(0.00)*	408	<3	*(0.00)*
	Boys											
All Children	1,792	<3	*(0.00)*	385	<3	*(0.00)*	660	<3	*(0.00)*	747	<3	*(0.00)*
All NSLP Participants	935	<3	*(0.00)*	238	<3	*(0.00)*	405	<3	*(0.00)*	292	<3	*(0.00)*
Income-eligible for Free/RP meals												
NSLP Participants	604	<3	*(0.00)*	167	<3	*(0.00)*	257	<3	*(0.00)*	180	<3	*(0.00)*
Nonparticipants	454	<3	*(0.00)*	77	<3	*(0.00)*	147	<3	*(0.00)*	230	<3	*(0.00)*
Higher-income												
NSLP Participants	331	<3	*(0.00)*	71	<3	*(0.00)*	148	<3	*(0.00)*	112	<3	*(0.00)*
Nonparticipants	364	<3	*(0.00)*	60	<3	*(0.00)*	102	<3	*(0.00)*	202	<3	*(0.00)*
	Girls											
All Children	1,752	<3	*(0.00)*	393	<3	*(0.00)*	700	<3	*(0.00)*	659	<3	*(0.00)*
All NSLP Participants	806	<3	*(0.00)*	235	<3	*(0.00)*	389	<3	*(0.00)*	182	<3	*(0.00)*
Income-eligible for Free/RP meals												
NSLP Participants	533	<3	*(0.00)*	154	<3	*(0.00)*	255	<3	*(0.00)*	124	<3	*(0.00)*
Nonparticipants	494	<3	*(0.01)*	83	<3	*(0.00)*	168	<3	*(0.00)*	243	<3	*(0.03)*
Higher-income												
NSLP Participants	273	<3	*(0.00)*	81	<3	*(0.00)*	134	<3	*(0.00)*	58	<3	*(0.00)*
Nonparticipants	397	<3	*(0.00)*	69	<3	*(0.00)*	122	<3	*(0.00)*	206	<3	*(0.00)*

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-89—Protein (% of energy intake): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	10-30	11.6	12.1	12.4	12.9	13.9	15.0	15.6	16.1	16.8	10-30	11.3	11.8	12.2	12.7	13.8	14.9	15.6	16.0	16.8
9-13 years	10-30	12.2	12.5	12.8	13.2	13.9	14.7	15.1	15.4	15.8	10-30	11.3	11.8	12.1	12.6	13.4	14.4	14.9	15.3	15.8
14-18 years	10-30	11.3	11.8	12.2	12.8	13.9	15.2	16.0	16.5	17.3	10-30	9.7	10.3	10.8	11.6	13.1	14.8	15.8	16.6	17.7
All NSLP Participants																				
5-8 years	10-30	12.3	12.7	13.0	13.5	14.4	15.5	16.1	16.6	17.3	10-30	11.3	11.8	12.1	12.6	13.7	14.9	15.6	16.0	16.8
9-13 years	10-30	12.7	13.1	13.3	13.7	14.4	15.2	15.6	15.8	16.2	10-30	11.8	12.3	12.6	13.0	13.9	14.8	15.3	15.6	16.1
14-18 years	10-30	11.3	11.8	12.1	12.7	13.7	14.9	15.6	16.1	16.8	10-30	11.0	11.7	12.1	12.8	14.3	15.9	16.8	17.5	18.5
Income-eligible Participants																				
5-8 years	10-30	12.5	12.9	13.2	13.7	14.7	15.9	16.6	17.1	17.9	10-30	11.6	12.1	12.4	12.9	13.9	15.0	15.7	16.2	16.9
9-13 years	10-30	12.8	13.1	13.4	13.7	14.4	15.1	15.4	15.7	16.1	10-30	11.9	12.3	12.6	13.1	13.9	14.7	15.2	15.5	16.0
14-18 years	10-30	11.4	12.0	12.4	13.0	14.2	15.4	16.1	16.6	17.4	10-30	10.7	11.4	11.8	12.6	14.1	16.0	17.1	17.8	19.0
Income-eligible Nonparticipants																				
5-8 years	10-30	10.7	11.2	11.6	12.2	13.3	14.5	15.1	15.6	16.4	10-30	11.5	11.9	12.3	12.8	13.9	15.1	15.9	16.4	17.2
9-13 years	10-30	11.0	11.4	11.7	12.1	12.9	13.8	14.2	14.5	14.9	10-30	10.3	10.7	11.0	11.5	12.5	13.4	14.0	14.4	15.0
14-18 years	10-30	11.0	11.7	12.1	12.8	14.2	15.8	16.7	17.3	18.4	10-30	9.1	9.8	10.3	11.0	12.6	14.5	15.6	16.5	18.0
Higher-income Participants																				
5-8 years	10-30	11.8 u	12.3 u	12.6 u	13.0 u	13.9 u	14.8 u	15.3 u	15.6 u	16.1 u	10-30	10.8	11.3	11.6	12.2	13.3	14.6	15.3	15.8	16.6
9-13 years	10-30	12.7	13.1	13.3	13.7	14.5	15.3	15.7	16.0	16.4	10-30	11.8	12.2	12.6	13.0	13.9	14.8	15.4	15.7	16.3
14-18 years	10-30	11.0	11.5	11.9	12.4	13.4	14.5	15.1	15.5	16.1	10-30	11.5 u	12.2 u	12.6 u	13.2 u	14.4 u	15.7 u	16.5 u	17.0 u	17.7 u
Higher-income Nonparticipants																				
5-8 years	10-30	11.0 u	11.5 u	11.8 u	12.4 u	13.3 u	14.4 u	15.0 u	15.4 u	16.1 u	10-30	11.2 u	11.8 u	12.1 u	12.7 u	13.8 u	14.9 u	15.5 u	15.9 u	16.5 u
9-13 years	10-30	12.0	12.3	12.5	12.8	13.5	14.2	14.5	14.8	15.1	10-30	10.9	11.4	11.7	12.1	13.0	14.0	14.5	14.9	15.5
14-18 years	10-30	11.5	12.1	12.5	13.1	14.3	15.5	16.2	16.6	17.3	10-30	9.7	10.3	10.7	11.4	12.8	14.4	15.2	15.9	16.8

[1] Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-90—Carbohydrates (g): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
						Both sexes[1]						
All Children	3,546	285	*(4.6)*	779	263	*(8.0)*	1,360	282	*(7.4)*	1,407	312	*(8.5)*
All NSLP Participants	1,741	293	*(6.9)*	473	266	*(10.3)*	794	285	*(9.4)*	474	328	*(15.4)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	284	*(8.4)*	321	263	*(12.1)*	512	281	*(11.9)*	304	308	*(18.7)*
Nonparticipants	950	* 259	*(8.6)*	161	241	*(13.1)*	315	266	*(17.6)*	474	269	*(13.2)*
Higher-income[2]												
NSLP Participants	604	305	*(10.0)*	152	272	*(11.0)*	282	291	*(13.9)*	170	352	*(24.5)*
Nonparticipants	761	293	*(7.4)*	129	270	*(15.8)*	224	286	*(10.4)*	408	323	*(11.9)*
						Boys						
All Children	1,794	310	*(6.8)*	386	276	*(9.7)*	660	302	*(12.2)*	748	353	*(13.0)*
All NSLP Participants	935	315	*(8.8)*	238	276	*(7.8)*	405	306	*(14.5)*	292	362	*(20.9)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	301	*(11.1)*	167	273	*(11.9)*	257	295	*(17.5)*	180	334	*(25.8)*
Nonparticipants	456	278	*(14.0)*	78	243	*(20.4)*	147	284	*(28.6)*	231	306	*(22.7)*
Higher-income[2]												
NSLP Participants	331	331	*(13.7)*	71	281 u	*(10.7)*	148	321	*(22.0)*	112	391	*(33.1)*
Nonparticipants	364	324	*(12.3)*	60	297 u	*(26.2)*	102	303	*(17.6)*	202	374	*(19.4)*
						Girls						
All Children	1,752	257	*(6.0)*	393	250	*(12.8)*	700	260	*(7.7)*	659	261	*(10.2)*
All NSLP Participants	806	259	*(9.8)*	235	257	*(18.6)*	389	260	*(11.0)*	182	260	*(20.1)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	261	*(12.0)*	154	254	*(20.6)*	255	266	*(15.8)*	124	262	*(25.2)*
Nonparticipants	494	240	*(8.8)*	83	238	*(14.7)*	168	244	*(16.3)*	243	237	*(14.9)*
Higher-income[2]												
NSLP Participants	273	258	*(11.3)*	81	265	*(18.7)*	134	250	*(13.9)*	58	259 u	*(24.7)*
Nonparticipants	397	263	*(8.5)*	69	243 u	*(17.6)*	122	272	*(12.0)*	206	275	*(14.0)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-91—Carbohydrates (g): Percent of Children with Usual Intake Greater than Estimated Average Requirement (EAR)[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	>97	*(0.03)*	779	>97	*(0.00)*	1,360	>97	*(0.00)*	1,407	>97	*(0.08)*
All NSLP Participants	1,741	>97	*(0.00)*	473	>97	*(0.00)*	794	>97	*(0.00)*	474	>97	*(0.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	>97	*(0.00)*	321	>97	*(0.00)*	512	>97	*(0.00)*	304	>97	*(0.00)*
Nonparticipants	950	>97	*(0.19)*	161	>97	*(0.47)*	315	>97	*(0.00)*	474	>97	*(0.33)*
Higher-income[3]												
NSLP Participants	604	>97	*(0.00)*	152	>97	*(0.00)*	282	>97	*(0.00)*	170	>97	*(0.00)*
Nonparticipants	761	>97	*(0.02)*	129	>97	*(0.00)*	224	>97	*(0.00)*	408	>97	*(0.05)*
	Boys											
All Children	1,794	>97	*(0.00)*	386	>97	*(0.00)*	660	>97	*(0.00)*	748	>97	*(0.00)*
All NSLP Participants	935	>97	*(0.00)*	238	>97	*(0.00)*	405	>97	*(0.00)*	292	>97	*(0.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	>97	*(0.00)*	167	>97	*(0.00)*	257	>97	*(0.00)*	180	>97	*(0.00)*
Nonparticipants	456	>97	*(0.29)*	78	>97	*(0.85)*	147	>97	*(0.00)*	231	>97	*(0.21)*
Higher-income[3]												
NSLP Participants	331	>97	*(0.00)*	71	>97	*(0.00)*	148	>97	*(0.00)*	112	>97	*(0.00)*
Nonparticipants	364	>97	*(0.00)*	60	>97	*(0.00)*	102	>97	*(0.00)*	202	>97	*(0.00)*
	Girls											
All Children	1,752	>97	*(0.06)*	393	>97	*(0.00)*	700	>97	*(0.00)*	659	>97	*(0.18)*
All NSLP Participants	806	>97	*(0.00)*	235	>97	*(0.00)*	389	>97	*(0.00)*	182	>97	*(0.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	>97	*(0.00)*	154	>97	*(0.00)*	255	>97	*(0.00)*	124	>97	*(0.00)*
Nonparticipants	494	>97	*(0.19)*	83	>97	*(0.00)*	168	>97	*(0.00)*	243	>97	*(0.59)*
Higher-income[3]												
NSLP Participants	273	>97	*(0.00)*	81	>97	*(0.00)*	134	>97	*(0.00)*	58	>97	*(0.00)*
Nonparticipants	397	>97	*(0.03)*	69	>97	*(0.00)*	122	>97	*(0.00)*	206	>97	*(0.09)*

1 The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups. See next table for EAR values.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-92—Carbohydrates (g): Distribution of Usual Carbohydrate Intake in Grams

	Percentiles																			
	Boys										Girls									
	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	EAR (µg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	100	190	206	218	237	274	311	333	349	374	100	182	195	205	219	248	279	296	308	326
9-13 years	100	213	230	242	261	299	339	361	376	400	100	183	197	208	224	256	292	312	327	350
14-18 years	100	218	243	260	286	342	410	450	478	523	100	161	180	193	214	256	303	330	349	380
All NSLP Participants																				
5-8 years	100	208	221	230	244	272	304	323	336	357	100	186	201	211	226	256	287	305	317	335
9-13 years	100	214	232	244	263	303	345	368	384	409	100	181	196	207	223	256	293	314	329	352
14-18 years	100	232	254	270	295	348	415	458	490	542	100	168	184	195	213	251	298	327	348	380
Income-eligible Participants																				
5-8 years	100	206	219	228	241	269	300	319	333	356	100	180	195	205	221	251	284	303	316	336
9-13 years	100	202	221	234	255	293	332	353	367	391	100	182	198	209	226	261	301	325	341	367
14-18 years	100	215	235	249	273	323	383	421	448	492	100	173	188	199	216	253	299	328	349	384
Income-eligible Nonparticipants																				
5-8 years	100	148	166	179	199	239	283	308	326	354	100	171	184	192	206	234	265	284	297	317
9-13 years	100	194	211	224	242	280	322	345	362	388	100	167	181	190	205	237	274	297	314	342
14-18 years	100	175	200	217	243	295	359	399	427	471	100	137	155	169	193	235	277	301	318	346
Higher-income Participants																				
5-8 years	100	212 u	226 u	236 u	250 u	279 u	310 u	327 u	339 u	357 u	100	195	210	220	236	266	293	307	316	330
9-13 years	100	230	248	260	279	317	359	384	401	429	100	180	194	204	219	248	278	295	307	325
14-18 years	100	251	275	291	317	374	448	496	531	588	100	162 u	178 u	190 u	209 u	250 u	298 u	328 u	350 u	386 u
Higher-income Nonparticipants																				
5-8 years	100	197 u	214 u	227 u	246 u	288 u	338 u	368 u	390 u	426 u	100	183 u	194 u	202 u	214 u	239 u	267 u	284 u	296 u	314 u
9-13 years	100	232	247	257	273	302	332	348	360	376	100	202	217	227	241	269	299	317	330	351
14-18 years	100	236	263	281	309	366	428	465	492	537	100	173	192	206	227	272	318	343	360	388

[1] The Dietary Reference Intakes (DRI) Estimated Average Requirement (EAR) is used to assess the adequacy of intakes for population groups.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-93—Carbohydrate (% of energy intake): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error	Sample size	Mean % of energy	Standard error
						Both sexes[1]						
All Children	3,544	54.9	*(0.33)*	778	55.2	*(0.64)*	1,360	54.9	*(0.47)*	1,406	54.4	*(0.59)*
All NSLP Participants	1,741	54.1	*(0.47)*	473	54.7	*(0.80)*	794	54.0	*(0.76)*	474	53.7	*(0.86)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	54.0	*(0.62)*	321	54.7	*(0.93)*	512	54.5	*(1.08)*	304	52.8	*(1.20)*
Nonparticipants	948	55.2	*(0.66)*	160	54.5	*(1.32)*	315	56.6	*(1.05)*	473	54.5	*(1.03)*
Higher-income[2]												
NSLP Participants	604	54.3	*(0.76)*	152	54.7	*(1.25)*	282	53.5	*(1.37)*	170	54.6	*(1.32)*
Nonparticipants	761	55.7	*(0.61)*	129	56.8	*(1.09)*	224	55.7	*(0.90)*	408	54.6	*(1.14)*
						Boys						
All Children	1,792	54.6	*(0.43)*	385	55.2	*(1.00)*	660	54.7	*(0.52)*	747	54.0	*(0.66)*
All NSLP Participants	935	54.5	*(0.58)*	238	54.8	*(1.22)*	405	54.0	*(0.83)*	292	54.8	*(0.94)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	54.7	*(0.81)*	167	55.0	*(1.53)*	257	54.9	*(1.44)*	180	54.1	*(1.24)*
Nonparticipants	454	54.3	*(1.00)*	77	53.2	*(2.09)*	147	56.1	*(1.50)*	230	53.5	*(1.56)*
Higher-income[2]												
NSLP Participants	331	54.2	*(0.92)*	71	54.4 u	*(1.53)*	148	52.9	*(1.61)*	112	55.4	*(1.63)*
Nonparticipants	364	55.0	*(0.90)*	60	57.0 u	*(1.62)*	102	55.0	*(1.48)*	202	53.0	*(1.57)*
						Girls						
All Children	1,752	55.1	*(0.51)*	393	55.2	*(0.79)*	700	55.2	*(0.81)*	659	54.9	*(1.03)*
All NSLP Participants	806	53.4	*(0.82)*	235	54.7	*(1.03)*	389	54.1	*(1.36)*	182	51.5	*(1.78)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	53.0	*(1.05)*	154	54.5	*(1.10)*	255	54.0	*(1.62)*	124	50.6	*(2.47)*
Nonparticipants	494	* 56.3	*(0.81)*	83	56.1	*(1.43)*	168	57.3	*(1.41)*	243	55.5	*(1.38)*
Higher-income[2]												
NSLP Participants	273	54.0	*(1.25)*	81	55.0	*(1.93)*	134	54.2	*(2.37)*	58	52.8 u	*(2.17)*
Nonparticipants	397	56.3	*(0.82)*	69	56.5 u	*(1.46)*	122	56.3	*(1.09)*	206	56.1	*(1.66)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-94—Carbohydrate (% of energy intake): Percent of Children with Usual Intake Below the AMDR[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error	Sample size	Percent < AMDR	Standard error
	Both sexes[2]											
All Children	3,544	<3	*(0.35)*	778	<3	*(0.43)*	1,360	<3	*(0.17)*	1,406	<3	*(0.96)*
All NSLP Participants	1,741	<3	*(0.84)*	473	<3	*(0.67)*	794	<3	*(0.45)*	474	3.1 u	*(2.41)*
Income-eligible for Free/RP meals												
NSLP Participants	1,137	<3	*(1.53)*	321	<3	*(0.31)*	512	<3	*(0.55)*	304	5.6 u	*(4.60)*
Nonparticipants	948	<3	*(1.04)*	160	<3	*(2.26)*	315	<3	*(0.11)*	473	3.8 u	*(2.17)*
Higher-income												
NSLP Participants	604	<3	*(0.89)*	152	<3	*(2.29)*	282	<3	*(0.99)*	170	<3	*(0.95)*
Nonparticipants	761	<3	*(0.51)*	129	<3	*(0.30)*	224	<3	*(0.12)*	408	<3	*(1.52)*
	Boys											
All Children	1,792	<3	*(0.31)*	385	<3	*(0.42)*	660	<3	*(0.13)*	747	<3	*(0.82)*
All NSLP Participants	935	<3	*(0.21)*	238	<3	*(0.34)*	405	<3	*(0.34)*	292	<3	*(0.43)*
Income-eligible for Free/RP meals												
NSLP Participants	604	<3	*(0.48)*	167	<3	*(0.57)*	257	<3	*(0.28)*	180	<3	*(1.31)*
Nonparticipants	454	<3	*(1.74)*	77	3.3 u	*(3.98)*	147	<3	*(0.13)*	230	4.4 u	*(3.46)*
Higher-income												
NSLP Participants	331	<3	*(0.56)*	71	<3	*(0.33)*	148	<3	*(1.56)*	112	<3	*(0.39)*
Nonparticipants	364	<3	*(0.73)*	60	<3	*(0.29)*	102	<3	*(0.12)*	202	<3	*(2.20)*
	Girls											
All Children	1,752	<3	*(0.68)*	393	<3	*(0.77)*	700	<3	*(0.32)*	659	3.7 u	*(1.88)*
All NSLP Participants	806	3.4 u	*(2.42)*	235	<3	*(1.25)*	389	<3	*(0.90)*	182	8.0 u	*(7.18)*
Income-eligible for Free/RP meals												
NSLP Participants	533	4.9 u	*(4.04)*	154	<3	*(0.26)*	255	<3	*(1.13)*	124	13.2 u	*(12.20)*
Nonparticipants	494	<3	*(0.97)*	83	<3	*(1.10)*	168	<3	*(0.19)*	243	3.2 u	*(2.72)*
Higher-income												
NSLP Participants	273	<3	*(1.80)*	81	3.1 u	*(4.37)*	134	<3	*(0.99)*	58	<3	*(3.09)*
Nonparticipants	397	<3	*(0.72)*	69	<3	*(0.53)*	122	<3	*(0.21)*	206	<3	*(2.11)*

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.
Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-95—Carbohydrate (% of energy intake): Percent of Children with Usual Intake Above the AMDR[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error	Sample size	Percent > AMDR	Standard error
	Both sexes[2]											
All Children	3,544	<3	*(0.37)*	778	<3	*(0.67)*	1,360	<3	*(0.36)*	1,406	<3	*(0.83)*
All NSLP Participants	1,741	<3	*(0.33)*	473	<3	*(0.66)*	794	<3	*(0.46)*	474	<3	*(0.59)*
Income-eligible for Free/RP meals												
NSLP Participants	1,137	<3	*(0.32)*	321	<3	*(0.48)*	512	<3	*(0.82)*	304	<3	*(0.16)*
Nonparticipants	948	<3	*(0.72)*	160	<3	*(0.61)*	315	<3	*(1.74)*	473	<3	*(1.11)*
Higher-income												
NSLP Participants	604	<3	*(0.75)*	152	<3	*(1.50)*	282	<3	*(0.24)*	170	<3	*(1.70)*
Nonparticipants	761	<3	*(0.95)*	129	<3	*(2.04)*	224	<3	*(0.16)*	408	<3	*(2.01)*
	Boys											
All Children	1,792	<3	*(0.22)*	385	<3	*(0.40)*	660	<3	*(0.15)*	747	<3	*(0.51)*
All NSLP Participants	935	<3	*(0.30)*	238	<3	*(0.23)*	405	<3	*(0.17)*	292	<3	*(0.86)*
Income-eligible for Free/RP meals												
NSLP Participants	604	<3	*(0.18)*	167	<3	*(0.39)*	257	<3	*(0.31)*	180	<3	*(0.22)*
Nonparticipants	454	<3	*(0.58)*	77	<3	*(0.24)*	147	<3	*(1.15)*	230	<3	*(1.28)*
Higher-income												
NSLP Participants	331	<3	*(0.79)*	71	<3	*(0.37)*	148	<3	*(0.07)*	112	<3	*(2.37)*
Nonparticipants	364	<3	*(0.68)*	60	<3	*(2.01)*	102	<3	*(0.07)*	202	<3	*(0.49)*
	Girls											
All Children	1,752	<3	*(0.75)*	393	<3	*(1.29)*	700	<3	*(0.73)*	659	3.1 u	*(1.72)*
All NSLP Participants	806	<3	*(0.55)*	235	<3	*(1.27)*	389	<3	*(0.99)*	182	<3	*(0.39)*
Income-eligible for Free/RP meals												
NSLP Participants	533	<3	*(0.65)*	154	<3	*(0.86)*	255	<3	*(1.71)*	124	<3	*(0.21)*
Nonparticipants	494	<3	*(1.45)*	83	<3	*(1.33)*	168	3.3 u	*(3.69)*	243	<3	*(1.76)*
Higher-income												
NSLP Participants	273	<3	*(1.02)*	81	<3	*(2.84)*	134	<3	*(0.54)*	58	<3	*(1.03)*
Nonparticipants	397	3.2 u	*(1.75)*	69	4.2 u	*(3.58)*	122	<3	*(0.29)*	206	5.4 u	*(3.89)*

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

2 Estimates for both sexes are computed as the weighted average of estimates for males and females.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-96—Carbohydrate (% of energy intake): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	AMDR[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	45-65	49.0	50.5	51.4	52.8	55.3	57.7	59.0	59.9	61.2	45-65	48.1	49.6	50.6	52.2	55.1	58.2	59.9	61.1	63.0
9-13 years	45-65	49.1	50.4	51.2	52.4	54.7	56.9	58.2	59.0	60.2	45-65	48.8	50.2	51.1	52.5	55.1	57.7	59.2	60.1	61.6
14-18 years	45-65	46.9	48.4	49.5	51.0	53.9	56.9	58.5	59.5	61.2	45-65	45.8	47.9	49.3	51.3	55.0	58.6	60.5	61.8	63.8
All NSLP Participants																				
5-8 years	45-65	49.0	50.2	51.1	52.4	54.7	57.2	58.5	59.4	60.7	45-65	47.5	49.0	50.1	51.7	54.6	57.6	59.2	60.4	62.2
9-13 years	45-65	48.3	49.6	50.4	51.7	54.0	56.3	57.6	58.5	59.7	45-65	47.5	48.9	49.9	51.3	54.0	56.8	58.3	59.4	61.0
14-18 years	45-65	48.2	49.6	50.6	52.1	54.7	57.4	58.8	59.8	61.3	45-65	43.9	45.6	46.7	48.3	51.5	54.6	56.2	57.4	59.1
Income-eligible Participants																				
5-8 years	45-65	49.1	50.3	51.2	52.5	54.9	57.4	58.8	59.7	61.1	45-65	48.5	49.7	50.6	51.9	54.4	56.9	58.4	59.4	61.1
9-13 years	45-65	49.4	50.6	51.5	52.7	54.9	57.2	58.4	59.3	60.5	45-65	47.2	48.7	49.6	51.1	53.8	56.7	58.4	59.5	61.2
14-18 years	45-65	47.6	49.0	50.1	51.5	54.2	56.7	58.0	58.9	60.1	45-65	42.5	44.2	45.4	47.2	50.6	54.0	55.8	56.9	58.6
Income-eligible Nonparticipants																				
5-8 years	45-65	45.9	47.6	48.8	50.4	53.4	56.2	57.7	58.7	60.1	45-65	48.7	50.4	51.6	53.3	56.2	59.1	60.5	61.5	62.9
9-13 years	45-65	50.7	52.0	52.8	54.0	56.2	58.2	59.4	60.2	61.5	45-65	50.6	52.1	53.1	54.6	57.3	60.0	61.5	62.5	64.1
14-18 years	45-65	45.3	47.2	48.4	50.2	53.5	56.8	58.7	59.9	61.8	45-65	46.3	48.6	50.0	52.1	55.7	59.1	60.8	61.9	63.6
Higher-income Participants																				
5-8 years	45-65	48.9 u	50.1 u	50.8 u	52.0 u	54.3 u	56.6 u	57.9 u	58.8 u	60.2 u	45-65	46.3	48.2	49.5	51.4	55.0	58.5	60.4	61.7	63.7
9-13 years	45-65	46.9	48.3	49.2	50.5	53.0	55.4	56.6	57.5	58.7	45-65	48.1	49.4	50.3	51.6	54.1	56.7	58.1	59.1	60.5
14-18 years	45-65	49.0	50.3	51.2	52.6	55.3	58.0	59.5	60.6	62.3	45-65	46.3 u	47.7 u	48.6 u	50.1 u	52.8 u	55.3 u	56.7 u	57.7 u	59.3 u
Higher-income Nonparticipants																				
5-8 years	45-65	51.2 u	52.6 u	53.5 u	54.8 u	57.1 u	59.3 u	60.5 u	61.4 u	62.6 u	45-65	49.2 u	50.7 u	51.7 u	53.2 u	56.3 u	59.5 u	61.3 u	62.6 u	64.5 u
9-13 years	45-65	50.3	51.3	52.0	53.0	55.0	56.9	58.0	58.7	59.8	45-65	51.0	52.2	53.0	54.2	56.4	58.4	59.5	60.2	61.3
14-18 years	45-65	46.6	47.9	48.8	50.1	52.8	55.7	57.3	58.4	60.1	45-65	46.7	48.9	50.3	52.4	56.3	60.0	61.9	63.2	65.2

1 Acceptable Macronutrient Distribution Ranges (AMDR) are the ranges of intake for macronutrients, as a percent of total food energy, associated with reduced risk of chronic disease while providing intakes of essential nutrients.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Table B-97—Cholesterol (mg): Mean Usual Intake

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error	Sample size	Mean	Standard error
Both sexes[1]												
All Children	3,546	217	*(6.8)*	779	199	*(13.1)*	1,360	211	*(10.7)*	1,407	240	*(11.3)*
All NSLP Participants	1,741	226	*(8.6)*	473	202	*(11.7)*	794	226	*(15.8)*	474	252	*(16.6)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	1,137	225	*(10.5)*	321	207	*(17.0)*	512	219	*(15.8)*	304	249	*(21.6)*
Nonparticipants	950	198	*(11.3)*	161	214	*(22.8)*	315	182	*(19.1)*	474	199	*(16.3)*
Higher-income[2]												
NSLP Participants	604	229	*(13.6)*	152	194	*(13.8)*	282	234	*(28.8)*	170	258	*(25.3)*
Nonparticipants	761	214	*(14.8)*	129	190	*(33.9)*	224	197	*(19.5)*	408	255	*(21.7)*
Boys												
All Children	1,794	246	*(11.6)*	386	217	*(22.6)*	660	236	*(18.4)*	748	285	*(19.1)*
All NSLP Participants	935	249	*(13.4)*	238	225	*(18.6)*	405	250	*(26.6)*	292	273	*(23.4)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	604	243	*(15.6)*	167	238	*(25.8)*	257	229	*(24.9)*	180	264	*(30.3)*
Nonparticipants	456	222	*(17.7)*	78	212	*(33.0)*	147	207	*(31.6)*	231	246	*(26.7)*
Higher-income[2]												
NSLP Participants	331	255	*(20.5)*	71	204	*(16.2)*	148	275	*(48.7)*	112	285	*(33.1)*
Nonparticipants	364	254	*(28.3)*	60	210 u	*(63.9)*	102	225	*(39.2)*	202	330	*(40.3)*
Girls												
All Children	1,752	183	*(6.2)*	393	181	*(13.0)*	700	184	*(9.5)*	659	185	*(9.3)*
All NSLP Participants	806	196	*(8.7)*	235	179	*(14.6)*	389	197	*(13.8)*	182	211	*(16.9)*
Income-eligible for Free/RP meals[2]												
NSLP Participants	533	203	*(13.2)*	154	177	*(22.4)*	255	208	*(18.5)*	124	224	*(27.3)*
Nonparticipants	494	174	*(13.2)*	83	216	*(30.6)*	168	* 149	*(15.6)*	243	159	*(19.8)*
Higher-income[2]												
NSLP Participants	273	186	*(14.2)*	81	185	*(21.9)*	134	178	*(17.8)*	58	194 u	*(32.4)*
Nonparticipants	397	176	*(10.2)*	69	170	*(21.0)*	122	174	*(13.8)*	206	185	*(17.8)*

1 Estimates for both sexes are computed as the weighted average of estimates for males and females.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-98—Cholesterol (mg): Percent of Children Meeting Dietary Guidelines Recommendation[1]

	All ages (5-18), age adjusted			5-8 years			9-13 years			14-18 years		
	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error	Sample size	Percent	Standard error
	Both sexes[2]											
All Children	3,546	87.7	*(2.42)*	779	93.1	*(3.44)*	1,360	92.9	*(4.63)*	1,407	77.0	*(4.37)*
All NSLP Participants	1,741	86.2	*(3.65)*	473	93.7	*(3.00)*	794	88.5	*(7.81)*	474	76.4	*(7.00)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	1,137	87.8	*(3.36)*	321	91.2	*(4.51)*	512	94.1	*(3.48)*	304	78.1	*(8.41)*
Nonparticipants	950	91.5	*(2.93)*	161	87.8	*(6.57)*	315	>97	*(3.11)*	474	87.7	*(5.04)*
Higher-income[3]												
NSLP Participants	604	83.7	*(6.64)*	152	>97	*(2.29)*	282	82.3	*(16.13)*	170	71.5	*(11.17)*
Nonparticipants	761	86.6	*(4.14)*	129	92.7 u	*(9.09)*	224	>97	*(5.15)*	408	69.5	*(6.78)*
	Boys											
All Children	1,794	79.6	*(4.53)*	386	87.7	*(6.71)*	660	88.3	*(8.78)*	748	62.5	*(7.83)*
All NSLP Participants	935	79.3	*(6.20)*	238	87.6	*(6.17)*	405	82.2	*(14.10)*	292	67.9	*(10.20)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	604	82.8	*(5.33)*	167	82.3	*(9.22)*	257	94.6 u	*(5.23)*	180	71.1	*(12.10)*
Nonparticipants	456	87.7	*(4.96)*	78	87.5 u	*(9.35)*	147	>97	*(5.51)*	231	77.4	*(10.30)*
Higher-income[3]												
NSLP Participants	331	76.0	*(10.94)*	71	96.0 u	*(4.20)*	148	70.1 u	*(28.20)*	112	62.0	*(15.50)*
Nonparticipants	364	75.6	*(8.27)*	60	86.8 u	*(17.90)*	102	94.4 u	*(11.20)*	202	45.2	*(13.20)*
	Girls											
All Children	1,752	97.0	*(0.82)*	393	>97	*(1.13)*	700	>97	*(1.06)*	659	94.4	*(1.93)*
All NSLP Participants	806	96.4	*(1.88)*	235	>97	*(0.61)*	389	96.2 u	*(2.47)*	182	93.4 u	*(5.07)*
Income-eligible for Free/RP meals[3]												
NSLP Participants	533	94.4	*(3.53)*	154	>97	*(0.58)*	255	93.4	*(4.47)*	124	89.9 u	*(9.64)*
Nonparticipants	494	94.9	*(3.14)*	83	88.3 u	*(9.06)*	168	>97	*(0.50)*	243	96.7 u	*(2.82)*
Higher-income[3]												
NSLP Participants	273	>97	*(2.59)*	81	>97	*(2.13)*	134	>97	*(1.96)*	58	94.4 u	*(7.29)*
Nonparticipants	397	97.0 u	*(1.59)*	69	>97	*(2.23)*	122	>97	*(0.84)*	206	92.6 u	*(4.19)*

1 Recommended intake of cholesterol is less than or equal to 300 mg per day.
2 Estimates for both sexes are computed as the weighted average of estimates for males and females.
3 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).
u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.
Note: Estimate is not displayed when percentage is <3 or >97.

Source: NHANES 1999–2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Data reflect nutrient intake from foods and do not include the contribution of vitamin and mineral supplements. Usual intake was estimated using *C-SIDE: Software for Intake Distribution Estimation*.

Table B-99—Cholesterol (mg): Distribution of Usual Intake

	Percentiles																			
	Boys										Girls									
	Guide-line (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th	Guide-line (mg/d)[1]	5th	10th	15th	25th	50th	75th	85th	90th	95th
Total Children																				
5-8 years	≤ 300	121	136	148	166	206	256	288	312	353	≤ 300	116	127	136	149	176	208	227	241	263
9-13 years	≤ 300	162	174	184	199	231	268	290	306	332	≤ 300	115	127	136	149	178	212	233	248	272
14-18 years	≤ 300	159	178	193	217	270	337	379	410	462	≤ 300	92	107	118	137	177	223	251	272	305
All NSLP Participants																				
5-8 years	≤ 300	137	151	162	178	215	260	290	312	348	≤ 300	120	130	138	151	176	205	221	233	250
9-13 years	≤ 300	170	184	193	209	243	283	308	326	354	≤ 300	124	136	146	160	191	227	249	265	291
14-18 years	≤ 300	158	176	190	212	260	320	358	386	431	≤ 300	122	139	151	172	209	246	268	284	309
Income-eligible Participants																				
5-8 years	≤ 300	139	154	166	184	226	277	311	336	378	≤ 300	122	131	138	150	173	201	216	227	244
9-13 years	≤ 300	162	175	184	199	228	257	273	284	302	≤ 300	127	141	151	167	202	242	266	283	310
14-18 years	≤ 300	150	166	178	199	248	312	354	384	433	≤ 300	137	154	165	183	219	258	282	300	330
Income-eligible Nonparticipants																				
5-8 years	≤ 300	110	126	138	157	198	252	288	315	363	≤ 300	123	137	148	165	204	254	285	309	349
9-13 years	≤ 300	149	162	170	181	203	230	248	260	280	≤ 300	89	99	107	120	145	173	190	202	222
14-18 years	≤ 300	131	151	165	188	236	293	328	353	395	≤ 300	* 78	89	98	113	149	192	219	241	278
Higher-income Participants																				
5-8 years	≤ 300	137	149	157	171	198	231	252	267	292	≤ 300	119	132	141	154	182	213	231	243	263
9-13 years	≤ 300	189	204	214	231	267	310	337	358	391	≤ 300	117	127	135	147	172	204	223	238	262
14-18 years	≤ 300	165	185	199	223	274	335	372	400	444	≤ 300	108 u	124 u	135 u	152 u	186 u	226 u	252 u	272 u	305 u
Higher-income Nonparticipants																				
5-8 years	≤ 300	103	119	131	150	195	253 u	291 u	320 u	367 u	≤ 300	103	115	123	136	165	198	218	232	256
9-13 years	≤ 300	159	171	180	193	221	251	270	283	304	≤ 300	113	124	132	144	170	199	217	229	248
14-18 years	≤ 300	184	208	225	252	312	387	436	474	537	≤ 300	90	104	115	132	171	222	256	281	325

[1] Recommended intake of cholesterol is less than or equal to 300 mg per day.

u Denotes individual point estimates that are unreliable due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999–2004 dietary recalls. See notes on prior table.

Appendix C
Other Detailed Tables

List of Tables

Table C-1—Percent of Children Using Dietary Supplements in the Past Month

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Mean	Std error	Sample size	Mean	Std error	Sample size	Mean	Std error	Sample size	Mean	Std error
Both sexes												
All Children	3,538	28.7	*(1.54)*	776	39.8	*(3.38)*	1,359	25.6	*(2.10)*	1,403	22.9	*(1.74)*
All NSLP Participants	1,737	25.1	*(2.17)*	470	33.0	*(4.56)*	794	23.7	*(2.05)*	473	20.0	*(2.46)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	1,134	19.4	*(2.76)*	318	25.2	*(5.58)*	512	17.2	*(3.15)*	304	16.8	*(3.25)*
Non-participants	949	22.8	*(3.33)*	161	35.1	*(5.54)*	314	19.4	*(5.81)*	474	16.3	*(3.41)*
Higher-income[1]												
NSLP Participants	603	33.6	*(2.89)*	152	46.6	*(6.54)*	282	33.3	*(3.31)*	169	23.5	*(4.19)*
Non-participants	759	40.2	*(2.64)*	129	56.2	*(6.87)*	224	36.3	*(4.56)*	406	31.2	*(2.94)*
Boys												
All Children	1,791	27.5	*(2.35)*	385	38.8	*(4.26)*	660	26.0	*(3.76)*	746	20.0	*(2.40)*
All NSLP Participants	933	24.6	*(2.95)*	237	35.6	*(6.19)*	405	24.8	*(3.81)*	291	15.6	*(3.15)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	603	20.4	*(4.29)*	166	25.8 u	*(7.76)*	257	19.9	*(5.81)*	180	16.4 u	*(4.71)*
Non-participants	456	23.0	*(5.17)*	78	34.0 u	*(8.00)*	147	20.5 u	*(9.21)*	231	16.8	*(4.55)*
Higher-income[1]												
NSLP Participants	330	31.8	*(3.29)*	71	53.2	*(7.61)*	148	31.6	*(4.67)*	111	14.8	*(4.31)*
Non-participants	364	36.3	*(4.11)*	60	46.7	*(8.13)*	102	35.1	*(7.65)*	202	* 29.2	*(5.01)*
Girls												
All Children	1,747	30.0	*(2.37)*	391	40.7	*(4.84)*	699	25.2	*(2.54)*	657	26.4	*(3.00)*
All NSLP Participants	804	27.0	*(3.25)*	233	30.6	*(6.77)*	389	22.4	*(2.67)*	182	28.8	*(4.20)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	531	18.3	*(4.10)*	152	24.5	*(8.36)*	255	14.1 u	*(3.39)*	124	17.5 u	*(4.81)*
Non-participants	493	22.5	*(2.86)*	83	36.4 u	*(6.73)*	167	18.1 u	*(3.97)*	243	15.8	*(5.46)*
Higher-income[1]												
NSLP Participants	273	40.0	*(4.28)*	81	40.7	*(9.43)*	134	35.6	*(4.55)*	58	44.1	*(6.89)*
Non-participants	395	44.0	*(3.19)*	69	66.0	*(8.17)*	122	37.3	*(5.34)*	204	33.2	*(5.47)*

Note: Estimate is not displayed when percentage is <3 or >97.

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-2—Percent of Children By Number of Dietary Supplements Taken In Past Month, Among Children Using Dietary Supplements

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Number of supplements		Sample size	Number of supplements		Sample size	Number of supplements		Sample size	Number of supplements	
		One	Two or more		One	Two or more		One	Two or more		One	Two or more
	Percent of children, Both sexes											
All Children	802	76.0	24.0	261	86.5	13.5	284	74.2	25.8	257	69.3	30.7
All NSLP Participants	370	83.8	16.2	137	89.3	10.7	154	79.1	20.9	79	84.3 u	15.7 u
Income-eligible for Free/RP Meals												
NSLP Participants	181	90.7	9.3	69	94.0 u	6.0 u	70	85.1 u	14.9 u	42	93.9 u	6.1 u
Non-participants	173	77.6	22.4	50	94.2 u	5.8 u	57	59.7 u	40.3 u	66	82.8 u	17.2 u
Higher-income												
NSLP Participants	189	78.3	21.7	68	84.8 u	15.2 u	84	74.6	25.4	37	76.9 u	23.1 u
Non-participants	251	69.4	30.6	70	82.0 u	18.0 u	73	72.1	27.9	108	56.4	43.6
	Standard errors, Both sexes											
All Children	802	*(2.65)*	*(2.65)*	261	*(2.89)*	*(2.89)*	284	*(4.63)*	*(4.63)*	257	*(3.71)*	*(3.71)*
All NSLP Participants	370	*(2.89)*	*(2.89)*	137	*(3.30)*	*(3.30)*	154	*(4.56)*	*(4.56)*	79	*(4.97)*	*(4.97)*
Income-eligible for Free/RP Meals												
NSLP Participants	181	*(3.27)*	*(3.27)*	69	*(3.98)*	*(3.98)*	70	*(6.81)*	*(6.81)*	42	*(2.95)*	*(2.95)*
Non-participants	173	*(6.95)*	*(6.95)*	50	*(3.19)*	*(3.19)*	57	*(18.94)*	*(18.94)*	66	*(7.89)*	*(7.89)*
Higher-income												
NSLP Participants	189	*(4.11)*	*(4.11)*	68	*(4.85)*	*(4.85)*	84	*(5.58)*	*(5.58)*	37	*(8.72)*	*(8.72)*
Non-participants	251	*(4.17)*	*(4.17)*	70	*(5.11)*	*(5.11)*	73	*(7.42)*	*(7.42)*	108	*(5.65)*	*(5.65)*

Note: Estimate is not displayed when percentage is <3 or >97.
u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.
Source: NHANES 1999-2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-3—Mean Percent of Daily Energy Intake From Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS)

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error
						Both sexes						
All Children	2,596	38.8	*(0.44)*	577	36.6	*(0.71)*	998	38.7	*(0.57)*	1,021	40.5	*(0.84)*
All NSLP Participants	1,292	38.7	*(0.60)*	352	37.1	*(1.18)*	593	38.2	*(0.87)*	347	40.3	*(1.42)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	852	38.2	*(0.82)*	238	36.1	*(1.48)*	390	37.6	*(1.02)*	224	40.6	*(1.77)*
Non-participants	685	39.8	*(0.78)*	117	38.5	*(1.10)*	230	40.2	*(0.92)*	338	40.5	*(1.45)*
Higher-income[1]												
NSLP Participants	440	39.4	*(0.79)*	114	38.7	*(1.13)*	203	39.2	*(1.06)*	123	40.0	*(1.66)*
Non-participants	541	38.1	*(0.52)*	96	* 34.6	*(1.27)*	152	38.9	*(1.22)*	293	40.2	*(1.05)*
						Boys						
All Children	1,318	38.6	*(0.72)*	288	36.3	*(1.07)*	489	38.5	*(1.01)*	541	40.8	*(1.10)*
All NSLP Participants	698	38.1	*(1.03)*	177	35.4	*(1.66)*	305	37.9	*(1.51)*	216	40.5	*(1.84)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	458	37.2	*(1.33)*	126	34.3 u	*(1.91)*	198	37.2	*(2.15)*	134	39.5 u	*(2.16)*
Non-participants	324	* 40.3	*(0.92)*	55	* 40.7 u	*(1.61)*	109	39.8	*(0.98)*	160	40.4	*(1.72)*
Higher-income[1]												
NSLP Participants	240	39.4	*(0.97)*	51	37.6 u	*(1.75)*	107	38.8	*(1.34)*	82	41.6	*(2.15)*
Non-participants	264	38.7	*(0.94)*	48	34.9 u	*(1.45)*	70	39.6	*(1.83)*	146	40.9	*(1.06)*
						Girls						
All Children	1,278	38.9	*(0.46)*	289	37.0	*(0.90)*	509	39.0	*(0.63)*	480	40.2	*(1.11)*
All NSLP Participants	594	39.2	*(0.56)*	175	38.7	*(1.25)*	288	38.7	*(0.85)*	131	40.0 u	*(1.21)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	394	39.6	*(0.76)*	112	38.0 u	*(1.62)*	192	38.1	*(1.02)*	90	42.3 u	*(1.34)*
Non-participants	361	39.2	*(1.07)*	62	35.8 u	*(1.25)*	121	40.6	*(1.38)*	178	40.6	*(2.49)*
Higher-income[1]												
NSLP Participants	200	38.5	*(0.81)*	63	** 39.6 u	*(1.42)*	96	39.8	*(1.72)*	41	36.4 u	*(2.00)*
Non-participants	277	37.6	*(0.74)*	48	** 34.2 u	*(1.77)*	82	38.4	*(1.32)*	147	39.4	*(1.66)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual unreliable estimates due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Source: NHANES 1999-2002 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-4—Mean Energy Density of Daily Intakes[1]

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error
Both sexes												
All Children	3,542	2.02	*(0.02)*	778	1.91	*(0.04)*	1,360	2.03	*(0.03)*	1,404	2.11	*(0.03)*
All NSLP Participants	1,741	2.01	*(0.03)*	473	1.84	*(0.05)*	794	2.02	*(0.04)*	474	2.15	*(0.05)*
Income-eligible for Free/RP Meals[2]												
NSLP Participants	1,137	2.01	*(0.04)*	321	1.79	*(0.06)*	512	2.03	*(0.05)*	304	2.17	*(0.09)*
Non-participants	947	2.02	*(0.04)*	160	1.89	*(0.07)*	315	2.05	*(0.09)*	472	2.10	*(0.06)*
Higher-income[2]												
NSLP Participants	604	2.02	*(0.03)*	152	1.95	*(0.07)*	282	2.00	*(0.04)*	170	2.12	*(0.06)*
Non-participants	761	2.07	*(0.02)*	129	2.05	*(0.05)*	224	2.07	*(0.05)*	408	2.08	*(0.03)*
Boys												
All Children	1,791	2.03	*(0.03)*	385	1.87	*(0.05)*	660	2.06	*(0.05)*	746	2.12	*(0.03)*
All NSLP Participants	935	2.00	*(0.04)*	238	1.80	*(0.08)*	405	2.03	*(0.06)*	292	2.13	*(0.05)*
Income-eligible for Free/RP Meals[2]												
NSLP Participants	604	1.98	*(0.05)*	167	1.70	*(0.06)*	257	2.06	*(0.10)*	180	2.12	*(0.10)*
Non-participants	453	2.05	*(0.06)*	77	1.91 u	*(0.10)*	147	2.16	*(0.14)*	229	2.05	*(0.05)*
Higher-income[2]												
NSLP Participants	331	2.04	*(0.05)*	71	1.99	*(0.12)*	148	1.99	*(0.06)*	112	2.15	*(0.09)*
Non-participants	364	2.06	*(0.04)*	60	1.96	*(0.06)*	102	2.05	*(0.08)*	202	2.16	*(0.05)*
Girls												
All Children	1,751	2.02	*(0.03)*	393	1.96	*(0.05)*	700	2.00	*(0.04)*	658	2.09	*(0.06)*
All NSLP Participants	806	2.03	*(0.03)*	235	1.88	*(0.06)*	389	2.01	*(0.05)*	182	2.17	*(0.07)*
Income-eligible for Free/RP Meals[2]												
NSLP Participants	533	2.06	*(0.05)*	154	1.87	*(0.08)*	255	2.01	*(0.07)*	124	2.27 u	*(0.11)*
Non-participants	494	1.98	*(0.05)*	83	1.86 u	*(0.10)*	168	1.91	*(0.08)*	243	2.14	*(0.12)*
Higher-income[2]												
NSLP Participants	273	1.99	*(0.04)*	81	1.91	*(0.09)*	134	2.01	*(0.05)*	58	2.04 u	*(0.10)*
Non-participants	397	2.07	*(0.04)*	69	2.14	*(0.07)*	122	2.08	*(0.06)*	206	2.00	*(0.07)*

1 Energy density is measured as calories per 100 grams of solid food. Beverages (fluid milk, juice drinks, soft drinks, coffee, tea, and alcoholic beverages) are not included in the analyses.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-5—Distribution of Body Weights of NSLP Participants and Nonparticipants

	All ages (5-18)								
	Both sexes			Boys			Girls		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
	Low BMI								
All Children	3,495	<3	*(0.45)*	1,771	4.1	*(0.66)*	1,724	<3	*(0.34)*
All NSLP Participants	1,714	3.0	*(0.56)*	921	4.4	*(0.77)*	793	<3	*(0.44)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	1,120	3.4	*(0.52)*	594	5.7	*(0.88)*	526	<3	*(0.26)*
Non-participants	937	3.5 u	*(1.08)*	451	3.6 u	*(1.19)*	486	3.6 u	*(1.62)*
Higher-income[1]									
NSLP Participants	594	<3	*(0.92)*	327	<3	*(1.10)*	267	<3	*(1.00)*
Non-participants	752	<3	*(0.86)*	361	3.7 u	*(1.49)*	391	<3	*(0.42)*
	Healthy weight								
All Children	3,495	64.6	*(1.33)*	1,771	62.9	*(1.50)*	1,724	66.6	*(1.99)*
All NSLP Participants	1,714	63.3	*(1.68)*	921	62.3	*(2.34)*	793	64.6	*(2.51)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	1,120	62.9	*(2.21)*	594	61.2	*(2.93)*	526	65.0	*(3.29)*
Non-participants	937	62.6	*(2.51)*	451	61.0	*(4.31)*	486	63.7	*(2.99)*
Higher-income[1]									
NSLP Participants	594	63.9	*(2.85)*	327	63.8	*(4.21)*	267	64.1	*(3.80)*
Non-participants	752	68.7	*(2.92)*	361	65.3	*(3.79)*	391	71.8	*(3.29)*
	At risk of overweight								
All Children	3,495	14.9	*(1.01)*	1,771	14.8	*(1.37)*	1,724	14.9	*(1.11)*
All NSLP Participants	1,714	14.5	*(1.33)*	921	13.8	*(1.89)*	793	15.5	*(1.94)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	1,120	13.9	*(1.74)*	594	14.6	*(2.85)*	526	13.2	*(1.96)*
Non-participants	937	15.6	*(2.12)*	451	15.6	*(2.71)*	486	16.0	*(2.64)*
Higher-income[1]									
NSLP Participants	594	15.4	*(2.85)*	327	12.3	*(2.81)*	267	19.0	*(4.34)*
Non-participants	752	16.3	*(2.37)*	361	17.7	*(3.53)*	391	15.2	*(2.02)*
	Overweight								
All Children	3,495	17.7	*(1.10)*	1,771	18.2	*(1.47)*	1,724	17.2	*(1.78)*
All NSLP Participants	1,714	19.2	*(1.66)*	921	19.5	*(2.27)*	793	18.7	*(2.47)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	1,120	19.8	*(1.77)*	594	18.4	*(2.40)*	526	21.1	*(2.99)*
Non-participants	937	18.2	*(2.06)*	451	19.7	*(2.99)*	486	16.6	*(2.77)*
Higher-income[1]									
NSLP Participants	594	18.2	*(3.06)*	327	21.0	*(4.35)*	267	14.8	*(3.50)*
Non-participants	752	12.9	*(1.92)*	361	13.3	*(2.69)*	391	12.5	*(2.50)*

Note: Estimate is not displayed when percentage is <3

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Low BMI is defined by BMI-for-age less than the 5th percentile of the CDC BMI-for-age growth chart; healthy weight is defined by BMI-for-age between the 5th and 85th percentiles; overweight is defined by BMI-for-age between the 85th and 95th percentiles; and obese is defined by BMI-for-age above the 95th percentile of the BMI-for-age growth chart.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls. Excludes pregnant and breastfeeding girls. Estimates are age adjusted.

Table C-5—Distribution of Body Weights of NSLP Participants and Nonparticipants —Continued

	5-8 years old								
	Both sexes			Boys			Girls		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
Low BMI									
All Children	768	<3	*(0.66)*	381	3.4 u	*(1.18)*	387	<3	*(0.53)*
All NSLP Participants	464	<3	*(0.51)*	234	<3	*(1.01)*	230	<3	*(0.23)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	315	<3	*(0.74)*	164	<3	*(1.42)*	151	<3	*(0.35)*
Non-participants	161	* 6.1 u	*(2.12)*	78	4.8 u	*(2.79)*	83	7.7 u	*(3.81)*
Higher-income[1]									
NSLP Participants	149	<3	*(0.66)*	70	<3	*(1.35)*	79	<3	*(0.22)*
Non-participants	127	<3	*(1.73)*	59	4.3 u	*(3.37)*	68	<3	*(0.35)*
Healthy weight									
All Children	768	62.2	*(2.53)*	381	61.0	*(3.45)*	387	63.4	*(3.66)*
All NSLP Participants	464	58.9	*(3.64)*	234	55.8	*(5.58)*	230	61.7	*(5.37)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	315	57.6	*(5.12)*	164	52.5	*(7.15)*	151	62.5	*(7.27)*
Non-participants	161	65.6	*(4.56)*	78	64.8	*(6.26)*	83	66.6	*(6.57)*
Higher-income[1]									
NSLP Participants	149	61.0	*(5.27)*	70	61.7	*(8.16)*	79	60.4	*(6.53)*
Non-participants	127	68.6	*(5.17)*	59	69.1 u	*(7.95)*	68	68.1	*(6.25)*
At risk of overweight									
All Children	768	16.1	*(1.67)*	381	15.4	*(2.85)*	387	16.8	*(2.10)*
All NSLP Participants	464	15.6	*(2.57)*	234	16.8	*(4.50)*	230	14.4	*(3.10)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	315	14.4	*(3.34)*	164	20.2 u	*(6.32)*	151	8.8 u	*(1.71)*
Non-participants	161	15.0 u	*(4.67)*	78	13.1 u	*(5.18)*	83	17.3 u	*(7.10)*
Higher-income[1]									
NSLP Participants	149	17.7 u	*(5.39)*	70	10.7 u	*(5.32)*	79	24.0 u	*(9.29)*
Non-participants	127	19.3	*(4.71)*	59	15.9 u	*(6.71)*	68	22.8 u	*(5.26)*
Overweight									
All Children	768	19.4	*(1.86)*	381	20.2	*(2.59)*	387	18.5	*(3.23)*
All NSLP Participants	464	24.0	*(2.72)*	234	24.6	*(4.26)*	230	23.6	*(4.49)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	315	26.4	*(4.78)*	164	24.3	*(7.03)*	151	28.3	*(7.39)*
Non-participants	161	* 13.3	*(2.93)*	78	17.2 u	*(4.83)*	83	* 8.4 u	*(3.19)*
Higher-income[1]									
NSLP Participants	149	19.9	*(5.55)*	70	25.0 u	*(7.94)*	79	15.4 u	*(8.08)*
Non-participants	127	9.8 u	*(2.99)*	59	10.8 u	*(4.69)*	68	8.7 u	*(4.14)*

Note: Estimate is not displayed when percentage is <3

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual unreliable estimates due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Low BMI is defined by BMI-for-age less than the 5th percentile of the CDC BMI-for-age growth chart; healthy weight is defined by BMI-for-age between the 5th and 85th percentiles; overweight is defined by BMI-for-age between the 85th and 95th percentiles; and obese is defined by BMI-for-age above the 95th percentile of the BMI-for-age growth chart.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls. Excludes pregnant and breastfeeding girls.

Table C-5—Distribution of Body Weights of NSLP Participants and Nonparticipants —Continued

	9-13 years old								
	Both sexes			Boys			Girls		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
	Low BMI								
All Children	1,342	3.8	*(0.98)*	654	5.3	*(1.42)*	688	<3	*(0.85)*
All NSLP Participants	782	4.8	*(1.41)*	400	7.0 u	*(2.13)*	382	<3	*(0.96)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	505	5.4 u	*(1.84)*	253	9.0 u	*(3.30)*	252	<3	*(0.65)*
Non-participants	310	<3	*(1.74)*	146	* <3	*(0.97)*	164	3.9 u	*(3.74)*
Higher-income[1]									
NSLP Participants	277	3.9 u	*(1.86)*	147	4.3 u	*(2.68)*	130	3.4 u	*(2.13)*
Non-participants	223	<3	*(1.36)*	102	3.4 u	*(2.01)*	121	<3	*(1.11)*
	Healthy weight								
All Children	1,342	62.9	*(2.19)*	654	62.8	*(2.91)*	688	63.1	*(2.79)*
All NSLP Participants	782	62.6	*(3.03)*	400	63.6	*(3.84)*	382	61.4	*(4.39)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	505	63.0	*(3.31)*	253	65.5	*(3.59)*	252	60.2	*(5.19)*
Non-participants	310	58.9	*(4.87)*	146	61.4	*(7.47)*	164	55.7	*(6.90)*
Higher-income[1]									
NSLP Participants	277	62.0	*(4.93)*	147	61.0	*(6.53)*	130	63.3	*(7.66)*
Non-participants	223	65.6	*(5.45)*	102	61.5	*(8.20)*	121	69.2	*(5.63)*
	At risk of overweight								
All Children	1,342	16.1	*(1.83)*	654	15.1	*(2.39)*	688	17.2	*(2.22)*
All NSLP Participants	782	14.9	*(2.12)*	400	12.2	*(2.54)*	382	18.1	*(3.44)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	505	14.6	*(2.78)*	253	11.1	*(3.14)*	252	18.7	*(4.43)*
Non-participants	310	17.1	*(3.90)*	146	15.7 u	*(5.23)*	164	18.8 u	*(5.93)*
Higher-income[1]									
NSLP Participants	277	15.2	*(3.56)*	147	13.7 u	*(4.18)*	130	17.2 u	*(6.30)*
Non-participants	223	18.6	*(3.51)*	102	22.9	*(6.23)*	121	14.9 u	*(3.38)*
	Overweight								
All Children	1,342	17.3	*(1.63)*	654	16.9	*(2.17)*	688	17.7	*(2.15)*
All NSLP Participants	782	17.7	*(2.57)*	400	17.2	*(3.38)*	382	18.4	*(3.46)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	505	16.9	*(2.96)*	253	14.3	*(2.95)*	252	19.8	*(4.25)*
Non-participants	310	21.2	*(3.15)*	146	20.8	*(5.27)*	164	21.6	*(4.82)*
Higher-income[1]									
NSLP Participants	277	18.9	*(4.19)*	147	21.0 u	*(6.37)*	130	16.1 u	*(4.06)*
Non-participants	223	13.6	*(3.87)*	102	12.3 u	*(4.97)*	121	14.8 u	*(4.55)*

Note: Estimate is not displayed when percentage is <3

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual unreliable estimates due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Low BMI is defined by BMI-for-age less than the 5th percentile of the CDC BMI-for-age growth chart; healthy weight is defined by BMI-for-age between the 5th and 85th percentiles; overweight is defined by BMI-for-age between the 85th and 95th percentiles; and obese is defined by BMI-for-age above the 95th percentile of the BMI-for-age growth chart.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls. Excludes pregnant and breastfeeding girls.

Table C-5—Distribution of Body Weights of NSLP Participants and Nonparticipants —Continued

	14-18 years old								
	Both sexes			Boys			Girls		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
	Low BMI								
All Children	1,385	<3	*(0.66)*	736	3.4 u	*(1.17)*	649	<3	*(0.24)*
All NSLP Participants	468	<3	*(1.05)*	287	3.1 u	*(1.48)*	181	<3	*(0.86)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	300	<3	*(1.86)*	177	4.5 u	*(2.90)*	123	<3	*(0.12)*
Non-participants	466	<3	*(1.26)*	227	4.2 u	*(2.49)*	239	<3	*(0.11)*
Higher-income[1]									
NSLP Participants	168	<3	*(1.07)*	110	<3	*(1.23)*	58	<3	*(2.02)*
Non-participants	402	<3	*(1.07)*	200	3.5 u	*(2.22)*	202	<3	*(0.14)*
	Healthy weight								
All Children	1,385	68.4	*(1.80)*	736	64.6	*(2.12)*	649	72.9	*(2.91)*
All NSLP Participants	468	67.5	*(2.71)*	287	66.1	*(3.76)*	181	70.3	*(5.22)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	300	67.0	*(4.47)*	177	63.8	*(6.15)*	123	72.1	*(5.20)*
Non-participants	466	64.0	*(3.13)*	227	57.6	*(6.35)*	239	69.7	*(5.03)*
Higher-income[1]									
NSLP Participants	168	68.2	*(4.56)*	110	68.3	*(5.58)*	58	67.8 u	*(8.25)*
Non-participants	402	72.0	*(3.05)*	200	66.3	*(4.31)*	202	77.4	*(3.77)*
	At risk of overweight								
All Children	1,385	12.7	*(1.53)*	736	14.0	*(2.07)*	649	11.1	*(1.47)*
All NSLP Participants	468	13.2	*(2.54)*	287	13.0	*(2.91)*	181	13.7	*(4.10)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	300	12.8	*(3.35)*	177	13.7 u	*(5.15)*	123	11.2 u	*(3.10)*
Non-participants	466	14.7	*(2.46)*	227	17.6	*(4.13)*	239	12.1	*(2.35)*
Higher-income[1]									
NSLP Participants	168	13.7 u	*(4.30)*	110	12.3 u	*(3.99)*	58	17.0 u	*(8.00)*
Non-participants	402	11.5	*(2.65)*	200	14.0	*(4.17)*	202	9.2 u	*(2.36)*
	Overweight								
All Children	1,385	16.9	*(1.44)*	736	18.0	*(1.79)*	649	15.6	*(2.58)*
All NSLP Participants	468	16.8	*(2.56)*	287	17.8	*(3.30)*	181	15.0	*(4.18)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	300	17.4	*(2.87)*	177	17.9	*(3.96)*	123	16.6 u	*(5.31)*
Non-participants	466	19.2	*(2.89)*	227	20.6	*(4.36)*	239	18.1	*(4.39)*
Higher-income[1]									
NSLP Participants	168	16.2	*(3.69)*	110	17.7 u	*(4.19)*	58	12.8 u	*(4.83)*
Non-participants	402	14.7	*(2.30)*	200	16.3	*(3.58)*	202	13.2	*(3.45)*

Note: Estimate is not displayed when percentage is <3

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Low BMI is defined by BMI-for-age less than the 5th percentile of the CDC BMI-for-age growth chart; healthy weight is defined by BMI-for-age between the 5th and 85th percentiles; overweight is defined by BMI-for-age between the 85th and 95th percentiles; and obese is defined by BMI-for-age above the 95th percentile of the BMI-for-age growth chart.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls. Excludes pregnant and breastfeeding girls.

Table C-6—Percent of Children Reporting All Three Main Meals (Breakfast, Lunch, and Dinner)

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
Both sexes												
All Children	3,546	68.6	*(0.98)*	779	84.5	*(1.70)*	1,360	69.6	*(1.71)*	1,407	54.7	*(1.91)*
All NSLP Participants	1,741	72.7	*(1.55)*	473	85.3	*(2.64)*	794	72.9	*(2.68)*	474	62.4	*(3.43)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	1,137	70.2	*(2.70)*	321	84.5	*(3.32)*	512	72.3	*(3.54)*	304	56.4	*(6.56)*
Non-participants	950	***49.2	*(2.60)*	161	*69.0	*(4.62)*	315	**48.4	*(6.13)*	474	**34.2	*(3.45)*
Higher-income[1]												
NSLP Participants	604	75.7	*(1.86)*	152	86.8	*(3.01)*	282	73.8	*(3.81)*	170	68.8	*(4.75)*
Non-participants	761	76.0	*(2.25)*	129	90.3 u	*(2.66)*	224	78.8	*(3.64)*	408	61.4	*(3.62)*
Boys												
All Children	1,794	70.5	*(1.36)*	386	86.7	*(1.83)*	660	71.5	*(2.73)*	748	56.3	*(2.78)*
All NSLP Participants	935	76.1	*(1.67)*	238	88.6	*(2.27)*	405	75.5	*(3.36)*	292	66.5	*(3.49)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	604	71.5	*(2.82)*	167	86.9 u	*(3.53)*	257	73.6	*(4.57)*	180	57.0	*(6.61)*
Non-participants	456	***52.4	*(3.86)*	78	73.0 u	*(5.74)*	147	*50.7	*(10.01)*	231	*37.4	*(5.04)*
Higher-income[1]												
NSLP Participants	331	81.1	*(3.00)*	71	91.8 u	*(2.99)*	148	78.1	*(4.96)*	112	75.6	*(5.68)*
Non-participants	364	73.9	*(2.65)*	60	90.3 u	*(3.96)*	102	80.2	*(3.88)*	202	**54.2	*(4.86)*
Girls												
All Children	1,752	66.5	*(1.49)*	393	82.2	*(2.59)*	700	67.5	*(2.62)*	659	52.8	*(2.84)*
All NSLP Participants	806	67.8	*(2.58)*	235	82.2	*(4.00)*	389	69.8	*(3.38)*	182	54.1	*(6.39)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	533	68.7	*(3.61)*	154	82.3 u	*(4.54)*	255	70.9	*(4.88)*	124	55.4	*(9.32)*
Non-participants	494	***45.8	*(3.25)*	83	64.0 u	*(7.76)*	168	**45.5	*(7.21)*	243	*31.3	*(5.27)*
Higher-income[1]												
NSLP Participants	273	66.5	*(3.31)*	81	82.2	*(4.66)*	134	68.0	*(5.85)*	58	52.3	*(9.24)*
Non-participants	397	**78.0	*(2.87)*	69	90.4 u	*(4.21)*	122	77.6	*(5.59)*	206	68.3	*(4.07)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-7—Percent of Children Reporting Breakfast

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
Both sexes												
All Children	3,546	78.9	*(1.04)*	779	91.8	*(1.45)*	1,360	76.8	*(1.73)*	1,407	70.5	*(1.71)*
All NSLP Participants	1,741	77.6	*(1.32)*	473	90.2	*(2.30)*	794	77.0	*(2.47)*	474	68.0	*(2.88)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	1,137	74.9	*(2.73)*	321	90.1	*(2.68)*	512	75.6	*(3.59)*	304	62.0	*(6.44)*
Non-participants	950	69.3	*(3.03)*	161	89.5 u	*(3.24)*	315	64.6	*(6.70)*	474	57.7	*(4.57)*
Higher-income[1]												
NSLP Participants	604	80.6	*(2.22)*	152	90.5 u	*(3.08)*	282	79.0	*(3.32)*	170	74.4	*(5.10)*
Non-participants	761	* 86.7	*(1.84)*	129	95.6 u	*(1.91)*	224	85.7	*(3.24)*	408	80.6	*(2.70)*
Boys												
All Children	1,794	81.0	*(1.13)*	386	94.1	*(1.17)*	660	79.2	*(2.46)*	748	72.2	*(1.96)*
All NSLP Participants	935	80.9	*(1.58)*	238	94.1 u	*(1.46)*	405	79.9	*(2.87)*	292	71.1	*(3.22)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	604	76.8	*(3.06)*	167	94.6 u	*(1.87)*	257	76.4	*(4.54)*	180	62.8	*(7.11)*
Non-participants	456	70.8	*(4.28)*	78	91.5 u	*(3.45)*	147	63.4	*(10.71)*	231	61.6	*(4.34)*
Higher-income[1]												
NSLP Participants	331	85.2	*(2.73)*	71	93.4 u	*(2.99)*	148	84.7	*(3.46)*	112	79.0	*(5.12)*
Non-participants	364	88.0	*(2.06)*	60	94.6 u	*(3.39)*	102	91.6 u	*(2.75)*	202	79.0	*(4.09)*
Girls												
All Children	1,752	76.5	*(1.68)*	393	89.5	*(2.65)*	700	74.2	*(2.42)*	659	68.4	*(3.06)*
All NSLP Participants	806	73.0	*(2.17)*	235	86.6	*(4.20)*	389	73.3	*(3.33)*	182	61.6	*(5.23)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	533	72.8	*(3.73)*	154	85.8 u	*(4.60)*	255	74.5	*(4.99)*	124	60.6	*(9.27)*
Non-participants	494	67.9	*(2.63)*	83	86.9 u	*(4.72)*	168	66.2	*(5.63)*	243	54.3	*(6.45)*
Higher-income[1]												
NSLP Participants	273	73.2	*(3.46)*	81	87.9 u	*(5.78)*	134	71.5	*(5.70)*	58	63.0	*(9.97)*
Non-participants	397	*** 85.7	*(2.58)*	69	96.6 u	*(1.69)*	122	80.7	*(5.36)*	206	82.0	*(3.52)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-8—Percent of Children Reporting Lunch

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
Both sexes												
All Children	3,546	91.7	*(0.62)*	779	97.0	*(0.73)*	1,360	94.7	*(0.87)*	1,407	84.2	*(1.36)*
All NSLP Participants	1,741	100.0	*(0.00)*	473	100.0	*(0.00)*	794	100.0	*(0.00)*	474	100.0	*(0.00)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	1,137	100.0	*(0.00)*	321	100.0	*(0.00)*	512	100.0	*(0.00)*	304	100.0	*(0.00)*
Non-participants	950	***77.2	*(2.34)*	161	***83.1 u	*(4.03)*	315	***79.7	*(5.20)*	474	***69.9	*(4.31)*
Higher-income[1]												
NSLP Participants	604	100.0	*(0.00)*	152	100.0	*(0.00)*	282	100.0	*(0.00)*	170	100.0	*(0.00)*
Non-participants	761	***90.9	*(1.28)*	129	98.7 u	*(0.69)*	224	***95.0 u	*(1.26)*	408	***80.2	*(3.37)*
Boys												
All Children	1,794	91.5	*(0.75)*	386	96.6 u	*(1.07)*	660	93.9	*(1.19)*	748	85.0	*(1.92)*
All NSLP Participants	935	100.0	*(0.00)*	238	100.0	*(0.00)*	405	100.0	*(0.00)*	292	100.0	*(0.00)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	604	100.0	*(0.00)*	167	100.0	*(0.00)*	257	100.0	*(0.00)*	180	100.0	*(0.00)*
Non-participants	456	***75.6	*(3.01)*	78	***80.4 u	*(5.41)*	147	***77.9	*(6.42)*	231	***69.4	*(6.06)*
Higher-income[1]												
NSLP Participants	331	100.0	*(0.00)*	71	100.0	*(0.00)*	148	100.0	*(0.00)*	112	100.0	*(0.00)*
Non-participants	364	***88.9	*(1.81)*	60	100.0 u	*(0.00)*	102	** 92.1 u	*(2.41)*	202	***76.7	*(4.58)*
Girls												
All Children	1,752	91.8	*(0.79)*	393	97.4 u	*(0.81)*	700	95.6	*(0.93)*	659	83.3	*(1.65)*
All NSLP Participants	806	100.0	*(0.00)*	235	100.0	*(0.00)*	389	100.0	*(0.00)*	182	100.0	*(0.00)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	533	100.0	*(0.00)*	154	100.0	*(0.00)*	255	100.0	*(0.00)*	124	100.0	*(0.00)*
Non-participants	494	***79.1	*(3.16)*	83	** 86.4 u	*(5.04)*	168	** 82.0	*(5.91)*	243	***70.3	*(4.67)*
Higher-income[1]												
NSLP Participants	273	100.0	*(0.00)*	81	100.0	*(0.00)*	134	100.0	*(0.00)*	58	100.0	*(0.00)*
Non-participants	397	***92.6	*(1.44)*	69	97.4 u	*(1.51)*	122	** 97.6 u	*(0.94)*	206	***83.6	*(3.71)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates that are unreliable due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-9—Percent of Children Reporting Dinner

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error	Sample size	Percent	Std error
Both sexes												
All Children	3,546	91.7	*(0.71)*	779	93.8	*(0.94)*	1,360	93.1	*(1.11)*	1,407	88.7	*(1.13)*
All NSLP Participants	1,741	92.5	*(1.23)*	473	94.0	*(1.36)*	794	92.7	*(1.63)*	474	91.1	*(2.11)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	1,137	91.4	*(1.43)*	321	93.5 u	*(1.65)*	512	91.8	*(2.42)*	304	89.2	*(2.88)*
Non-participants	950	86.8	*(1.46)*	161	87.6	*(2.87)*	315	89.7	*(2.40)*	474	83.1	*(1.90)*
Higher-income[1]												
NSLP Participants	604	94.0	*(1.34)*	152	95.1 u	*(2.18)*	282	94.1	*(1.83)*	170	93.2 u	*(2.70)*
Non-participants	761	93.9	*(1.06)*	129	96.1 u	*(2.07)*	224	96.2 u	*(1.05)*	408	89.8	*(2.15)*
Boys												
All Children	1,794	90.8	*(1.08)*	386	93.6	*(1.31)*	660	91.8	*(1.95)*	748	87.6	*(1.68)*
All NSLP Participants	935	92.2	*(1.38)*	238	93.0 u	*(1.77)*	405	91.2	*(2.98)*	292	92.7 u	*(1.74)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	604	90.3	*(1.89)*	167	91.4 u	*(2.65)*	257	90.3	*(4.35)*	180	89.4 u	*(3.04)*
Non-participants	456	86.7	*(1.96)*	78	90.2 u	*(3.53)*	147	90.5	*(3.36)*	231	80.0	*(3.85)*
Higher-income[1]												
NSLP Participants	331	94.6	*(1.34)*	71	95.9 u	*(2.10)*	148	92.4 u	*(2.86)*	112	95.8 u	*(1.72)*
Non-participants	364	91.7	*(1.68)*	60	95.7 u	*(2.49)*	102	94.9 u	*(1.89)*	202	* 85.1	*(3.86)*
Girls												
All Children	1,752	92.8	*(0.74)*	393	94.0	*(1.59)*	700	94.4	*(1.19)*	659	90.0	*(1.32)*
All NSLP Participants	806	92.4	*(1.47)*	235	95.0 u	*(1.84)*	389	94.6 u	*(1.29)*	182	87.9	*(3.32)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	533	92.4	*(1.35)*	154	95.4 u	*(1.59)*	255	93.5 u	*(1.80)*	124	88.7 u	*(3.39)*
Non-participants	494	86.5	*(2.43)*	83	* 84.5	*(4.90)*	168	88.7	*(3.82)*	243	85.9	*(3.00)*
Higher-income[1]												
NSLP Participants	273	92.4	*(2.59)*	81	94.4 u	*(3.54)*	134	96.2 u	*(1.72)*	58	86.8 u	*(6.20)*
Non-participants	397	95.9	*(1.25)*	69	96.4 u	*(3.52)*	122	97.2 u	*(1.26)*	206	94.2	*(1.72)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-10—Average Number of Snacks Reported

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Mean	Std error	Sample size	Mean	Std error	Sample size	Mean	Std error	Sample size	Mean	Std error
Both sexes												
All Children	3,546	2.1	*(0.05)*	779	2.2 u	*(0.09)*	1,360	2.0	*(0.06)*	1,407	2.1	*(0.07)*
All NSLP Participants	1,741	2.0	*(0.06)*	473	2.1 u	*(0.11)*	794	1.8 u	*(0.06)*	474	2.0 u	*(0.11)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	1,137	1.9 u	*(0.09)*	321	2.1 u	*(0.17)*	512	1.8 u	*(0.09)*	304	1.9 u	*(0.14)*
Non-participants	950	2.2 u	*(0.11)*	161	2.3 u	*(0.12)*	315	* 2.2 u	*(0.17)*	474	2.1 u	*(0.15)*
Higher-income[1]												
NSLP Participants	604	2.0 u	*(0.09)*	152	2.2 u	*(0.13)*	282	1.9 u	*(0.11)*	170	2.1 u	*(0.15)*
Non-participants	761	2.2 u	*(0.10)*	129	2.3 u	*(0.22)*	224	2.2 u	*(0.14)*	408	2.2 u	*(0.13)*
Boys												
All Children	1,794	2.1	*(0.06)*	386	2.2 u	*(0.12)*	660	2.0 u	*(0.07)*	748	2.2 u	*(0.09)*
All NSLP Participants	935	2.0 u	*(0.07)*	238	2.1 u	*(0.10)*	405	1.9 u	*(0.07)*	292	2.0 u	*(0.12)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	604	1.9 u	*(0.08)*	167	2.0 u	*(0.12)*	257	1.9 u	*(0.10)*	180	1.9 u	*(0.16)*
Non-participants	456	2.2 u	*(0.16)*	78	2.2 u	*(0.19)*	147	2.2 u	*(0.29)*	231	2.1 u	*(0.19)*
Higher-income[1]												
NSLP Participants	331	2.1 u	*(0.11)*	71	2.3 u	*(0.19)*	148	2.0 u	*(0.15)*	112	2.1 u	*(0.17)*
Non-participants	364	2.3 u	*(0.14)*	60	2.1 u	*(0.35)*	102	2.2 u	*(0.20)*	202	2.4 u	*(0.17)*
Girls												
All Children	1,752	2.1	*(0.06)*	393	2.2 u	*(0.11)*	700	2.0 u	*(0.09)*	659	2.1 u	*(0.09)*
All NSLP Participants	806	1.9 u	*(0.09)*	235	2.1 u	*(0.16)*	389	1.8 u	*(0.09)*	182	1.9 u	*(0.15)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	533	1.9 u	*(0.13)*	154	2.1 u	*(0.28)*	255	1.7 u	*(0.12)*	124	1.9 u	*(0.18)*
Non-participants	494	2.2 u	*(0.11)*	83	2.3 u	*(0.17)*	168	* 2.2 u	*(0.20)*	243	2.1 u	*(0.15)*
Higher-income[1]												
NSLP Participants	273	1.9 u	*(0.12)*	81	2.1 u	*(0.14)*	134	1.8 u	*(0.16)*	58	1.9 u	*(0.23)*
Non-participants	397	2.2 u	*(0.11)*	69	2.4 u	*(0.19)*	122	2.2 u	*(0.19)*	206	2.1 u	*(0.15)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates that are unreliable due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Source: NHANES 1999-2004. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-11—Mean Energy Density of Foods Consumed in Meals and Snacks[1]

	All ages (5-18)								
	Both sexes			Boys			Girls		
	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error
Breakfast									
All Children	2,496	2.04	*(0.04)*	1,286	2.00	*(0.06)*	1,210	2.09	*(0.05)*
All NSLP Participants	1,282	2.08	*(0.08)*	696	2.08	*(0.09)*	586	2.08	*(0.09)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	830	2.11	*(0.11)*	436	2.08	*(0.14)*	394	2.15	*(0.10)*
Non-participants	594	* 1.82	*(0.07)*	292	1.79	*(0.09)*	302	** 1.85	*(0.10)*
Higher-income[2]									
NSLP Participants	452	2.04	*(0.09)*	260	2.11	*(0.11)*	192	1.95	*(0.12)*
Non-participants	554	2.14	*(0.07)*	271	1.98	*(0.08)*	283	* 2.29	*(0.10)*
Lunch									
All Children	3,150	2.38	*(0.03)*	1,610	2.41	*(0.04)*	1,540	2.34	*(0.04)*
All NSLP Participants	1,735	2.25	*(0.04)*	931	2.30	*(0.06)*	804	2.19	*(0.05)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	1,132	2.23	*(0.05)*	601	2.26	*(0.08)*	531	2.20	*(0.05)*
Non-participants	720	* 2.47	*(0.07)*	350	2.46	*(0.10)*	370	** 2.46	*(0.09)*
Higher-income[2]									
NSLP Participants	603	2.28	*(0.04)*	330	2.35	*(0.05)*	273	2.19	*(0.07)*
Non-participants	646	*** 2.54	*(0.06)*	304	* 2.60	*(0.08)*	342	** 2.49	*(0.08)*
Dinner									
All Children	3,085	1.97	*(0.02)*	1,561	1.97	*(0.03)*	1,524	1.98	*(0.03)*
All NSLP Participants	1,544	1.95	*(0.03)*	830	1.88	*(0.05)*	714	2.02	*(0.04)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	994	1.94	*(0.04)*	529	1.84	*(0.05)*	465	2.06	*(0.07)*
Non-participants	775	2.02	*(0.05)*	375	** 2.13	*(0.07)*	400	** 1.89	*(0.05)*
Higher-income[2]									
NSLP Participants	550	1.98	*(0.06)*	301	1.96	*(0.07)*	249	1.98	*(0.07)*
Non-participants	685	2.00	*(0.04)*	322	2.02	*(0.06)*	363	1.99	*(0.05)*
Snacks									
All Children	2,958	2.97	*(0.05)*	1,460	2.89	*(0.07)*	1,498	3.04	*(0.07)*
All NSLP Participants	1,453	3.04	*(0.06)*	778	2.97	*(0.08)*	675	3.11	*(0.10)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	944	3.03	*(0.09)*	503	3.06	*(0.10)*	441	2.96	*(0.16)*
Non-participants	779	2.98	*(0.10)*	347	2.89	*(0.12)*	432	3.07	*(0.12)*
Higher-income[2]									
NSLP Participants	509	3.04	*(0.09)*	275	2.84	*(0.13)*	234	3.33	*(0.14)*
Non-participants	645	2.88	*(0.09)*	303	2.81	*(0.13)*	342	* 2.94	*(0.12)*

1 Energy density is measured as calories per 100 grams of solid food. Beverages (fluid milk, juice drinks, soft drinks, coffee, tea, and alcoholic beverages) are not included in the analyses.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal because some children did not eat some meals.

Table C-11—Mean Energy Density of Foods Consumed in Meals and Snacks[1] —Continued

	5-8 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error
Breakfast									
All Children	673	1.90	*(0.07)*	346	1.83	*(0.08)*	327	1.97	*(0.10)*
All NSLP Participants	401	1.79	*(0.08)*	211	1.80	*(0.10)*	190	1.77	*(0.10)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	275	1.73	*(0.09)*	147	1.68 u	*(0.12)*	128	1.78 u	*(0.11)*
Non-participants	139	1.85	*(0.11)*	70	1.95 u	*(0.19)*	69	1.73 u	*(0.13)*
Higher-income[2]									
NSLP Participants	126	1.89	*(0.18)*	64	2.01 u	*(0.16)*	62	1.76 u	*(0.25)*
Non-participants	117	2.10	*(0.13)*	55	1.77 u	*(0.13)*	62	* 2.43	*(0.19)*
Lunch									
All Children	738	2.14	*(0.04)*	366	2.20	*(0.06)*	372	2.08	*(0.06)*
All NSLP Participants	471	1.97	*(0.05)*	236	2.03	*(0.09)*	235	1.91	*(0.07)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	320	1.96	*(0.08)*	166	1.97	*(0.12)*	154	1.94	*(0.11)*
Non-participants	132	2.15	*(0.16)*	63	2.23 u	*(0.21)*	69	2.05 u	*(0.17)*
Higher-income[2]									
NSLP Participants	151	** 1.99	*(0.12)*	70	2.14 u	*(0.11)*	81	* 1.86	*(0.17)*
Non-participants	123	** 2.40	*(0.08)*	59	2.40	*(0.11)*	64	* 2.39	*(0.13)*
Dinner									
All Children	697	1.97	*(0.05)*	344	1.93	*(0.06)*	353	2.01	*(0.06)*
All NSLP Participants	425	1.95	*(0.07)*	209	1.85	*(0.09)*	216	2.04	*(0.09)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	281	1.85	*(0.09)*	142	1.74	*(0.09)*	139	1.96	*(0.12)*
Non-participants	133	1.93	*(0.09)*	68	* 1.99 u	*(0.10)*	65	1.84 u	*(0.13)*
Higher-income[2]									
NSLP Participants	144	2.13	*(0.12)*	67	2.06 u	*(0.15)*	77	2.19	*(0.16)*
Non-participants	125	2.02	*(0.07)*	57	2.03	*(0.14)*	68	2.01	*(0.08)*
Snacks									
All Children	671	2.80	*(0.09)*	324	2.60	*(0.17)*	347	3.01	*(0.08)*
All NSLP Participants	408	2.93	*(0.13)*	203	2.81	*(0.24)*	205	3.05	*(0.11)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	277	2.99	*(0.16)*	142	2.91	*(0.26)*	135	3.08	*(0.18)*
Non-participants	137	2.71	*(0.20)*	63	2.44 u	*(0.27)*	74	3.03 u	*(0.25)*
Higher-income[2]									
NSLP Participants	131	2.82	*(0.18)*	61	2.62	*(0.32)*	70	3.00	*(0.18)*
Non-participants	111	2.67	*(0.16)*	49	2.43 u	*(0.24)*	62	2.89 u	*(0.19)*

1 Energy density is measured as calories per 100 grams of solid food. Beverages (fluid milk, juice drinks, soft drinks, coffee, tea, and alcoholic beverages) are not included in the analyses.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates that are unreliable due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal because some children did not eat some meals.

Table C-11—Mean Energy Density of Foods Consumed in Meals and Snacks[1] —Continued

	9-13 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error
Breakfast									
All Children	982	2.06	*(0.06)*	483	2.07	*(0.08)*	499	2.06	*(0.07)*
All NSLP Participants	592	2.13	*(0.08)*	300	2.17	*(0.12)*	292	2.08	*(0.09)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	374	2.22	*(0.11)*	181	2.24	*(0.19)*	193	2.20	*(0.09)*
Non-participants	201	** 1.73	*(0.11)*	95	* 1.64	*(0.14)*	106	1.84	*(0.16)*
Higher-income[2]									
NSLP Participants	218	2.00	*(0.13)*	119	2.08	*(0.16)*	99	1.87	*(0.17)*
Non-participants	170	2.11	*(0.14)*	84	2.05	*(0.19)*	86	2.17	*(0.19)*
Lunch									
All Children	1,248	2.39	*(0.05)*	608	2.43	*(0.07)*	640	2.35	*(0.06)*
All NSLP Participants	791	2.28	*(0.06)*	404	2.34	*(0.08)*	387	2.20	*(0.08)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	509	2.27	*(0.09)*	256	2.38	*(0.15)*	253	2.14	*(0.09)*
Non-participants	245	2.56	*(0.12)*	113	2.65	*(0.19)*	132	2.45	*(0.16)*
Higher-income[2]									
NSLP Participants	282	2.29	*(0.05)*	148	2.29	*(0.06)*	134	2.29	*(0.10)*
Non-participants	200	* 2.58	*(0.12)*	87	2.54	*(0.18)*	113	2.61	*(0.15)*
Dinner									
All Children	1,195	1.95	*(0.04)*	576	1.92	*(0.06)*	619	1.97	*(0.05)*
All NSLP Participants	709	1.88	*(0.04)*	359	1.78	*(0.05)*	350	2.00	*(0.07)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	455	1.88	*(0.06)*	227	1.73	*(0.09)*	228	2.05	*(0.11)*
Non-participants	259	* 2.10	*(0.09)*	122	** 2.30	*(0.16)*	137	1.84	*(0.08)*
Higher-income[2]									
NSLP Participants	254	1.89	*(0.07)*	132	1.85	*(0.10)*	122	1.93	*(0.09)*
Non-participants	202	2.01	*(0.07)*	91	1.99	*(0.11)*	111	2.02	*(0.10)*
Snacks									
All Children	1,138	3.02	*(0.08)*	536	2.97	*(0.12)*	602	3.08	*(0.10)*
All NSLP Participants	663	3.00	*(0.09)*	337	2.89	*(0.14)*	326	3.16	*(0.15)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	424	2.97	*(0.13)*	216	2.93	*(0.18)*	208	3.03	*(0.20)*
Non-participants	260	3.05	*(0.18)*	110	3.19	*(0.22)*	150	2.88	*(0.23)*
Higher-income[2]									
NSLP Participants	239	3.05	*(0.14)*	121	2.82	*(0.19)*	118	3.34	*(0.20)*
Non-participants	191	3.05	*(0.15)*	84	3.06	*(0.22)*	107	3.05	*(0.21)*

1 Energy density is measured as calories per 100 grams of solid food. Beverages (fluid milk, juice drinks, soft drinks, coffee, tea, and alcoholic beverages) are not included in the analyses.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal because some children did not eat some meals.

Table C-11—Mean Energy Density of Foods Consumed in Meals and Snacks[1] —Continued

	14-18 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error	Sample size	Mean energy density	Std. error
Breakfast									
All Children	841	2.14	*(0.09)*	457	2.07	*(0.12)*	384	2.22	*(0.09)*
All NSLP Participants	289	2.25	*(0.18)*	185	2.23	*(0.21)*	104	2.32 u	*(0.17)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	181	2.30	*(0.30)*	108	2.23 u	*(0.35)*	73	2.41 u	*(0.26)*
Non-participants	254	1.88	*(0.12)*	127	1.80	*(0.12)*	127	* 1.97	*(0.19)*
Higher-income[2]									
NSLP Participants	108	2.21	*(0.17)*	77	2.22 u	*(0.20)*	31	2.19 u	*(0.22)*
Non-participants	267	2.20	*(0.10)*	132	2.07	*(0.14)*	135	2.32	*(0.16)*
Lunch									
All Children	1,164	2.55	*(0.05)*	636	2.57	*(0.05)*	528	2.54	*(0.07)*
All NSLP Participants	473	2.45	*(0.04)*	291	2.48	*(0.05)*	182	2.41	*(0.06)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	303	* 2.41	*(0.06)*	179	2.38	*(0.07)*	124	* 2.46	*(0.11)*
Non-participants	343	* 2.64	*(0.10)*	174	2.45	*(0.11)*	169	* 2.80	*(0.14)*
Higher-income[2]									
NSLP Participants	170	2.51	*(0.06)*	112	2.57	*(0.07)*	58	2.35 u	*(0.12)*
Non-participants	323	2.62	*(0.07)*	158	2.81	*(0.09)*	165	2.45	*(0.10)*
Dinner									
All Children	1,193	2.01	*(0.03)*	641	2.03	*(0.04)*	552	1.97	*(0.06)*
All NSLP Participants	410	2.02	*(0.05)*	262	2.01	*(0.06)*	148	2.03	*(0.09)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	258	2.08	*(0.06)*	160	2.04	*(0.07)*	98	2.17	*(0.10)*
Non-participants	383	2.02	*(0.07)*	185	2.06	*(0.08)*	198	1.98	*(0.11)*
Higher-income[2]									
NSLP Participants	152	1.95	*(0.08)*	102	1.99	*(0.11)*	50	1.84 u	*(0.16)*
Non-participants	358	1.98	*(0.05)*	174	2.04	*(0.07)*	184	1.93	*(0.09)*
Snacks									
All Children	1,149	3.04	*(0.07)*	600	3.04	*(0.07)*	549	3.04	*(0.10)*
All NSLP Participants	382	3.16	*(0.13)*	238	3.17	*(0.12)*	144	3.12	*(0.23)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	243	3.12	*(0.21)*	145	3.31	*(0.22)*	98	2.80 u	*(0.29)*
Non-participants	382	3.13	*(0.11)*	174	2.96	*(0.18)*	208	3.30	*(0.13)*
Higher-income[2]									
NSLP Participants	139	3.20	*(0.17)*	93	3.04	*(0.17)*	46	3.59 u	*(0.35)*
Non-participants	343	2.87	*(0.10)*	170	2.87	*(0.13)*	173	2.87	*(0.15)*

1 Energy density is measured as calories per 100 grams of solid food. Beverages (fluid milk, juice drinks, soft drinks, coffee, tea, and alcoholic beverages) are not included in the analyses.

2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates that are unreliable due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal because some children did not eat some meals.

Table C-12—Mean Percent of Calories From Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS), For Meals and Snacks

	All ages (5-18)								
	Both sexes			Boys			Girls		
	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error
Breakfast									
All Children	1,922	36.4	*(0.76)*	995	37.4	*(1.11)*	927	35.0	*(1.07)*
All NSLP Participants	991	38.3	*(1.18)*	543	39.2	*(1.67)*	448	36.7	*(1.22)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	641	38.1	*(1.76)*	343	38.5	*(2.95)*	298	37.3	*(1.77)*
Non-participants	460	37.9	*(1.03)*	223	37.9	*(1.29)*	237	37.8	*(1.53)*
Higher-income[1]									
NSLP Participants	350	38.4	*(1.46)*	200	40.0	*(1.96)*	150	35.6	*(1.30)*
Non-participants	416	** 33.9	*(1.31)*	207	* 34.9	*(1.67)*	209	33.1	*(2.21)*
Lunch									
All Children	2,329	35.8	*(0.56)*	1,196	36.1	*(0.53)*	1,133	35.4	*(0.87)*
All NSLP Participants	1,292	35.7	*(0.74)*	698	36.0	*(0.76)*	594	35.0	*(1.05)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	852	34.8	*(0.80)*	458	34.4	*(1.26)*	394	35.4	*(0.91)*
Non-participants	528	** 38.0	*(0.94)*	251	* 38.0	*(1.18)*	277	37.7	*(1.57)*
Higher-income[1]									
NSLP Participants	440	36.7	*(1.18)*	240	38.2	*(1.31)*	200	34.5	*(1.75)*
Non-participants	463	34.1	*(1.10)*	224	34.2	*(1.47)*	239	33.8	*(1.35)*
Dinner									
All Children	2,245	34.0	*(0.52)*	1,136	33.8	*(0.77)*	1,109	34.2	*(0.89)*
All NSLP Participants	1,136	34.5	*(0.86)*	615	33.4	*(1.14)*	521	35.6	*(1.31)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	739	33.7	*(0.94)*	399	32.2	*(1.35)*	340	35.7	*(1.22)*
Non-participants	554	33.7	*(1.31)*	263	34.1	*(1.83)*	291	33.1	*(1.37)*
Higher-income[1]									
NSLP Participants	397	35.8	*(1.65)*	216	35.2	*(1.71)*	181	35.1	*(2.06)*
Non-participants	489	33.5	*(0.72)*	231	34.6	*(1.10)*	258	32.6	*(1.20)*
Snacks									
All Children	2,287	47.3	*(0.94)*	1,144	46.4	*(1.28)*	1,143	48.3	*(1.17)*
All NSLP Participants	1,129	46.3	*(1.10)*	608	45.2	*(1.34)*	521	47.5	*(1.58)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	739	45.4	*(1.49)*	396	44.0	*(1.51)*	343	47.0	*(2.48)*
Non-participants	594	47.8	*(1.91)*	267	45.9	*(2.62)*	327	48.9	*(2.29)*
Higher-income[1]									
NSLP Participants	390	47.6	*(1.76)*	212	47.2	*(1.83)*	178	48.1	*(2.31)*
Non-participants	493	48.4	*(1.44)*	242	49.4	*(3.15)*	251	47.8	*(1.76)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

Sources: NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted.

Table C-12—Mean Percent of Calories From Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS), For Meals and Snacks —Continued

	5-8 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error
Breakfast									
All Children	514	36.1	*(1.03)*	270	36.7	*(1.60)*	244	35.5	*(1.51)*
All NSLP Participants	306	36.7	*(1.26)*	164	37.1	*(2.30)*	142	36.2	*(1.01)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	209	36.2	*(1.66)*	117	36.2 u	*(2.50)*	92	36.2 u	*(1.80)*
Non-participants	106	38.9	*(1.53)*	53	40.8 u	*(2.24)*	53	36.3 u	*(2.56)*
Higher-income[1]									
NSLP Participants	97	37.4	*(2.20)*	47	39.0 u	*(3.66)*	50	36.2 u	*(2.63)*
Non-participants	90	34.0	*(2.29)*	45	33.7 u	*(3.18)*	45	34.2 u	*(3.77)*
Lunch									
All Children	550	33.9	*(0.86)*	275	34.1	*(0.89)*	275	33.6	*(1.64)*
All NSLP Participants	352	34.3	*(1.02)*	177	34.5	*(1.04)*	175	34.2	*(1.78)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	238	35.2	*(1.10)*	126	34.2	*(1.57)*	112	36.2 u	*(1.31)*
Non-participants	95	38.1	*(2.12)*	43	* 40.3 u	*(2.39)*	52	35.6	*(3.63)*
Higher-income[1]									
NSLP Participants	114	32.9	*(2.80)*	51	35.2 u	*(3.58)*	63	31.3 u	*(4.11)*
Non-participants	93	30.6	*(1.46)*	48	29.6 u	*(1.54)*	45	31.6 u	*(3.07)*
Dinner									
All Children	515	32.8	*(1.37)*	257	31.9	*(1.62)*	258	33.6	*(2.31)*
All NSLP Participants	315	33.9	*(2.31)*	155	30.4	*(1.92)*	160	37.2	*(3.53)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	207	31.3	*(1.77)*	106	29.1	*(2.29)*	101	33.5	*(1.90)*
Non-participants	98	32.2 u	*(1.68)*	49	32.6 u	*(2.48)*	49	31.6 u	*(1.98)*
Higher-income[1]									
NSLP Participants	108	38.2	*(3.62)*	49	32.9 u	*(2.51)*	59	42.3 u	*(5.00)*
Non-participants	92	30.4	*(2.01)*	45	33.5	*(3.11)*	47	** 27.4	*(1.76)*
Snacks									
All Children	513	44.4	*(1.92)*	251	44.3	*(2.85)*	262	44.5	*(1.73)*
All NSLP Participants	308	42.1	*(2.41)*	153	40.2	*(3.95)*	155	44.0	*(2.11)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	208	41.5	*(3.29)*	109	38.1	*(4.66)*	99	45.3	*(3.19)*
Non-participants	105	43.9	*(3.83)*	48	48.0 u	*(5.53)*	57	39.0 u	*(3.52)*
Higher-income[1]									
NSLP Participants	100	43.2	*(2.24)*	44	44.3 u	*(3.37)*	56	42.4	*(2.98)*
Non-participants	89	49.0	*(4.01)*	43	50.7 u	*(5.15)*	46	47.5 u	*(4.66)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Sources:NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted.

Table C-12—Mean Percent of Calories From Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS), For Meals and Snacks —Continued

	9-13 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error
Breakfast									
All Children	755	35.7	*(0.92)*	378	36.2	*(1.15)*	377	35.1	*(1.45)*
All NSLP Participants	458	35.8	*(1.13)*	238	36.4	*(1.46)*	220	35.0	*(1.67)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	293	36.4	*(1.41)*	147	36.6	*(1.76)*	146	36.1	*(2.20)*
Non-participants	160	35.0	*(1.62)*	76	34.4	*(2.18)*	84	35.5	*(2.33)*
Higher-income[1]									
NSLP Participants	165	35.0	*(1.78)*	91	36.1	*(2.15)*	74	33.2	*(2.35)*
Non-participants	120	35.9	*(2.08)*	61	36.5	*(2.64)*	59	35.5	*(3.35)*
Lunch									
All Children	921	34.8	*(0.73)*	451	34.3	*(1.24)*	470	35.2	*(0.91)*
All NSLP Participants	593	34.6	*(0.90)*	305	34.4	*(1.58)*	288	34.7	*(0.98)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	390	33.4	*(1.34)*	198	33.3	*(2.64)*	192	33.6	*(1.22)*
Non-participants	181	35.3	*(1.53)*	83	35.6	*(2.21)*	98	35.2	*(2.21)*
Higher-income[1]									
NSLP Participants	203	36.3	*(1.04)*	107	36.1	*(1.08)*	96	36.5	*(1.66)*
Non-participants	135	34.2	*(1.86)*	59	32.6	*(2.84)*	76	35.2	*(2.11)*
Dinner									
All Children	875	35.0	*(0.59)*	426	35.6	*(1.16)*	449	34.4	*(0.87)*
All NSLP Participants	524	34.6	*(1.04)*	270	34.5	*(1.51)*	254	34.7	*(1.31)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	344	34.2	*(1.18)*	176	33.3	*(1.82)*	168	35.2	*(1.53)*
Non-participants	191	36.0	*(1.85)*	91	38.3 u	*(2.68)*	100	33.7	*(2.92)*
Higher-income[1]									
NSLP Participants	180	35.2	*(1.76)*	94	36.2 u	*(2.53)*	86	33.9 u	*(2.20)*
Non-participants	139	35.6	*(1.67)*	62	37.5	*(2.94)*	77	34.4	*(2.10)*
Snacks									
All Children	869	45.6	*(1.30)*	414	44.2	*(1.64)*	455	47.1	*(1.80)*
All NSLP Participants	522	45.6	*(1.89)*	267	44.3	*(2.37)*	255	47.4	*(2.82)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	340	43.7	*(3.01)*	173	43.0	*(3.52)*	167	44.5	*(4.41)*
Non-participants	189	47.9	*(2.62)*	80	42.0 u	*(4.57)*	109	52.7	*(3.29)*
Higher-income[1]									
NSLP Participants	182	48.5	*(2.51)*	94	46.2	*(2.80)*	88	51.6	*(3.44)*
Non-participants	138	44.0	*(2.71)*	63	46.0	*(5.77)*	75	42.7	*(2.91)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Sources:NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted.

Table C-12—Mean Percent of Calories From Solid Fats, Alcoholic Beverages, and Added Sugars (SoFAAS), For Meals and Snacks —Continued

	14-18 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error
Breakfast									
All Children	653	37.2	*(1.36)*	347	39.4	*(2.12)*	306	34.5	*(1.88)*
All NSLP Participants	227	42.1	*(2.75)*	141	43.6	*(3.76)*	86	38.8 u	*(2.86)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	139	41.4	*(4.61)*	79	42.4 u	*(7.16)*	60	39.6 u	*(4.33)*
Non-participants	194	40.2	*(1.67)*	94	39.1	*(1.74)*	100	41.3	*(2.88)*
Higher-income[1]									
NSLP Participants	88	42.8	*(2.58)*	62	44.7	*(3.34)*	26	37.6 u	*(3.58)*
Non-participants	206	***31.8	*(1.61)*	101	** 34.2	*(2.21)*	105	29.7	*(2.26)*
Lunch									
All Children	858	38.4	*(0.82)*	470	39.6	*(1.08)*	388	37.1	*(1.45)*
All NSLP Participants	347	37.9	*(1.46)*	216	38.9	*(1.66)*	131	35.9	*(1.77)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	224	36.0	*(1.68)*	134	35.7	*(1.92)*	90	36.6 u	*(2.16)*
Non-participants	252	40.5	*(1.75)*	125	38.8	*(2.77)*	127	41.9	*(3.01)*
Higher-income[1]									
NSLP Participants	123	40.3	*(1.85)*	82	42.6 u	*(2.20)*	41	35.0 u	*(3.04)*
Non-participants	235	36.8	*(1.79)*	117	39.7	*(2.25)*	118	34.1	*(2.65)*
Dinner									
All Children	855	34.0	*(1.21)*	453	33.4	*(1.33)*	402	34.6	*(1.68)*
All NSLP Participants	297	34.8	*(1.92)*	190	34.7	*(2.15)*	107	35.1 u	*(2.67)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	188	35.2	*(2.15)*	117	33.6	*(2.53)*	71	38.0 u	*(2.64)*
Non-participants	265	32.6	*(2.36)*	123	31.0	*(2.77)*	142	33.7	*(3.63)*
Higher-income[1]									
NSLP Participants	109	34.4	*(3.14)*	73	35.9 u	*(3.28)*	36	30.5 u	*(4.74)*
Non-participants	258	33.8	*(1.17)*	124	32.4	*(1.76)*	134	35.1	*(1.65)*
Snacks									
All Children	905	51.3	*(1.21)*	479	50.3	*(1.91)*	426	52.6	*(1.42)*
All NSLP Participants	299	50.2	*(1.86)*	188	50.2	*(2.54)*	111	50.4	*(2.27)*
Income-eligible for Free/RP Meals[1]									
NSLP Participants	191	50.2	*(2.03)*	114	49.7	*(2.33)*	77	51.1 u	*(2.65)*
Non-participants	300	50.8	*(2.55)*	139	48.1	*(3.24)*	161	53.0	*(4.01)*
Higher-income[1]									
NSLP Participants	108	50.3	*(2.95)*	74	50.7	*(3.77)*	34	49.1 u	*(4.68)*
Non-participants	266	52.6	*(2.11)*	136	51.8	*(3.01)*	130	53.4	*(2.68)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Sources:NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted.

Table C-13—Mean Nutrient Rich (NR) Score for Meals and Snacks[1]

	All ages (5-18)								
	Both sexes			Boys			Girls		
	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error
Breakfast									
All Children	2,601	150	*(2.81)*	1,329	150	*(3.62)*	1,272	149	*(3.99)*
All NSLP Participants	1,326	146	*(4.84)*	718	143	*(5.14)*	608	150	*(5.70)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	857	142	*(6.27)*	451	138	*(7.41)*	406	146	*(7.15)*
Non-participants	628	152	*(6.35)*	304	157	*(8.46)*	324	146	*(8.14)*
Higher-income[2]									
NSLP Participants	469	151	*(5.62)*	267	148	*(7.31)*	202	155	*(7.29)*
Non-participants	580	151	*(5.66)*	279	158	*(7.15)*	301	145	*(7.06)*
Lunch									
All Children	3,174	86	*(0.75)*	1,625	86	*(0.95)*	1,549	86	*(1.50)*
All NSLP Participants	1,741	90	*(0.99)*	935	90	*(1.47)*	806	90	*(1.55)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	1,137	92	*(1.33)*	604	92	*(2.11)*	533	92	*(1.65)*
Non-participants	727	*** 81	*(1.74)*	354	** 83	*(2.55)*	373	*** 80	*(2.73)*
Higher-income[2]									
NSLP Participants	604	87	*(1.40)*	331	86	*(1.48)*	273	88	*(2.24)*
Non-participants	655	* 82	*(2.18)*	310	** 79	*(2.19)*	345	84	*(3.18)*
Dinner									
All Children	3,099	92	*(1.40)*	1,567	93	*(2.13)*	1,532	92	*(1.61)*
All NSLP Participants	1,551	92	*(2.66)*	833	95	*(3.98)*	718	90	*(1.91)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	997	94	*(3.99)*	530	99	*(7.30)*	467	89	*(2.75)*
Non-participants	779	89	*(1.78)*	377	88	*(2.60)*	402	91	*(2.14)*
Higher-income[2]									
NSLP Participants	554	90	*(2.50)*	303	92	*(3.14)*	251	91	*(3.04)*
Non-participants	687	94	*(2.01)*	323	91	*(2.56)*	364	97	*(2.96)*
Snacks									
All Children	3,135	71	*(1.41)*	1,560	72	*(1.99)*	1,575	69	*(1.60)*
All NSLP Participants	1,529	69	*(1.61)*	821	72	*(2.56)*	708	67	*(2.52)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	994	71	*(2.46)*	529	74	*(4.11)*	465	68	*(3.61)*
Non-participants	833	70	*(2.58)*	379	70	*(2.98)*	454	70	*(4.09)*
Higher-income[2]									
NSLP Participants	535	66	*(2.36)*	292	68	*(3.57)*	243	65	*(3.96)*
Non-participants	687	71	*(2.94)*	326	70	*(4.17)*	361	72	*(3.63)*

1 The NR score is based on the Naturally Nutrient Rich (NNR) score proposed by Drenowski (2005), but does not exclude fortified foods.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal as some children did not eat some meals.

Table C-13—Mean Nutrient Rich (NR) Score for Meals and Snacks[1] —Continued

	5-8 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error
Breakfast									
All Children	689	159	*(5.48)*	355	157	*(5.46)*	334	162	*(8.79)*
All NSLP Participants	413	166	*(7.64)*	218	157	*(8.21)*	195	176	*(12.10)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	283	168	*(7.50)*	153	157	*(8.74)*	130	179 u	*(12.20)*
Non-participants	142	** 144	*(6.38)*	72	143 u	*(6.85)*	70	* 145 u	*(11.50)*
Higher-income[2]									
NSLP Participants	130	164	*(11.58)*	65	156 u	*(14.08)*	65	172 u	*(15.71)*
Non-participants	118	153	*(7.40)*	55	162 u	*(9.95)*	63	143	*(10.61)*
Lunch									
All Children	745	91	*(1.39)*	370	90	*(1.75)*	375	93	*(1.89)*
All NSLP Participants	473	96	*(1.46)*	238	96	*(2.53)*	235	96	*(1.84)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	321	98	*(1.86)*	167	99	*(3.20)*	154	97	*(1.76)*
Non-participants	135	90	*(4.37)*	64	87 u	*(5.75)*	71	94 u	*(5.88)*
Higher-income[2]									
NSLP Participants	152	93	*(3.07)*	71	** 91 u	*(2.54)*	81	95 u	*(5.15)*
Non-participants	125	** 83	*(2.17)*	60	** 79 u	*(2.54)*	65	87	*(4.05)*
Dinner									
All Children	700	94	*(2.22)*	344	96	*(2.99)*	356	92	*(2.68)*
All NSLP Participants	427	92	*(3.20)*	209	100	*(4.77)*	218	85	*(2.83)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	283	94	*(3.88)*	142	103 u	*(6.44)*	141	86 u	*(3.21)*
Non-participants	134	99	*(4.08)*	68	95	*(5.80)*	66	** 104	*(6.16)*
Higher-income[2]									
NSLP Participants	144	89	*(5.51)*	67	95 u	*(7.12)*	77	83	*(6.29)*
Non-participants	125	96	*(3.01)*	57	89 u	*(3.87)*	68	** 104	*(4.18)*
Snacks									
All Children	695	74	*(3.26)*	336	79	*(4.71)*	359	69	*(3.74)*
All NSLP Participants	419	73	*(3.74)*	209	82	*(6.32)*	210	64	*(3.39)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	284	75	*(4.13)*	147	85	*(7.19)*	137	65	*(2.77)*
Non-participants	144	76	*(3.54)*	66	78 u	*(5.46)*	78	74	*(4.12)*
Higher-income[2]									
NSLP Participants	135	69	*(6.77)*	62	76	*(11.31)*	73	61	*(6.15)*
Non-participants	117	70	*(6.85)*	52	65 u	*(8.55)*	65	75 u	*(8.61)*

1 The NR score is based on the Naturally Nutrient Rich (NNR) score proposed by Drenowski (2005), but does not exclude fortified foods.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.
u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal as some children did not eat some meals.

Table C-13—Mean Nutrient Rich (NR) Score for Meals and Snacks[1] —Continued

	9-13 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error
Breakfast									
All Children	1,016	153	*(3.29)*	498	154	*(4.36)*	518	152	*(4.65)*
All NSLP Participants	608	146	*(3.92)*	308	144	*(4.63)*	300	149	*(6.13)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	386	140	*(4.19)*	188	134	*(4.50)*	198	149	*(6.46)*
Non-participants	212	* 175	*(12.70)*	100	** 182	*(18.01)*	112	168	*(14.79)*
Higher-income[2]									
NSLP Participants	222	155	*(7.40)*	120	158	*(9.25)*	102	149	*(12.42)*
Non-participants	177	156	*(9.48)*	86	161	*(11.12)*	91	151	*(12.27)*
Lunch									
All Children	1,253	88	*(1.09)*	611	88	*(1.61)*	642	87	*(1.82)*
All NSLP Participants	794	92	*(1.35)*	405	92	*(1.81)*	389	93	*(2.13)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	512	94	*(1.81)*	257	93	*(2.65)*	255	96	*(2.95)*
Non-participants	246	** 82	*(3.38)*	114	* 83	*(4.16)*	132	* 82	*(5.58)*
Higher-income[2]									
NSLP Participants	282	90	*(1.98)*	148	91	*(1.88)*	134	88	*(2.75)*
Non-participants	201	** 79	*(2.89)*	88	* 80	*(4.97)*	113	* 78	*(3.32)*
Dinner									
All Children	1,204	89	*(2.00)*	582	90	*(3.36)*	622	89	*(1.52)*
All NSLP Participants	714	91	*(3.03)*	362	94	*(5.28)*	352	88	*(2.05)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	456	92	*(4.69)*	228	95	*(8.50)*	228	88	*(3.16)*
Non-participants	262	82	*(2.76)*	124	79	*(4.33)*	138	87	*(3.13)*
Higher-income[2]									
NSLP Participants	258	91	*(2.74)*	134	92	*(3.72)*	124	89	*(4.11)*
Non-participants	203	90	*(2.89)*	92	90	*(4.81)*	111	89	*(3.01)*
Snacks									
All Children	1,198	70	*(2.52)*	567	70	*(3.91)*	631	71	*(2.73)*
All NSLP Participants	700	70	*(3.98)*	356	71	*(6.02)*	344	69	*(3.40)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	449	72	*(6.59)*	227	75	*(10.15)*	222	69	*(4.38)*
Non-participants	271	68	*(5.22)*	116	66	*(4.21)*	155	71	*(9.05)*
Higher-income[2]									
NSLP Participants	251	67	*(3.19)*	129	67	*(3.27)*	122	67	*(6.05)*
Non-participants	203	73	*(4.17)*	90	67	*(5.85)*	113	77	*(5.75)*

1 The NR score is based on the Naturally Nutrient Rich (NNR) score proposed by Drenowski (2005), but does not exclude fortified foods.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.
u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal as some children did not eat some meals.

Table C-13—Mean Nutrient Rich (NR) Score for Meals and Snacks[1] —Continued

	14-18 years old								
	Both sexes			Boys			Girls		
	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error	Sample size	Mean NR score	Std. error
Breakfast									
All Children	896	139	*(4.67)*	476	142	*(7.16)*	420	135	*(6.74)*
All NSLP Participants	305	130	*(9.02)*	192	130	*(11.70)*	113	129 u	*(8.96)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	188	123	*(14.93)*	110	128 u	*(20.04)*	78	116 u	*(13.01)*
Non-participants	274	134	*(6.61)*	132	142	*(8.85)*	142	125	*(9.88)*
Higher-income[2]									
NSLP Participants	117	136	*(7.57)*	82	133	*(10.24)*	35	147 u	*(10.97)*
Non-participants	285	146	*(7.63)*	138	153	*(10.81)*	147	141	*(11.70)*
Lunch									
All Children	1,176	80	*(1.83)*	644	80	*(1.51)*	532	80	*(3.78)*
All NSLP Participants	474	83	*(1.77)*	292	83	*(2.17)*	182	83	*(2.18)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	304	86	*(2.11)*	180	87	*(2.93)*	124	83	*(2.39)*
Non-participants	346	** 72	*(2.92)*	176	79	*(3.45)*	170	*** 66	*(4.21)*
Higher-income[2]									
NSLP Participants	170	79	*(2.95)*	112	78	*(3.16)*	58	81 u	*(3.94)*
Non-participants	329	83	*(5.05)*	162	77	*(3.35)*	167	88	*(8.43)*
Dinner									
All Children	1,195	93	*(2.25)*	641	93	*(3.62)*	554	94	*(3.81)*
All NSLP Participants	410	94	*(5.03)*	262	93	*(7.75)*	148	95	*(4.82)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	258	96	*(10.35)*	160	100 u	*(17.07)*	98	91 u	*(6.44)*
Non-participants	383	89	*(2.80)*	185	92	*(3.98)*	198	86	*(4.20)*
Higher-income[2]									
NSLP Participants	152	91	*(3.67)*	102	88	*(3.77)*	50	100 u	*(6.63)*
Non-participants	359	97	*(3.60)*	174	93	*(3.90)*	185	100	*(6.19)*
Snacks									
All Children	1,242	68	*(2.49)*	657	70	*(3.36)*	585	66	*(3.06)*
All NSLP Participants	410	65	*(4.29)*	256	64	*(5.18)*	154	67	*(5.70)*
Income-eligible for Free/RP Meals[2]									
NSLP Participants	261	66	*(6.35)*	155	65	*(8.35)*	106	68 u	*(8.40)*
Non-participants	418	67	*(3.06)*	197	68	*(4.07)*	221	67	*(5.56)*
Higher-income[2]									
NSLP Participants	149	64	*(4.07)*	101	64	*(4.70)*	48	65 u	*(8.22)*
Non-participants	367	71	*(4.76)*	184	77	*(6.27)*	183	65	*(5.77)*

1 The NR score is based on the Naturally Nutrient Rich (NNR) score proposed by Drenowski (2005), but does not exclude fortified foods.
2 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.
u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for 'All ages (5-18)' are age adjusted. Sample size varies by meal as some children did not eat some meals.

Table C-14—Mean Nutrient Rich (NR) Score for Daily Intakes

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error	Sample size	Mean	Standard Error
						Both sexes						
All Children	3,544	93	*(0.67)*	778	99	*(1.36)*	1,360	92	*(0.84)*	1,406	88	*(1.14)*
All NSLP Participants	1,741	93	*(0.87)*	473	100	*(1.83)*	794	94	*(1.12)*	474	88	*(1.76)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	1,137	94	*(1.10)*	321	102	*(1.80)*	512	94	*(1.29)*	304	89	*(2.40)*
Non-participants	948	*** 89	*(1.15)*	160	* 97	*(1.92)*	315	* 88	*(2.15)*	473	84	*(2.08)*
Higher-income[1]												
NSLP Participants	604	91	*(1.24)*	152	95	*(2.87)*	282	93	*(1.63)*	170	87	*(2.08)*
Non-participants	761	93	*(1.58)*	129	97	*(2.59)*	224	92	*(2.60)*	408	91	*(2.14)*
						Boys						
All Children	1,792	94	*(0.87)*	385	100	*(1.79)*	660	93	*(1.34)*	747	89	*(1.20)*
All NSLP Participants	935	95	*(1.28)*	238	104	*(2.82)*	405	94	*(1.88)*	292	88	*(2.00)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	604	97	*(1.61)*	167	107	*(2.89)*	257	94	*(2.45)*	180	91	*(2.50)*
Non-participants	454	** 91	*(1.54)*	77	** 97	*(2.52)*	147	87	*(3.19)*	230	89	*(2.12)*
Higher-income[1]												
NSLP Participants	331	92	*(1.92)*	71	97	*(4.73)*	148	95	*(2.12)*	112	86	*(2.65)*
Non-participants	364	93	*(2.05)*	60	94 u	*(2.98)*	102	95	*(3.90)*	202	91	*(1.90)*
						Girls						
All Children	1,752	91	*(0.93)*	393	97	*(1.70)*	700	91	*(1.05)*	659	86	*(1.95)*
All NSLP Participants	806	91	*(1.09)*	235	96	*(2.17)*	389	93	*(1.51)*	182	87	*(1.93)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	533	92	*(1.46)*	154	98	*(2.21)*	255	94	*(1.92)*	124	85	*(2.97)*
Non-participants	494	88	*(1.80)*	83	97	*(3.02)*	168	89	*(2.64)*	243	80	*(3.36)*
Higher-income[1]												
NSLP Participants	273	91	*(1.48)*	81	92	*(2.90)*	134	90	*(2.32)*	58	90 u	*(2.83)*
Non-participants	397	93	*(1.95)*	69	99	*(3.68)*	122	90	*(2.61)*	206	91	*(3.54)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Source: NHANES 1999-2004 dietary recalls. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods

	All ages (5-18)					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	3,174	1,741	1,137	727	604	655
Grains	20.6	20.9	23.0	18.4	18.6	19.0
Whole grains	2.7	0.6 u	0.5 u	3.6 u	0.8 u	** 5.9
Not whole grain	53.9	54.5	56.7	* 44.9	52.0	59.3
Bread	4.4	5.8	5.9	3.4	5.6	2.2
Rolls	4.7	8.4	8.7	***0.8 u	8.2	***0.0
Crackers	3.2	1.3	1.6	1.5	1.0 u	** 7.0
Vegetables	35.8	48.0	47.8	***28.5	48.5	***18.7
Raw vegetables	11.3	13.2	12.4	8.5	14.5	9.0
Raw carrots	3.8	3.2	3.4	3.6 u	3.0	5.0
Salads (w/greens)	5.7	8.5	7.8	* 2.7	9.7	***2.3
Cooked vegetables, excluding potatoes	10.0	13.6	15.5	* 10.0	10.8	***3.0
Cooked green beans	2.6	4.4	6.3	* 0.7 u	1.4	** 0.1 u
Cooked potatoes	19.7	28.4	26.4	***13.6	31.6	***8.6
Cooked potatoes-not fried	3.6	5.6	5.1	* 2.4	6.3	***0.5 u
Cooked potatoes-fried	16.2	23.0	21.6	* 11.2	25.4	***8.2
Fruit and 100% fruit juice	30.2	37.1	38.3	***15.2	35.5	** 24.9
Fresh fruit	14.6	15.6	14.9	***6.4	17.0	16.9
Fresh apple	6.8	6.2	5.9	***1.9 u	6.8	10.9
Canned or frozen fruit, total	8.9	13.0	12.7	***2.4 u	13.5	***4.4
Canned or frozen in syrup	5.1	7.5	8.5	***1.7 u	6.2	** 2.2
Canned or frozen, no syrup	3.8	5.5	4.2 u	0.8 u	7.3	** 2.2 u
Other canned/frozen	2.7	4.1	3.0	* 0.7 u	5.4	** 1.0 u
Fruit juice	9.7	12.5	14.6	***6.0	9.5	6.4
Non-citrus juice	6.1	7.8	10.0	***3.2	4.4	4.3
Citrus juice	3.6	4.8	4.7	2.8	5.1	2.1
Milk & milk products	48.7	68.7	71.5	***24.3	64.6	***24.9
Cow's milk, total	43.0	65.9	69.6	***17.8	60.8	***13.8
Unflavored white milk, total	16.6	22.3	25.6	***13.6	17.9	***8.0
Unflavored whole milk,	5.3	6.9	9.1	7.6	3.5	1.4 u
Unflavored non-whole, total	8.0	10.2	10.3	* 4.9	10.3	* 5.5
2% milk, unflavored	5.7	7.9	8.3	4.1	7.5	* 2.8
1% milk, unflavored	5.7	7.9	8.3	4.1	7.5	* 2.8
Fat not specified, unflavored	3.3	5.2	6.2	** 1.0 u	4.1	* 1.1 u
Flavored milk, total	26.6	43.8	44.2	***4.5	43.1	***6.1
Flavored whole milk	3.8	6.0	4.9	* 1.3	7.6	** 1.1 u
Flavored non-whole milk, total	8.0	13.5	15.2	***0.4	10.6	** 2.4
2% milk, flavored	5.1	8.8	10.5	***0.1 u	6.2	** 0.8 u
Fat not specified, flavored	14.8	24.4	24.0	***2.8 u	24.9	***2.6
Yogurt	2.1	0.3 u	0.0 u	0.7 u	0.7 u	***6.8
Cheese	6.3	5.7	4.6	6.2	6.9	7.2
Meat and meat alternates	17.2	18.6	19.2	19.6	17.8	12.3
Chicken	8.6	9.9	9.5	9.4	10.3	* 5.4

See footnotes at end of table.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods — Continued

	All ages (5-18)					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Mixed dishes	71.8	78.1	78.0	***59.0	78.3	* 70.4
Hamburgers/cheeseburgers	9.9	13.7	15.1	* 6.1	11.4	** 5.1
Other sandwiches	32.7	26.6	25.3	28.8	28.2	***48.2
Luncheon meat	12.9	7.9	8.0	11.4	7.8	***24.6
Chicken,turkey	5.1	6.0	6.0	6.6 u	6.0	3.5 u
Peanut butter	6.1	2.6	2.7 u	4.4	2.3	***14.3
Pizza (no meat)	5.0	6.4	7.1	* 2.9	5.6	3.7
Pizza w/ meat	10.8	16.0	15.9	***5.8	16.2	***4.9
Mexican entrees	5.9	7.5	6.3	* 3.1	8.9	5.0
Pasta dishes, Italian style	3.1	4.5	4.0	2.1 u	5.7 u	* 0.4 u
Sweets and desserts	25.6	24.9	20.4	21.1	30.8	29.0
Candy	6.2	4.0	2.4	* 5.2	5.8	** 11.4
Ice cream	3.3	3.9	2.5	2.1	5.8	* 2.8
Cookies	10.1	9.9	7.7	8.5	12.9	11.5
Beverages excluding milk and 100% fruit juice	35.1	23.7	23.2	***49.8	23.9	***49.8
Soft drink, regular	16.9	11.0	11.2	***30.6	10.3	***19.1
Noncarbonated, sweetened beverage	14.8	9.9	9.1	***17.6	10.8	***24.6
Salty snacks	17.8	11.6	13.0	* 20.9	9.9	***27.9
Corn-based salty snacks	9.8	7.0	7.6	11.3	6.5	***13.8
Popcorn	2.6	1.3 u	1.2 u	1.2 u	1.3 u	** 6.1
Potato chips	5.8	3.2	3.6	8.6	2.7	** 9.3
Added fats and oils	7.7	8.8	8.8	** 3.7	8.7	7.2

[1] Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods —Continued

	5-8 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	745	473	321	135	152	125
Grains	22.9	20.8	19.4	18.1 u	23.3	27.7
Whole grains	3.4 u	0.6 u	0.9 u	0.6 u	0.0	* 11.0 u
Not whole grain	57.4	49.4	49.8	47.8	48.7	** 75.1
Bread	4.9	6.0 u	5.2 u	4.8 u	7.4 u	3.0 u
Rolls	3.9 u	6.6 u	5.9 u	0.2 u	7.8 u	*** 0.0
Corn tortillas	1.8	1.7 u	2.4 u	5.1	0.4 u	0.7 u
Crackers	6.2	2.4 u	1.9 u	0.9 u	3.4 u	* 13.4 u
Breakfast/granola bar	2.6 u	0.3 u	0.0	1.7 u	0.8 u	8.2 u
Vegetables	35.1	46.9	48.4	** 23.4	44.2	* 18.1
Raw vegetables	11.8	15.0	13.3	6.1 u	18.0	8.3 u
Raw carrots	4.4 u	5.3 u	5.8 u	1.8 u	4.4 u	4.0 u
Salads (w/greens)	5.0	7.3	5.4 u	1.2 u	10.7 u	2.0 u
Cooked vegetables, excluding potatoes	15.9	22.3	25.0	15.3 u	17.4	** 4.0 u
Cooked green beans	4.9 u	8.1 u	10.7 u	* 1.3 u	3.4 u	* 0.1 u
Cooked corn	6.0	8.2	8.1	3.1 u	8.3 u	3.2 u
Cooked mixed	1.3	1.2 u	1.8 u	5.4 u	0.0	0.0
Cooked potatoes	14.9	20.5	19.2	** 7.4 u	22.8	* 7.5 u
Cooked potatoes-not fried	5.5	8.5	7.9	4.3 u	9.6 u	** 0.0
Cooked potatoes-fried	9.4	12.0	11.3	* 3.5 u	13.2 u	7.5 u
Fruit and 100% fruit juice	44.5	52.3	50.9	*** 25.6	54.7	* 37.4
Fresh fruit	22.5	24.0	21.0	** 9.0 u	29.2	26.6
Fresh orange	2.9 u	4.1 u	5.0 u	1.2 u	2.5 u	1.3 u
Fresh apple	10.5	8.4	6.8	2.8 u	11.3 u	18.6
Fresh banana	2.8	3.8	2.6 u	2.1 u	5.9 u	1.3 u
Fresh peach/nectarine	2.4 u	3.9 u	1.7 u	1.2 u	7.8 u	0.0
Canned or frozen fruit, total	15.1	22.0	20.5	*** 5.2 u	24.6	*** 6.1 u
Canned or frozen in syrup	9.1	12.6	14.0	** 5.0 u	10.0	4.4 u
Canned or frozen, no syrup	6.0 u	9.4 u	6.5 u	0.2 u	14.5	** 1.7 u
Applesauce,canned/frozen apples	3.5	4.6	3.8 u	** 0.0 u	6.0 u	3.0 u
Canned/frozen peaches	3.3	4.4	4.0 u	4.2 u	5.1 u	0.8 u
Canned/frozen pineapple	3.6 u	6.1 u	6.2 u	0.0	6.0 u	* 0.0
Other canned/frozen	5.0	7.2	6.5 u	1.1 u	8.4 u	2.3 u
Fruit juice	13.3	14.6	16.2	10.0	11.8	10.8
Non-citrus juice	8.7	8.2	11.2	7.8	2.8 u	8.8 u
Citrus juice	4.6	6.4	5.0	2.2 u	9.0 u	* 2.0 u
Milk & milk products	64.8	82.7	87.2	*** 33.5	74.6	*** 42.1
Cow's milk, total	57.3	80.3	85.6	*** 25.8	70.8	*** 24.9
Unflavored white milk, total	23.0	29.4	33.6	* 18.2	21.9	12.3 u
Unflavored whole milk,	9.6	12.2	17.1	15.5 u	3.5 u	2.2 u
Unflavored non-whole, total	9.2	10.7	10.4 u	2.4 u	11.2 u	8.4 u
2% milk, unflavored	6.5	9.0 u	8.4 u	2.0 u	10.0 u	3.5 u
Fat not specified, unflavored	4.3	6.4	6.0 u	** 0.4 u	7.2 u	1.6 u
Flavored milk, total	34.5	51.2	52.4	*** 8.4 u	48.9	*** 12.6 u
Flavored whole milk	5.2	7.8	6.6 u	3.2 u	10.1 u	* 1.1 u

See footnotes at end of table.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods —Continued

	5-8 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Flavored non-whole milk, total	13.8	20.6	23.8	***1.1 u	14.9 u	6.2 u
2% milk, flavored	8.1	13.2	15.9	***0.2 u	8.3 u	1.5 u
1% milk, flavored	3.6 u	5.2 u	5.0 u	0.4 u	5.5 u	2.1 u
Fat not specified, flavored	15.4	22.7	22.0	***4.1 u	23.9	***5.4 u
Yogurt	3.2 u	0.3 u	0.1 u	0.6 u	0.8 u	* 10.7 u
Cheese	9.9	6.7	6.6	7.1 u	6.8 u	16.8
Meat and meat alternates	23.9	26.5	27.0	28.0	25.6	17.5
Chicken	11.6	12.2	12.5	9.3 u	11.6	11.3
Mixed dishes	73.7	75.8	75.0	63.0	77.2	73.6
Hamburgers/cheeseburgers	7.0	9.2	12.3 u	***3.4 u	3.8 u	4.7 u
Other sandwiches	38.1	27.9	27.8	29.0	28.0	***60.5
Hot dogs	4.6	6.2	4.8 u	1.9 u	8.7	** 0.0
Luncheon meat	13.1	6.5	6.1 u	11.3 u	7.2 u	***27.6
Cheese (no meat)	4.0	4.6 u	6.8	5.6 u	0.6 u	0.4 u
Peanut butter	11.2	4.6 u	6.1 u	7.0 u	1.9 u	***27.6
Pizza (no meat)	7.2	8.2	7.3	7.9 u	9.6	5.3 u
Pizza w/ meat	9.0	14.8	13.6	***1.9 u	16.9	***0.7 u
Mexican entrees	4.4	6.4	6.3 u	* 2.4 u	6.6 u	1.6 u
Pasta dishes, Italian style	3.3 u	5.4 u	2.8 u	0.8 u	10.2 u	0.2 u
Grain soups	3.4	4.1 u	5.7 u	4.8 u	1.2 u	1.7 u
Vegetables mixtures (inc soup)	1.4 u	1.2 u	1.7 u	6.0 u	0.3 u	0.1 u
Sweets and desserts	27.2	26.9	22.4	16.6 u	34.8	30.0
Syrups/sweet toppings	2.0	2.5	0.9 u	0.0	5.3	2.0 u
Candy	3.9	1.4 u	1.7 u	4.0 u	0.7 u	** 9.6 u
Ice cream	4.5	4.9	3.1 u	* 0.2 u	8.2 u	4.2 u
Cake/cupcakes	3.7	3.5	1.4 u	0.9 u	7.2 u	2.9 u
Cookies	10.8	10.6	8.7	10.0 u	14.1 u	12.2
Beverages excluding milk and 100% fruit juice	25.0	11.7	13.2	***50.3	9.0	***41.0
Soft drink, regular	6.9	3.0 u	4.4 u	** 21.0 u	0.3 u	***10.0
Noncarbonated, sweetened beverage	16.3	8.4	8.8	***31.0	7.7 u	** 24.8
Salty snacks	14.7	10.5	11.6	14.4 u	8.6	***22.6
Corn-based salty snacks	7.8	6.2	5.7 u	7.4 u	7.0 u	10.2
Popcorn	3.4 u	2.3 u	3.5 u	1.8 u	0.2 u	* 6.7 u
Potato chips	4.0	2.5 u	2.6 u	5.2 u	2.4 u	6.6 u
Added fats and oils	5.4	6.0	6.2 u	2.8 u	5.6 u	5.8 u

[1] Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods —Continued

	9-13 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	1,253	794	512	246	282	201
Grains	21.0	24.9	27.0	20.2	21.8	* 11.4
Whole grains	3.1	0.9 u	0.1 u	7.9 u	2.1 u	4.9 u
Not whole grain	53.6	54.1	54.6	50.0	53.4	55.0
Bread	5.4	7.8	8.4	3.5 u	6.8 u	* 0.8 u
Rolls	6.7	10.9	10.8	*** 0.8 u	11.2	*** 0.0
Crackers	1.9	0.8 u	1.2 u	1.8 u	0.1 u	* 5.0 u
Breakfast/granola bar	2.2 u	0.7 u	0.6 u	7.9 u	0.9 u	2.7 u
Vegetables	34.4	43.9	39.8	** 24.3	50.0	*** 16.9
Raw vegetables	12.2	13.5	12.4	11.1 u	15.0	9.0
Raw carrots	5.6	4.4	4.2 u	8.3 u	4.9	7.1 u
Salads (w/greens)	5.1	7.4	7.0	** 1.7 u	8.0	*** 1.0 u
Cooked vegetables, excluding potatoes	8.8	12.1	14.2	6.6 u	9.1	** 2.0 u
Cooked green beans	2.8 u	4.5 u	6.8 u	0.2 u	1.0 u	0.2 u
Cooked potatoes	17.6	24.5	19.2	** 7.3 u	32.2	*** 7.2
Cooked potatoes-fried	15.5	21.1	16.4	* 7.3 u	28.1	*** 7.1
Fruit and 100% fruit juice	31.2	39.1	42.4	*** 12.7	34.2	* 23.6
Fresh fruit	15.7	17.5	17.4	* 7.8	17.7	16.3
Fresh apple	7.8	7.8	8.4	** 1.6 u	6.9 u	12.0
Canned or frozen fruit, total	8.2	11.8	12.7	*** 0.3 u	10.3	4.2 u
Canned or frozen in syrup	5.2	8.0	7.6	*** 0.0	8.6	* 1.5 u
Canned or frozen, no syrup	3.1 u	3.9 u	5.4 u	0.3 u	1.7 u	2.7 u
Fruit juice	10.5	13.8	17.1	*** 4.8	8.8	5.8 u
Non-citrus juice	7.6	10.4	13.3	*** 2.0 u	6.1	4.3 u
Milk & milk products	55.5	75.8	76.5	*** 26.9	74.8	*** 22.5
Cow's milk, total	49.7	72.8	73.5	*** 20.3	71.7	*** 10.2
Unflavored white milk, total	18.4	23.1	23.0	16.0	23.2	** 8.2
Unflavored whole milk,	55.5	75.8	76.5	*** 26.9	74.8	*** 22.5
Unflavored non-whole, total	10.4	12.2	10.8	9.6	14.3	6.2 u
2% milk, unflavored	7.2	7.9	8.0 u	8.1 u	7.7	4.3 u
1% milk, unflavored	2.3	3.0	1.6 u	0.8 u	5.3	1.4 u
Fat not specified, unflavored	4.0	5.7	6.1 u	** 0.8 u	5.1 u	1.8 u
Flavored milk, total	31.4	49.9	50.6	*** 4.3 u	48.9	*** 2.0 u
Flavored whole milk	3.8	6.2	4.8 u	* 0.5 u	8.2	*** 0.0
Flavored non-whole milk, total	6.7	10.7	12.7	*** 0.1 u	7.8 u	* 0.9 u
2% milk, flavored	4.8	7.8	9.4	** 0.1 u	5.5 u	* 0.3 u
Fat not specified, flavored	21.0	33.0	33.0	*** 3.8 u	32.9	*** 1.1 u
Yogurt	2.3 u	0.5 u	0.0	0.4 u	1.2 u	8.2 u
Cheese	6.1	6.9	6.1	6.8	8.2	3.9 u
Meat and meat alternates	13.9	16.6	16.7	13.7	16.4	7.8 u
Chicken	6.4	8.3	7.9	6.7	9.0	** 1.3 u
Mixed dishes	73.0	75.6	75.5	* 59.1	75.8	75.2
Hamburgers/cheeseburgers	10.0	13.7	14.9	5.8	12.1	*** 2.0 u

See footnotes at end of table.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods —Continued

	9-13 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Other sandwiches	31.8	23.6	21.4	* 37.1	26.8	*** 50.2
Hot dogs	3.3	4.5	3.4 u	3.2 u	6.1	** 0.2 u
Luncheon meat	13.0	6.9	7.1	14.2	6.7 u	*** 27.8
Chicken,turkey	4.0	3.8 u	3.3 u	8.6 u	4.5 u	2.0 u
Peanut butter	5.9	2.9 u	2.6 u	6.0 u	3.2 u	* 13.8
Pizza (no meat)	5.0	7.0	8.2	** 0.9 u	5.1	2.2 u
Pizza w/ meat	9.9	12.5	12.6	** 4.6 u	12.4	6.7
Mexican entrees	6.9	7.4	6.3	* 1.6 u	9.0	9.3
Pasta dishes, Italian style	4.1	6.4	6.1	* 1.2 u	6.9 u	* 0.1 u
Grain soups	2.0	0.4 u	0.7 u	* 5.7 u	0.0	3.7 u
Sweets and desserts	26.6	25.7	23.7	26.7	28.5	29.4
Candy	6.4	4.3	3.1	5.2 u	6.0	12.8
Cookies	10.8	11.1	9.7	9.7 u	13.2	10.8
Beverages excluding milk and 100% fruit juice	31.5	18.3	18.4	*** 49.0	18.2	*** 53.5
Tea	3.5	2.8 u	2.1 u	2.6 u	3.7 u	6.0 u
Soft drink, regular	13.8	8.0	9.5	** 32.7	5.6	** 16.1
Noncarbonated, sweetened beverage	14.5	7.4	6.5	13.2	8.6	*** 32.6
Salty snacks	20.1	12.7	12.5	* 30.1	13.1	*** 32.8
Corn-based salty snacks	10.8	8.2	7.4	13.0	9.3	* 16.4
Popcorn	3.3	1.5 u	0.6 u	1.4 u	2.8 u	* 9.1
Potato chips	7.2	3.4	4.4	16.2 u	2.0 u	** 10.9
Added fats and oils	7.7	10.3	10.9	* 2.2 u	9.6	4.7 u

1 Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods —Continued

	14-18 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	1,176	474	304	346	170	329
Grains	18.4	16.9	21.7	16.6	11.6 u	*20.0
Not whole grain	51.4	59.1	64.6	***37.3	53.3	50.9
Rolls	3.3	7.1 u	8.8 u	1.5 u	5.3 u	0.0
Rice	3.3	3.8	5.1	4.5 u	2.4 u	2.1 u
Vegetables	37.8	53.2	55.7	*37.0	50.5	***21.1
Raw vegetables	9.9	11.5	11.8	7.7 u	11.2 u	9.7
Salads (w/greens)	6.8	10.6	10.6	5.0	10.6 u	*3.9 u
Cooked vegetables, excluding potatoes	6.4	8.2	9.2 u	9.1	7.2 u	3.1
Cooked tomatoes	3.8	4.5	4.9 u	6.1	4.1 u	2.1 u
Cooked potatoes	25.7	38.9	39.7	25.0	38.2	***11.1
Cooked potatoes-not fried	3.2	5.0	4.4 u	3.5 u	5.6 u	1.2 u
Cooked potatoes-fried	22.5	34.0	35.2	21.6	32.6	***9.8
Fruit and 100% fruit juice	17.4	22.7	24.0	***9.5	21.4	16.0
Fresh fruit	7.2	6.8	7.3 u	2.9 u	6.4 u	9.8
Canned or frozen fruit, total	4.6	7.1	6.3 u	**2.3 u	7.9 u	3.3 u
Canned or frozen in syrup	1.8	3.0 u	5.1 u	*0.7 u	0.8 u	1.3 u
Canned or frozen, no syrup	2.8 u	4.0 u	1.2 u	1.6 u	7.2 u	2.0 u
Fruit juice	6.1	9.6	10.8	*4.0	8.3 u	3.4 u
Non-citrus juice	2.4	4.8	5.6 u	*0.8 u	3.9 u	*0.6 u
Citrus juice	3.6	4.8	5.3	3.2 u	4.4 u	2.7 u
Milk & milk products	28.6	49.9	53.6	***14.1	46.1	***13.4
Cow's milk, total	24.6	47.3	52.6	***8.8	41.5	***8.5
Unflavored white milk, total	9.6	15.7	21.7	*7.3	9.2 u	4.5 u
Unflavored whole milk,	3.2	4.5	5.6 u	3.4 u	3.2 u	2.0 u
Unflavored non-whole, total	4.5	7.6 u	9.6 u	**2.1 u	5.4 u	2.5 u
2% milk, unflavored	3.2	4.5	5.6 u	3.4 u	3.2 u	2.0 u
Fat not specified, unflavored	1.9 u	3.6 u	6.4 u	1.8 u	0.5 u	0.0 u
Flavored milk, total	15.4	31.6	30.9	***1.7 u	32.3	***5.0
Flavored non-whole milk, total	4.8	10.5	10.9 u	***0.1 u	10.1 u	*1.0 u
2% milk, flavored	3.0	6.4 u	7.3 u	**0.0	5.3 u	0.8 u
Fat not specified, flavored	7.9	16.8	16.4	***0.9 u	17.3	***1.9 u
Cheese	3.5	3.5 u	1.6 u	*4.8	5.6 u	2.7 u
Meat and meat alternates	15.2	14.3	15.5	18.8	13.1	12.6
Chicken	8.6	9.6	8.8	12.4	10.6	4.8
Mixed dishes	68.9	82.5	83.1	***55.6	81.7	***62.8
Hamburgers/cheeseburgers	12.2	17.3	17.7	8.6	16.9	8.7
Other sandwiches	29.3	28.6	27.4	20.0	29.9	36.3
Luncheon meat	12.7	9.9	10.5	8.5	9.4 u	*18.9
Chicken,turkey	8.4	11.1	11.8	7.3 u	10.4	6.4 u
Pizza (no meat)	3.4	4.4	5.7 u	*0.8 u	3.0 u	3.9 u
Pizza w/ meat	13.0	20.5	21.3	10.3	19.6	**6.4
Mexican entrees	5.9	8.4	6.4 u	5.2	10.6 u	*3.4 u

See footnotes at end of table.

Table C-15—Food Choices at Lunch: Percent of Children Consuming Different Types of Foods —Continued

	14-18 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sweets and desserts	23.4	22.5	15.4	19.1	30.0	27.8
Candy	8.0	5.9	2.4 u	* 6.1	9.6	11.4
Ice cream	2.4	4.1	1.2 u	1.0 u	7.2 u	* 1.3 u
Cookies	8.8	8.0	4.8 u	6.0 u	11.5 u	11.6
Beverages excluding milk and 100% fruit juice	47.0	38.9	36.2	* 50.2	41.7	53.3
Tea	4.8	6.3 u	8.0	* 2.2 u	4.4 u	4.9
Soft drink, regular	28.0	20.7	18.2	** 36.2	23.3	29.6
Noncarbonated, sweetened beverage	13.9	13.7	12.1	11.3	15.4	16.1
Salty snacks	17.9	11.3	14.7	16.6	7.6	*** 27.0
Corn-based salty snacks	10.2	6.4	9.2 u	12.6	3.4 u	*** 14.1
Potato chips	5.8	3.6 u	3.6 u	3.5 u	3.6 u	9.7
Added fats and oils	9.6	9.5	8.8 u	5.9	10.3 u	11.0

1 Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods

	All ages (5-18)					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	3,546	1,741	1,137	950	604	761
Grains	78.9	79.3	78.8	73.0	80.3	81.9
Whole grains	22.5	19.1	15.6	17.7	23.4	* 31.1
Not whole grain	86.4	88.2	88.1	* 80.3	88.7	88.6
Bread	20.0	19.2	18.4	18.8	19.6	20.4
Rolls	7.4	12.1	11.0	** 3.9	13.7	*** 2.1
Bagels	5.1	2.8	2.7 u	1.0 u	3.0	*** 10.6
Corn tortillas	3.2	2.8	3.8	* 5.8	1.4 u	2.7
Flour tortillas	4.2	3.7	5.1	4.9	1.7	* 4.0
Crackers	12.5	10.4	8.7	9.6	13.1	17.6
Breakfast/granola bar	5.1	2.7	2.2 u	4.5	3.3	** 10.3
Pancakes, waffles, French toast	8.4	8.6	8.2	* 5.4	9.5	10.5
Cold cereal	39.5	41.5	41.8	38.6	40.7	37.2
Rice	9.0	10.3	11.4	8.4	8.5	8.0
Pasta	5.1	4.2	4.1	4.0	4.2	6.1
Vegetables	62.0	70.6	69.6	*** 53.4	72.2	*** 53.2
Raw vegetables	20.7	20.4	19.7	18.1	21.7	21.2
Raw carrots	5.7	4.5	4.2	4.1 u	4.8	* 8.6
Salads (w/greens)	9.8	11.3	10.4	6.7	12.8	8.9
Cooked vegetables, excluding potatoes	25.6	30.2	29.6	23.8	30.2	*** 17.5
Cooked green beans	5.6	7.5	8.6	* 2.0	5.6	3.5
Cooked corn	6.6	8.4	7.6	* 4.3	9.4	** 3.9
Cooked tomatoes	6.8	6.8	7.0	8.5	6.4	4.9
Cooked potatoes	35.6	44.9	43.7	*** 28.2	46.8	*** 27.9
Cooked potatoes-not fried	11.0	13.1	12.9	** 8.0	13.3	8.4
Cooked potatoes-fried	26.8	34.2	33.1	** 21.5	36.2	*** 21.0
Fruit and 100% fruit juice	59.2	62.8	64.6	*** 48.7	60.6	58.0
Fresh fruit	32.2	32.4	31.9	26.9	33.0	35.1
Fresh orange	6.0	6.8	8.2	6.6	4.7	3.1
Fresh apple	13.6	13.0	12.1	* 8.0	14.5	19.2
Fresh banana	7.7	6.4	6.8	7.6	5.7	* 9.6
Fresh grapes	3.2	2.6	1.8	1.8	3.7	5.4
Canned or frozen fruit, total	11.2	15.0	14.6	*** 4.6	15.4	* 8.4
Canned or frozen in syrup	6.8	9.1	10.1	*** 2.6	7.7	5.0
Canned or frozen, no syrup	4.6	6.1	4.7 u	2.1	7.8	* 3.7
Other canned/frozen	4.0	5.4	4.4	** 1.3	6.6	* 3.1
Fruit juice	35.2	38.8	45.9	*** 27.7	28.6	30.7
Non-citrus juice	18.1	21.3	26.0	*** 12.6	14.2	14.1
Citrus juice	20.9	23.0	26.6	** 17.2	17.8	17.8
Milk & milk products	81.4	88.4	87.2	*** 72.3	90.1	*** 76.4
Cow's milk, total	75.3	85.0	84.6	*** 66.7	85.2	*** 65.9
Unflavored white milk, total	62.2	65.5	64.5	60.8	66.5	59.1
Unflavored whole milk,	24.0	27.6	32.9	37.0	19.5	** 10.6
Unflavored non-whole, total	36.5	35.8	29.4	* 20.9	45.1	48.1
2% milk, unflavored	23.9	27.2	25.5	* 16.3	29.5	24.2
1% milk, unflavored	23.9	27.2	25.5	* 16.3	29.5	24.2
Skim milk, unflavored	6.6	4.8	2.4 u	2.7	8.2	11.5

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods — Continued

	All ages (5-18)					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Fat not specified, unflavored	5.9	8.3	10.4	** 4.0	5.6	3.0
Flavored milk, total	31.5	49.0	49.7	***13.0	47.4	***13.4
Flavored whole milk	7.9	9.4	9.1	6.9	9.9	6.2
Flavored non-whole milk, total	9.0	14.9	16.8	***1.8	11.9	** 3.4
2% milk, flavored	5.6	9.5	11.1	***1.4 u	7.2	** 1.5 u
Fat not specified, flavored	15.7	26.1	25.4	***5.6	26.8	***4.0
Yogurt	5.5	3.1	2.6	2.3	4.0	** 11.7
Cheese	17.7	17.4	15.8	17.4	19.6	18.1
Meat and meat alternates	57.3	58.9	59.4	54.3	58.5	55.1
Beef	8.4	7.4	7.2	8.0	7.6	10.1
Pork	4.2	5.4	7.4	3.3	3.1	3.6
Chicken	24.4	25.3	24.7	24.8	26.3	21.1
Fish	4.0	4.4	4.0	3.6	5.2 u	3.1
Bacon/sausage	5.3	5.0	5.6	6.0	4.6	5.8
Eggs	7.9	6.4	7.6	10.3	4.5	8.3
Beans	4.1	4.4	6.0	5.7	2.3	2.4
Mixed dishes	89.7	92.9	92.4	***84.1	93.8	* 90.6
Meat mixtures w/ red meat	4.1	4.9	3.9	3.6	5.9	* 3.0
Hamburgers/cheeseburgers	16.6	22.0	21.8	** 11.7	21.7	** 11.8
Other sandwiches	43.3	38.6	37.7	39.7	39.7	***55.9
Hot dogs	7.0	7.9	7.4	7.8	8.8	***3.0
Luncheon meat	16.6	12.1	12.3	14.8	11.8	***26.1
Chicken,turkey	6.1	7.0	7.0	6.6	7.2	5.3
Peanut butter	7.3	4.3	4.1	5.3	4.5	***14.9
Pizza (no meat)	8.8	9.1	9.4	7.0	9.0	9.9
Pizza w/ meat	17.1	22.7	22.8	***12.4	22.9	***12.2
Mexican entrees	9.9	11.4	10.1	8.8	13.0	8.1
Macaroni & cheese	6.3	4.9	3.7	6.7	6.7	8.9
Pasta dishes, Italian style	8.0	10.4	9.5	6.3	11.9	* 5.8
Rice dishes	5.8	5.7	6.0	6.0	5.0	6.2
Other grain mixtures	3.7	3.5	3.3	1.8	3.5	5.8
Grain soups	6.3	6.8	8.3	10.1	4.6	3.9
Sweets and desserts	79.7	81.3	78.8	73.6	85.0	81.8
Sugar and sugar substitutes	9.7	8.0	8.7	8.7	6.7	* 12.1
Syrups/sweet toppings	11.8	10.9	9.7	8.1	13.2	14.9
Candy	37.5	36.3	33.7	33.2	39.8	41.7
Ice cream	18.9	18.6	14.6	19.1	24.5	19.3
Cake/cupcakes	10.1	9.7	10.1	7.8	9.4	11.6
Cookies	31.9	30.4	29.9	31.5	31.0	34.6
Pastries	5.7	5.8	3.0	4.0	9.6	7.0
Beverages excluding milk and 100% fruit juice	81.5	80.6	79.0	* 86.1	82.7	81.2
Tea	11.7	11.4	10.3	9.7	13.2	13.6
Soft drink, regular	54.3	54.3	53.1	* 61.0	56.0	51.0
Soft drink, sugar-free	5.2	3.8	3.7	2.5	3.8	** 9.0
Noncarbonated, sweetened beverage	36.3	33.9	32.3	37.2	36.6	41.3
Salty snacks	44.4	39.6	41.8	* 50.0	36.6	***49.4
Corn-based salty snacks	22.4	20.0	21.7	25.9	18.4	* 25.0
Pretzels/party mix	7.1	6.3	6.4	6.2	6.4	9.8
Popcorn	6.8	5.7	4.7	3.3	6.7	11.1

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods — Continued

	All ages (5-18)					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Potato chips	15.3	13.6	14.8	20.6	11.8	14.7
Added fats and oils	30.9	28.5	26.6	23.1	30.9	38.6
Butter	7.5	6.3	5.4	6.6	7.7	10.1
Margarine	8.9	8.6	7.4	5.4	9.8	10.4
Salad dressing	4.9	5.6	4.6	2.6	7.2	5.5
Gravy	4.1	5.4	6.2	* 2.3	4.1	2.5
Cream cheese	3.6	1.9 u	2.3 u	1.2 u	1.1 u	*** 7.5
Cream /sour cream	5.0	3.9	2.9	4.1	5.1	7.8

1 Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	5-8 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	779	473	321	161	152	129
Grains	91.2	92.1	91.3	88.1 u	93.6 u	90.2
Whole grains	27.9	26.3	29.3	** 11.4 u	21.0	* 41.2
Not whole grain	92.4	91.2	90.9	90.7 u	91.8 u	94.9 u
Bread	24.7	26.2	29.6	27.1	20.0	19.4
Rolls	5.7	8.4	7.2 u	4.5 u	10.5 u	*** 0.9 u
Bagels	4.1 u	2.0 u	1.4 u	0.0	3.0 u	8.9 u
Biscuits, scones, croissants	3.3	4.9 u	3.6 u	1.3 u	7.2 u	1.0 u
Corn tortillas	5.3	3.6	5.3	* 10.4	0.7 u	6.7 u
Flour tortillas	3.7 u	3.4 u	4.6 u	7.8 u	1.2 u	2.6 u
Crackers	19.5	17.3	14.1	12.2	22.9	24.9
Breakfast/granola bar	7.1	1.8 u	1.6 u	3.7 u	2.2 u	** 20.4
Pancakes, waffles, French toast	11.2	11.2	8.7	9.1 u	15.6	13.0 u
Cold cereal	52.7	56.4	59.7	55.3	50.5	45.4
Rice	9.0	8.6	10.6	9.6 u	5.1 u	9.8 u
Pasta	5.3	1.9 u	1.2 u	* 5.4 u	3.1 u	8.8 u
Vegetables	63.3	73.0	73.4	** 51.6	72.2	** 48.8
Raw vegetables	21.4	21.8	21.3	14.1 u	22.6	22.4
Raw carrots	7.9	7.2	7.6 u	3.2 u	6.6 u	12.3 u
Other raw (high nutrients)	2.3 u	0.9 u	1.1 u	2.8 u	0.5 u	5.2 u
Other raw (low nutrients)	4.3	2.8 u	3.4 u	3.3 u	1.6 u	5.1 u
Salads (w/greens)	7.4	9.9	7.6 u	5.3 u	14.1	* 3.3 u
Cooked vegetables, excluding potatoes	30.0	36.7	38.7	28.8	33.1	** 15.2
Cooked green beans	7.1	11.1 u	12.6 u	3.4 u	8.5 u	1.5 u
Cooked corn	9.9	13.5	14.0	7.4 u	12.6 u	4.5 u
Cooked carrots	3.8	4.8	3.1 u	3.3 u	7.7 u	2.3 u
Cooked potatoes	33.9	42.1	40.9	* 27.0	44.2	** 23.0
Cooked potatoes-not fried	12.7	16.6	15.8	11.8	18.1	* 5.8 u
Cooked potatoes-fried	23.1	28.0	27.0	16.1 u	29.8	18.4
Fruit and 100% fruit juice	70.5	75.4	75.7	** 54.6	74.8	71.4
Fresh fruit	41.7	43.4	42.0	30.8	45.9	45.7
Fresh orange	7.1	9.7	12.3	4.4 u	5.0 u	3.4 u
Fresh apple	17.2	14.0	10.8	9.1 u	19.7	29.0
Fresh banana	11.9	12.4	13.3	11.9	10.7 u	11.2 u
Fresh melon	3.6 u	4.1 u	5.1 u	0.4 u	2.4 u	4.4 u
Fresh grapes	4.3	3.1	1.8 u	2.7 u	5.3 u	7.4 u
Fresh peach/nectarine	2.9 u	4.7 u	2.4 u	1.8 u	8.6 u	0.0
Fresh berries	3.8	2.8 u	1.8 u	4.1 u	4.7 u	6.2 u
Other fresh fruit	3.7	2.0	3.1 u	7.3 u	0.0	* 5.9 u
Canned or frozen fruit, total	18.0	24.2	22.5	*** 7.3 u	27.3	* 12.0 u
Canned or frozen in syrup	11.1	14.4	15.4	** 6.6 u	12.7	7.4 u
Canned or frozen, no syrup	7.1	10.0	7.5 u	0.9 u	14.5	4.6 u
Applesauce,canned/frozen apples	4.9	5.6	4.6 u	* 0.8 u	7.5 u	5.7 u
Canned/frozen peaches	3.9	4.7	4.2	4.4 u	5.6 u	2.4 u
Canned/frozen pineapple	3.8 u	6.7 u	6.6 u	0.2 u	6.8 u	* 0.1 u
Other canned/frozen	6.0	8.0	7.4 u	2.1 u	9.1 u	4.4 u
Fruit juice	43.7	48.2	56.8	*** 30.8	32.9	42.3
Non-citrus juice	26.7	29.2	37.2	** 20.7	14.9	24.7

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	5-8 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Citrus juice	22.7	27.7	32.2	***13.6	19.8	18.3
Milk & milk products	93.0	97.5 u	96.6 u	** 87.2 u	99.1 u	** 86.7
Cow's milk, total	87.4	93.6	95.4 u	** 83.8	90.5 u	* 75.8
Unflavored white milk, total	74.7	77.4	82.0	77.6	69.1	65.9
Unflavored whole milk,	35.0	37.4	47.4	56.9	19.7	19.3
Unflavored non-whole, total	40.3	39.8	34.0	* 18.1 u	50.2	50.4
2% milk, unflavored	27.3	31.9	31.8	17.2 u	32.1	21.1
1% milk, unflavored	8.9	5.1	3.1 u	* 0.7 u	8.7 u	20.1
Skim milk, unflavored	7.0	7.6	4.5 u	0.6 u	13.0 u	9.9 u
Fat not specified, unflavored	6.3	9.2	9.1 u	4.8 u	9.3	* 1.6 u
Flavored milk, total	42.3	57.8	59.8	***21.5	54.1	** 21.9
Flavored whole milk	11.3	13.5	13.1	11.7 u	14.2	7.4 u
Flavored non-whole milk, total	15.4	22.5	25.9	***3.4 u	16.3 u	6.2 u
2% milk, flavored	8.6	14.0	16.6	** 2.3 u	9.3 u	1.6 u
1% milk, flavored	3.8 u	5.5 u	5.2 u	0.6 u	6.0 u	2.1 u
Fat not specified, flavored	17.2	24.2	23.6	** 8.3 u	25.1	** 8.4 u
Yogurt	10.7	8.2	7.4 u	4.4 u	9.7 u	18.7
Cheese	21.5	20.2	19.3	19.4 u	21.8	25.1
Meat and meat alternates	66.0	69.9	68.2	65.3	72.9	61.7
Beef	7.5	6.8	7.0	8.1 u	6.5 u	9.2 u
Ground beef	3.4	2.2 u	3.1 u	5.1 u	0.5 u	5.2 u
Pork	3.7	5.0	5.9 u	4.8 u	3.3 u	0.8 u
Chicken	31.2	32.9	31.7	29.5	35.1	29.3
Hot dogs	4.7	5.9	6.2 u	4.0 u	5.5 u	2.8 u
Fish	4.8	5.4 u	4.6 u	7.4 u	7.0 u	2.4 u
Bacon/sausage	7.1	7.1	5.2 u	13.0	10.5 u	4.8 u
Eggs	10.6	9.0 u	11.1 u	19.1	5.2 u	9.9 u
Beans	4.5	4.3	5.0 u	9.8	3.1 u	2.2 u
Baked/refried beans	4.5	4.4	6.4	8.1 u	0.8 u	3.3 u
Nuts	2.0 u	3.0 u	1.6 u	1.1 u	5.5 u	* 0.6 u
Mixed dishes	90.7	92.2	92.1	83.6	92.2	92.5 u
Meat mixtures W/ chicken/turkey	3.9 u	5.0 u	6.7 u	2.9 u	2.1 u	2.5 u
Hamburgers/cheeseburgers	11.2	14.7	16.2	***5.9 u	12.0 u	6.4 u
Other sandwiches	47.8	39.8	40.6	42.6	38.5	***64.3
Hot dogs	8.4	10.2	8.3	5.5 u	13.7	* 3.1 u
Luncheon meat	16.2	10.8	11.6	14.0	9.6 u	** 28.4
Beef,pork,ham	2.4	3.1 u	1.0 u	1.0 u	6.7 u	2.0 u
Cheese (no meat)	7.5	7.5	11.4	11.2 u	0.6 u	4.3 u
Fish	3.2	3.0 u	2.1 u	6.0 u	4.6 u	2.6 u
Peanut butter	12.6	6.5	7.5 u	9.4 u	4.6 u	***27.9
Pizza (no meat)	11.7	10.5	9.1	14.0	13.0	14.3
Pizza w/ meat	16.0	21.7	19.5	** 7.1 u	25.6	* 9.5 u
Mexican entrees	7.9	10.2	10.8	* 5.1 u	8.9 u	3.6 u
Macaroni & cheese	6.4	5.5	3.6 u	8.6 u	8.7 u	7.7 u
Pasta dishes, Italian style	7.4	8.8	5.6 u	4.9 u	14.5 u	6.7 u
Rice dishes	5.9	6.0	7.0 u	7.8 u	4.2 u	4.9 u
Meat soup	1.9	2.0	2.6 u	5.3 u	0.7 u	0.1 u
Grain soups	6.6	8.1	10.4	11.2 u	4.2 u	1.8 u
Vegetables mixtures (inc soup)	3.7	4.3 u	6.2 u	6.7 u	0.9 u	1.3 u
Sweets and desserts	85.2	85.7	83.2	79.1	90.2 u	86.2 u
Sugar and sugar substitutes	9.1	8.1 u	11.7 u	8.3 u	1.7 u	** 11.9 u
Syrups/sweet toppings	15.4	14.9	10.0	11.3	23.6	17.8

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	5-8 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Jelly	5.7	5.7	7.2	3.8 u	3.1 u	7.2 u
Candy	34.1	33.4	30.9	24.7	37.6	38.9
Ice cream	23.7	24.4	19.6	21.2	33.1	22.1
Pudding	3.6	3.7 u	2.8 u	0.4 u	5.4 u	5.0 u
Ice/popsicles	6.2	6.8	5.8	7.3 u	8.8	5.1 u
Sweet rolls	3.0	2.9 u	2.3 u	5.5 u	3.9 u	2.3 u
Cake/cupcakes	13.5	16.2	15.0	10.3 u	18.5	8.1 u
Cookies	37.8	33.4	32.8	44.0	34.7	42.6
Pastries	5.6	4.1 u	2.2 u	7.4 u	7.4 u	7.3 u
Doughnuts	3.0	2.4 u	3.0 u	* 0.4 u	1.3 u	5.8 u
Beverages excluding milk and 100% fruit juice	76.6	78.0	76.5	82.0	80.7 u	71.7
Tea	7.0	6.5	6.4 u	8.6 u	6.6 u	7.9 u
Soft drink, regular	41.2	42.9	40.3	42.6	47.6	39.1
Soft drink, sugar-free	5.8	4.7 u	6.7 u	4.2 u	1.1 u	7.6 u
Noncarbonated, sweetened beverage	43.6	41.4	36.3	* 51.1	50.4	45.3
Salty snacks	43.0	40.8	42.8	53.1	37.1	43.6
Corn-based salty snacks	20.1	18.8	17.8	24.0	20.8	20.1
Pretzels/party mix	7.6	7.8	7.6 u	8.1 u	8.2 u	7.4 u
Popcorn	10.1	8.6	10.8	4.6 u	4.6 u	* 15.2
Potato chips	14.2	13.0	13.6	23.7 u	11.9	13.1
Added fats and oils	32.7	30.8	30.8	27.7	30.9	41.2
Butter	8.3	7.0	6.4 u	9.7 u	8.0 u	11.0 u
Margarine	12.3	14.1	14.9	8.7 u	12.7 u	10.6 u
Salad dressing	4.5	4.1 u	3.0 u	5.2 u	6.1 u	5.5 u
Gravy	3.1 u	4.8 u	6.3 u	1.7 u	2.2 u	0.2 u
Cream cheese	2.8 u	1.1 u	1.7 u	0.0	0.0	* 7.9 u
Cream /sour cream	5.0	3.8	3.7 u	5.4 u	3.9 u	7.5 u

1 Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	9-13 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	1,360	794	512	315	282	224
Grains	78.5	77.8	75.6	74.8	81.2	83.0
Whole grains	22.7	18.9	11.4	24.7	30.1	30.6
Not whole grain	86.2	86.2	84.2	83.0	89.2	88.4
Bread	20.4	21.1	19.1	19.1	24.1	19.8
Rolls	9.1	14.5	12.7	***2.4 u	17.0	***0.9 u
Bagels	5.0	3.6 u	3.6 u	0.2 u	3.6 u	*12.3
Flour tortillas	4.2	5.1	7.2	2.6 u	2.1 u	2.8 u
Crackers	11.6	9.4	7.7	9.3	11.9	18.8
Breakfast/granola bar	4.1	2.3 u	1.9 u	8.0 u	2.9 u	5.7 u
Pancakes, waffles, French toast	9.0	9.0	9.0	6.0	9.1	11.7
Cold cereal	39.4	39.9	39.0	39.2	41.2	38.5
Rice	8.2	9.4	10.2	7.4	8.2	6.0 u
Pasta	5.3	6.3	7.7	2.3 u	4.2 u	5.4 u
Vegetables	62.0	67.4	63.8	53.2	72.8	*55.3
Raw vegetables	21.8	21.8	19.0	20.8	26.0	21.7
Raw carrots	6.4	5.4	4.8 u	7.6 u	6.3	8.2 u
Other raw (low nutrients)	4.1	3.4	2.8	8.4 u	4.3 u	2.3 u
Salads (w/greens)	10.2	11.0	10.1	*3.8 u	12.3	11.6
Cooked vegetables, excluding potatoes	25.4	29.0	29.2	23.2	28.6	*16.9
Cooked green beans	5.6	8.3	11.0 u	*0.9 u	4.3 u	2.8 u
Cooked corn	6.1	7.7	7.0	2.9 u	8.8	2.9 u
Cooked broccoli	2.9	2.6	2.0 u	1.2 u	3.6 u	5.1 u
Cooked tomatoes	6.7	7.0	7.1	8.4	6.7	4.7
Other cooked (high nutrients)	2.1 u	1.4 u	0.6 u	6.5 u	2.6 u	0.6 u
Other cooked (low nutrients)	2.9	2.5	2.2 u	6.0 u	3.0 u	1.8 u
Cooked potatoes	34.5	40.5	37.3	*22.6	45.1	30.5
Cooked potatoes-not fried	10.1	13.8	14.3	***1.2 u	13.0	8.1 u
Cooked potatoes-fried	26.5	30.0	26.0	21.3	36.0	23.3
Fruit and 100% fruit juice	60.7	67.0	69.6	*52.1	63.2	51.0
Fresh fruit	34.8	35.4	36.4	32.0	34.0	36.1
Fresh orange	7.8	9.2	9.9	11.4 u	8.3	**1.7 u
Fresh apple	14.6	14.5	15.0	*7.2	13.7	20.5
Fresh banana	6.9	5.4	5.8	7.9	4.9 u	9.6
Fresh grapes	3.4	2.7	2.3 u	1.4 u	3.3 u	6.8
Fresh berries	2.8	2.1 u	0.9 u	0.9 u	3.8 u	6.1 u
Canned or frozen fruit, total	10.5	14.2	16.4	***3.4 u	10.8	7.4 u
Canned or frozen in syrup	6.6	10.0	10.7	***0.6 u	8.8	3.6 u
Canned or frozen, no syrup	3.9	4.4 u	6.0 u	2.8 u	2.0 u	3.8 u
Other canned/frozen	3.5	5.2	5.2	***0.3 u	5.1 u	2.1 u
Fruit juice	34.9	41.4	47.1	**29.0	33.1	*21.7
Non-citrus juice	17.9	23.9	27.8	***9.3	18.2	*9.9
Citrus juice	20.6	23.3	25.6	20.7	19.9	12.4
Milk & milk products	86.1	92.9	91.5	**75.0	94.9	***79.5
Cow's milk, total	81.6	90.5	89.4	***70.7	92.1	***69.5
Unflavored white milk, total	64.1	64.9	59.0	62.6	73.7	64.3
Unflavored whole milk,	86.1	92.9	91.5	**75.0	94.9	***79.5

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	9-13 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Unflavored non-whole, total	38.0	36.1	26.7	27.5	49.9	51.4
2% milk, unflavored	25.1	24.9	20.7	19.1	31.1	30.3
1% milk, unflavored	8.0	8.3	3.5	4.9 u	15.2	10.3 u
Skim milk, unflavored	6.7	5.0	3.0 u	5.2 u	7.9 u	12.0
Fat not specified, unflavored	8.8	11.3	14.3	* 4.9 u	6.9	6.3 u
Flavored milk, total	35.6	53.9	56.3	*** 12.2	50.3	*** 10.0
Flavored whole milk	7.8	9.1	9.0	6.8 u	9.4	5.8 u
Flavored non-whole milk, total	7.7	12.3	14.3	*** 0.7 u	9.3 u	** 2.5 u
2% milk, flavored	5.1	8.3	9.6	** 0.6 u	6.5 u	** 1.1 u
Fat not specified, flavored	21.5	34.4	34.9	*** 6.8 u	33.7	*** 1.9 u
Yogurt	4.3	1.8 u	0.7 u	1.0 u	3.3 u	12.6
Cheese	18.4	18.9	16.4	21.2	22.7	14.8
Meat and meat alternates	53.2	55.8	57.0	47.9	54.0	48.8
Beef	7.2	6.7	6.1	6.0 u	7.5	8.5 u
Ground beef	3.9	5.2	4.5	1.1 u	6.1	2.8 u
Pork	4.4	4.2	5.1 u	* 1.5 u	2.9 u	7.3
Ham	2.6 u	4.5 u	7.2 u	0.0	0.4 u	0.4 u
Chicken	19.2	22.5	21.2	18.4	24.4	*** 11.6
Fish	3.5	4.7	3.6 u	1.9 u	6.3 u	1.7 u
Bacon/sausage	4.2	3.7	5.1	3.6 u	1.6 u	6.1 u
Eggs	7.1	6.7	8.2 u	6.2	4.6	7.8 u
Beans	4.0	5.4	7.3	* 2.5 u	2.7 u	2.0 u
Nuts	3.2	2.5	0.9 u	7.3 u	5.0	1.9 u
Mixed dishes	91.3	91.1	89.2	89.2	94.0	93.5
Meat mixtures w/ red meat	4.2	6.0	5.5	** 1.4 u	6.7	* 2.1 u
Meat mixtures W/ chicken/turkey	4.6	5.8 u	6.2 u	2.6 u	5.2 u	3.3 u
Hamburgers/cheeseburgers	18.6	22.2	22.9	* 10.8	21.2	15.2
Other sandwiches	43.3	36.4	34.0	46.8	40.0	** 58.5
Hot dogs	8.7	10.5	10.0	13.5	11.1	*** 1.0 u
Luncheon meat	16.7	11.7	11.4	16.9	12.2	*** 28.3
Chicken,turkey	5.5	4.8	4.1 u	7.1 u	5.6	6.6 u
Peanut butter	7.6	5.2	4.4 u	6.5 u	6.4	14.6
Pizza (no meat)	7.9	9.2	9.2	3.7 u	9.2	8.0
Pizza w/ meat	16.1	18.7	19.2	13.5	18.0	12.2
Mexican entrees	11.1	11.2	10.1	11.6 u	12.9	10.9
Macaroni & cheese	7.7	6.2	5.1	7.0 u	7.9	11.7
Pasta dishes, Italian style	9.6	11.6	12.2	9.2	10.7 u	5.2 u
Rice dishes	6.8	6.7	8.2	4.8 u	4.5 u	8.8 u
Other grain mixtures	3.5	2.7	3.0	1.8 u	2.4 u	6.4 u
Grain soups	7.2	6.3	7.2	11.6	5.0 u	6.5 u
Sweets and desserts	79.8	79.2	75.8	78.8	84.2	81.8
Sugar and sugar substitutes	10.0	9.8	8.8 u	8.0	11.3	11.3
Syrups/sweet toppings	12.3	12.0	11.2	9.4	13.0	15.7
Candy	38.2	35.9	33.8	35.8	39.0	44.9
Ice cream	20.6	18.8	14.3	* 25.7	25.5	21.3
Sweet rolls	4.3	4.8	4.7	5.2 u	4.9	2.5 u
Cake/cupcakes	9.6	7.8	9.4	8.6	5.4	*** 15.2
Cookies	31.5	31.6	31.8	31.2	31.4	31.0
Pastries	6.4	6.7	4.2	3.4 u	10.4	8.3
Doughnuts	3.8	4.0	2.8	* 1.3 u	5.7	3.5 u
Beverages excluding milk and 100% fruit juice	81.6	77.6	77.6	86.6	77.8	86.9
Tea	11.3	11.3	7.8	7.8 u	16.5	13.4

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	9-13 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Soft drink, regular	54.8	51.2	52.5	** 68.7	49.4	52.7
Soft drink, sugar-free	4.6	2.6 u	1.9 u	1.6 u	3.6 u	* 11.4
Noncarbonated, sweetened beverage	34.4	30.2	31.1	29.9	29.0	** 46.8
Salty snacks	49.8	43.7	45.4	57.8	41.2	** 57.5
Corn-based salty snacks	23.8	20.0	20.6	28.5	19.2	* 28.8
Pretzels/party mix	9.6	7.8	7.6	6.5 u	8.2	16.4
Popcorn	6.4	5.3	3.2 u	1.7 u	8.4	12.8
Potato chips	18.7	16.8	19.4	26.5	12.9	17.1
Added fats and oils	31.2	31.3	28.9	23.3	34.9	35.9
Butter	9.6	9.2	6.7	5.2 u	12.7	13.3
Margarine	7.8	8.0	7.6	4.4 u	8.6 u	8.3
Salad dressing	4.4	6.0	3.9	** 1.0 u	9.0 u	3.5 u
Mayonnaise	1.5 u	0.6 u	0.1 u	6.2 u	1.4 u	0.1 u
Gravy	4.3	6.1	6.2 u	2.2 u	6.0	** 1.7 u
Cream cheese	4.0	3.3 u	4.5 u	1.4 u	1.5 u	* 8.0 u
Cream /sour cream	3.5	2.3	2.0 u	3.9 u	2.7 u	6.0 u

1 Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	14-18 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	1,407	474	304	474	170	408
Grains	69.3	70.4	72.0	* 58.8	68.7	74.2
Whole grains	17.9	13.5	8.8	* 15.4	18.6	23.5
Not whole grain	81.8	87.9	89.9	*** 69.1	85.7	83.8
Bread	15.7	11.6	8.7 u	11.9	14.7	21.8
Rolls	7.2	12.6	12.2 u	4.9	13.0	* 4.2
Bagels	6.1	2.7 u	3.0 u	2.7 u	2.5 u	*** 10.3
Flour tortillas	4.6	2.6 u	3.3 u	4.9	1.8 u	* 6.5
Crackers	7.9	5.9	5.4	7.7	6.4 u	10.4
Breakfast/granola bar	4.4	3.8 u	3.2 u	1.6 u	4.5 u	6.8
Pancakes, waffles, French toast	5.4	6.0	6.9 u	** 1.9 u	5.0 u	7.4
Cold cereal	28.9	31.1	30.1	24.4	32.1	29.2
Rice	9.9	12.4	13.3	8.3	11.6	8.6
Vegetables	60.9	72.1	72.6	* 55.2	71.5	** 54.7
Raw vegetables	18.9	18.0	19.3	18.5	16.5	19.8
Raw carrots	3.1	1.3 u	0.8 u	1.3 u	1.8 u	6.1
Salads (w/greens)	11.3	12.7	13.2	10.8	12.2	10.6
Cooked vegetables, excluding potatoes	22.3	26.1	22.8	20.4	29.6	20.1
Cooked green beans	4.2	3.8 u	3.1 u	2.0 u	4.6 u	5.8
Cooked corn	4.3	5.1	2.9 u	3.2 u	7.4 u	4.4
Cooked tomatoes	8.8	9.2	10.0	11.5	8.4	6.6
Cooked potatoes	38.2	51.6	52.6	* 34.8	50.7	** 29.2
Cooked potatoes-not fried	10.5	9.5	9.2	12.0	9.8 u	10.7
Cooked potatoes-fried	30.0	43.6	45.4	** 26.2	41.6	** 20.8
Fruit and 100% fruit juice	48.6	48.4	50.3	* 40.3	46.4	54.4
Fresh fruit	21.7	20.4	19.2	18.5	21.6	25.6
Fresh apple	9.6	10.6	10.1	8.0	11.1 u	10.0
Fresh banana	5.2	2.4 u	2.5 u	3.6	2.4 u	* 8.3
Canned or frozen fruit, total	6.4	8.5	6.5 u	3.7 u	10.6 u	6.5
Canned or frozen in syrup	3.4	3.9 u	5.3 u	* 1.4 u	2.4 u	4.4
Canned or frozen, no syrup	3.2	4.6 u	1.2 u	2.4 u	8.2 u	2.8 u
Other canned/frozen	2.8	3.5 u	1.1 u	1.8 u	6.0 u	3.0 u
Fruit juice	28.6	28.5	35.8	* 23.9	20.6	30.7
Non-citrus juice	11.2	12.3	14.9	9.5	9.5	9.9
Citrus juice	19.7	18.8	23.2	16.5	14.0	* 22.9
Milk & milk products	67.2	76.5	75.2	** 57.5	77.9	** 65.1
Cow's milk, total	59.0	72.4	71.0	*** 48.7	73.9	*** 54.1
Unflavored white milk, total	50.2	56.6	56.0	45.3	57.1	48.2
Unflavored whole milk,	18.0	24.2	27.8	27.6	20.4	*** 5.0
Unflavored non-whole, total	31.8	32.1	28.5	16.4	36.0	42.8
2% milk, unflavored	18.0	24.2	27.8	27.6	20.4	*** 5.0
1% milk, unflavored	6.7	5.1	3.0 u	2.0 u	7.4 u	11.7
Skim milk, unflavored	6.1	2.4 u	0.2 u	1.8 u	4.8 u	12.1
Fat not specified, unflavored	2.5	4.5 u	7.6 u	2.5 u	1.3 u	0.8 u
Flavored milk, total	18.6	36.8	34.8	*** 6.9	39.0	*** 10.1
Flavored whole milk	5.1	6.4	6.0 u	3.1 u	6.9 u	5.6 u

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	14-18 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Flavored non-whole milk, total	5.2	11.5	12.1	** 1.7 u	11.0 u	* 2.0 u
2% milk, flavored	3.6	7.2	8.1 u	* 1.4 u	6.2 u	1.8 u
Fat not specified, flavored	8.5	19.1	17.2	*** 2.2 u	21.2	*** 2.8 u
Yogurt	2.5	0.3 u	0.5 u	2.0 u	0.0	** 5.1 u
Cheese	14.1	13.5	12.4	11.9	14.6	15.7
Meat and meat alternates	54.6	53.2	54.7	51.8	51.6	56.1
Beef	10.4	8.6	8.5	10.0	8.8 u	12.6
Pork	4.2	7.1	10.8	4.1	3.2 u	2.0 u
Chicken	24.4	22.0	22.8	27.6	21.2	24.2
Fish	4.0	3.3 u	4.0 u	2.3 u	2.6 u	5.1
Bacon/sausage	5.0	4.8 u	6.5	2.9 u	2.8 u	6.4
Eggs	6.6	4.1 u	4.2 u	7.3	3.9 u	7.6
Beans	3.8	3.4 u	5.6 u	5.6	1.1 u	3.2 u
Baked/refried beans	2.5	4.3	2.0 u	2.4 u	6.8	* 1.1 u
Mixed dishes	87.2	95.4	95.9 u	*** 79.4	94.8 u	** 86.0
Meat mixtures w/ red meat	4.5	4.4	1.6 u	* 5.8	7.5	4.1
Meat mixtures W/ chicken/turkey	3.0	1.1 u	1.8 u	1.0 u	0.3 u	*** 6.1
Hamburgers/cheeseburgers	18.9	27.6	25.3	17.3	30.0	* 12.7
Other sandwiches	39.7	39.7	39.1	30.1	40.4	46.5
Luncheon meat	16.8	13.6	13.8	13.3	13.3	22.1
Beef,pork,ham	3.0	4.9	5.4 u	2.2 u	4.2 u	1.8 u
Chicken,turkey	9.2	12.1	13.2	9.4 u	11.0	6.7
Breakfast sandwiches	5.2	6.2	7.5	4.1	4.8 u	5.2
Pizza (no meat)	7.4	7.8	9.9	4.6	5.5 u	8.4
Pizza w/ meat	19.0	27.6	29.3	* 15.7	25.8	14.3
Mexican entrees	10.3	12.8	9.5	9.0	16.2	8.9
Macaroni & cheese	4.8	3.0 u	2.3 u	4.8 u	3.7 u	6.9
Pasta dishes, Italian style	7.0	10.6	10.0	4.4	11.1 u	5.6
Rice dishes	4.8	4.6 u	3.1 u	5.8	6.2 u	4.6 u
Other grain mixtures	5.1	5.4	4.0 u	2.2	6.8 u	6.9
Grain soups	5.1	6.1	7.6	7.7	4.4 u	2.8 u
Sweets and desserts	75.1	79.8	78.2	* 63.8	81.6	78.3
Sugar and sugar substitutes	9.8	6.1 u	6.1 u	9.6	6.0 u	13.1
Syrups/sweet toppings	8.2	6.6	8.0	4.1	5.1 u	11.7
Candy	39.6	39.0	35.8	37.4	42.4	40.8
Ice cream	13.3	13.6	10.9	10.5	16.6	15.0
Sweet rolls	3.2	5.1	6.1 u	2.6 u	3.9 u	2.2 u
Cake/cupcakes	7.7	6.4	6.8 u	4.8 u	6.1 u	10.6
Cookies	27.6	26.7	25.8	21.8	27.7	31.6
Pastries	5.0	6.2	2.4 u	1.9 u	10.4 u	5.6
Doughnuts	5.1	4.9	4.3	6.2	5.6 u	4.8
Beverages excluding milk and 100% fruit juice	85.5	85.8	82.5	88.9	89.4 u	83.1
Coffee	4.7	3.4 u	3.7 u	5.2	3.0 u	5.1
Tea	16.0	15.6	16.0	12.6	15.1	18.5
Soft drink, regular	64.3	66.6	64.0	68.1	69.5	58.8
Soft drink, sugar-free	5.2	4.5 u	3.0 u	2.0 u	6.0 u	7.5
Noncarbonated, sweetened beverage	32.2	31.6	30.2	33.4	33.2	32.4
Salty snacks	40.0	34.6	37.4	39.5	31.6	*** 45.8
Corn-based salty snacks	22.9	21.0	26.0	24.7	15.7	** 25.0
Popcorn	4.7	3.9 u	1.4 u	3.8	6.7 u	6.1

See footnotes at end of table.

Table C-16—Food Choices Over 24 Hours: Percent of Children Consuming Different Types of Foods —Continued

	14-18 years old					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Potato chips	12.7	10.7	11.0	12.1	10.5	13.5
Added fats and oils	29.0	23.6	20.7	19.3	26.8	39.4
Butter	4.6	2.8 u	3.2 u	5.6	2.3 u	6.0
Margarine	7.3	4.7 u	1.1 u	3.9	8.6 u	12.4
Salad dressing	5.7	6.4	6.7	2.2 u	6.2 u	7.5
Gravy	4.6	5.0 u	6.1 u	3.0 u	3.8 u	5.1
Cream cheese	4.0	1.0 u	0.5 u	2.0 u	1.6 u	* 6.6
Cream /sour cream	6.6	5.7	3.1 u	3.2 u	8.5 u	9.9

1 Significant differences in means and proportions are noted by * (.05 level), ** (.01 level), or *** (.001 level). Differences are tested in comparison to NSLP participants, identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Note: Tabulations are of all individual foods reported by respondents, except when foods were reported to be eaten in "combination" as sandwiches, green salads, and soup. Sandwiches, salads and soups are counted as one food choice. Food subgroups reported by fewer than 5 percent of children in every population group (column) are not included in the table.

Source: NHANES 1999–2004 dietary recalls for school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Results for "All ages (5–18)" are age adjusted.

Table C-17—Percent of Lunch Food Choices From Foods Suggested for Frequent, Selective, or Occasional Consumption

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion
All Children	10.2	17.3	72.5	12.2	21.1	66.7	11.4	17.0	71.6	7.4	14.6	78.0
All NSLP Participants	8.8	20.3	70.8	11.4	23.4	65.2	9.8	21.3	68.9	5.9 u	16.8	77.3
Income-eligible for Free/RP Meals[1]												
NSLP Participants	8.8	21.2	70.0	10.2 u	24.1	65.7	10.0 u	21.4	68.7	6.5 u	18.8	74.8
Non-participants	* 12.5	** 14.2	73.3	15.8 u	17.4 u	66.8	14.6	** 11.9	73.5	7.8	13.8	78.3
Higher-income[1]												
NSLP Participants	9.0	19.1	71.9	13.3 u	22.3	64.4	9.4 u	21.2	69.3	5.2 u	14.3	80.6
Non-participants	** 11.8	** 12.9	75.3	12.3 u	19.2	68.5	14.1	***8.2 u	77.7	9.1	12.6	78.3
	Standard Errors											
All Children	*(0.85)*	*(1.04)*	*(1.58)*	*(1.01)*	*(1.90)*	*(2.30)*	*(1.27)*	*(1.30)*	*(2.08)*	*(0.92)*	*(1.00)*	*(1.50)*
All NSLP Participants	*(1.13)*	*(1.31)*	*(1.97)*	*(1.57)*	*(2.15)*	*(3.06)*	*(1.39)*	*(1.74)*	*(2.59)*	*(1.06)*	*(1.58)*	*(2.05)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	*(1.40)*	*(1.81)*	*(2.44)*	*(1.40)*	*(2.40)*	*(2.94)*	*(2.03)*	*(2.56)*	*(3.59)*	*(1.66)*	*(2.42)*	*(2.78)*
Non-participants	*(1.51)*	*(1.46)*	*(2.35)*	*(3.08)*	*(3.30)*	*(4.83)*	*(3.24)*	*(2.56)*	*(4.95)*	*(1.51)*	*(2.57)*	*(2.93)*
Higher-income[1]												
NSLP Participants	*(1.19)*	*(1.59)*	*(2.27)*	*(3.09)*	*(3.02)*	*(4.58)*	*(1.35)*	*(1.87)*	*(2.66)*	*(1.23)*	*(2.46)*	*(3.17)*
Non-participants	*(0.94)*	*(1.21)*	*(1.77)*	*(1.61)*	*(3.08)*	*(2.93)*	*(2.16)*	*(2.13)*	*(2.98)*	*(2.12)*	*(1.81)*	*(3.13)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Sources:NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breatfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted.

Table C-18—Percent of Daily Food Choices From Foods Suggested for Frequent, Selective, or Occasional Consumption

	All ages (5-18)			5-8 years old			9-13 years old			14-18 years old		
	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion	Foods to enjoy frequently	Foods to enjoy selectively	Foods to enjoy on occasion
All Children	12.7	19.3	67.8	13.8	20.9	65.0	13.3	18.9	67.8	11.3	18.6	70.1
All NSLP Participants	11.9	20.4	67.7	13.6	21.7	64.7	12.5	19.8	67.7	10.0	19.8	70.2
Income-eligible for Free/RP Meals[1]												
NSLP Participants	11.6	20.4	68.1	14.0 u	21.6	64.3	12.1	19.4	68.5	9.0 u	20.4	70.6
Non-participants	11.5	* 17.2	70.7	11.3 u	19.4 u	67.3	12.2	15.8	72.0	11.0	16.8	72.2
Higher-income[1]												
NSLP Participants	12.4	20.4	67.2	12.8 u	21.9	65.2	13.1	20.4	66.5	11.3 u	19.2	69.6
Non-participants	* 14.6	19.4	66.0	15.4	21.0	63.6	15.6	18.7	65.7	12.8	18.9	68.2
	Standard Errors											
All Children	*(0.52)*	*(0.62)*	*(0.97)*	*(0.64)*	*(0.91)*	*(1.16)*	*(0.64)*	*(0.87)*	*(1.28)*	*(0.81)*	*(0.82)*	*(1.25)*
All NSLP Participants	*(0.74)*	*(0.80)*	*(1.35)*	*(1.14)*	*(1.15)*	*(1.83)*	*(0.66)*	*(1.09)*	*(1.47)*	*(1.27)*	*(1.56)*	*(2.25)*
Income-eligible for Free/RP Meals[1]												
NSLP Participants	*(1.06)*	*(1.12)*	*(1.80)*	*(1.72)*	*(1.30)*	*(2.34)*	*(0.89)*	*(1.61)*	*(1.95)*	*(1.68)*	*(2.30)*	*(3.25)*
Non-participants	*(0.87)*	*(1.06)*	*(1.49)*	*(1.36)*	*(1.21)*	*(1.86)*	*(1.41)*	*(1.72)*	*(2.70)*	*(1.25)*	*(1.62)*	*(1.91)*
Higher-income[1]												
NSLP Participants	*(1.06)*	*(1.07)*	*(1.45)*	*(1.40)*	*(1.69)*	*(2.10)*	*(1.32)*	*(1.83)*	*(2.25)*	*(1.81)*	*(1.82)*	*(2.70)*
Non-participants	*(0.53)*	*(0.92)*	*(0.97)*	*(1.10)*	*(2.23)*	*(2.05)*	*(1.12)*	*(1.35)*	*(1.82)*	*(0.86)*	*(0.98)*	*(1.38)*

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

Sources:NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breatfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted.

Table C-19—Means of Healthy Eating Index-2005 (HEI-2005) Scores for School Children

	All ages (5-18)					5-8 years				
		Income-eligible for Free/RP Meals[1]		Higher-income[1]			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
	Mean Score									
Sample size	2,597	852	686	440	541	578	238	118	114	96
Total Fruit	3.1	3.5	* 2.8	2.5	3.1	3.9	4.9	*** 2.5	3.3 u	4.0 u
Whole Fruit	2.8	2.8	2.6	2.4	* 3.3	3.9	3.8	* 2.5	4.1	4.7 u
Total Vegetables	2.4	2.4	2.6	2.4	2.1	2.2	2.2	2.4 u	2.4 u	2.0 u
Dark Green & Orange Vegetables, and Legumes	0.8	0.8 u	0.8 u	0.8 u	0.9 u	0.9 u	0.9 u	1.0 u	0.7 u	1.0 u
Total Grains	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Whole Grains	0.9	0.6 u	0.8 u	0.8 u	1.3	1.1	0.9 u	0.9 u	0.9 u	1.7 u
Milk	8.1	8.7	*** 7.3	8.7	*** 7.6	9.6	10.0	9.2	9.2	8.6
Meat & Beans	8.1	8.5	* 7.7	8.4	* 7.8	7.6	7.5	6.9	7.9	7.7
Oils	6.4	6.0	6.6	6.4	6.8	6.2	5.2	6.5	6.9	6.9
Saturated Fat[2]	5.4	4.8	5.5	5.1	5.9	5.3	4.8	4.9	5.4	6.1
Sodium[2]	4.4	4.3	4.4	4.2	4.6	4.3	4.3	4.0	4.3	4.6
Calories from SoFAAS	7.4	7.6	6.5	7.4	7.7	8.9	9.3	7.4 u	7.6 u	** 10.4 u
Total HEI Score	54.9	55.1	52.5	54.0	56.0	59.0	58.9	53.3	57.8	62.7

	9-13 years					14-18 years				
		Income-eligible for Free/RP Meals[1]		Higher-income[1]			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.	All Children	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
	Mean Score									
Sample size	998	390	230	203	152	1,021	224	338	123	293
Total Fruit	2.9	3.5	* 2.6	2.5	2.5	2.7	2.5	3.3	1.9	2.9
Whole Fruit	2.8	3.0	2.3	2.3	3.5	2.1	1.9	2.8 u	1.4	2.2
Total Vegetables	2.4	2.6	2.1 u	2.5 u	2.0	2.5	2.4 u	3.1	2.4 u	2.3 u
Dark Green & Orange Vegetables, and Legumes	0.8 u	0.9	0.7 u	0.8 u	0.7 u	0.8	0.8 u	0.7 u	0.8 u	0.9 u
Total Grains	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Whole Grains	0.9	0.5 u	0.9 u	1.1 u	1.5 u	0.6 u	0.4 u	0.5 u	0.5 u	0.8 u
Milk	8.4	8.5	7.7	9.3	*** 7.9	6.8	7.7	** 5.6	7.9	* 6.6
Meat & Beans	7.9	8.2	*** 7.0	8.4	*** 7.2	8.6	9.3	8.8	8.7	8.3
Oils	6.3	5.7	6.7	6.9	6.3	6.7	6.7	6.4	5.6	7.3
Saturated Fat[2]	5.1	4.8	5.2	4.6	5.8	5.7	4.9	6.3	5.2	5.9
Sodium[2]	4.3	4.1	4.4	4.3	4.6	4.7	4.7	4.9	4.1	4.6
Calories from SoFAAS	7.5	8.1	* 6.4	7.9	7.0	6.3	6.1	6.0	6.8 u	6.4
Total HEI Score	54.4	54.9	51.1	55.6	53.9	52.7	52.4	53.5	50.2	53.5

[1] T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

[2] Calculated as the mean of individual HEI scores, rather than the score of group means to enable significance testing (see Appendix A).

Sources: NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted. Methodology for scores was provided by CNPP, *Calculation of the Healthy Eating Index-2005 component scores for a population or group.*

Table C-20—Average Amounts of MyPyramid Groups Consumed Per Child

	All ages (5-18)					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	2,597	1,292	852	686	440	541
Total Fruit (cup equiv.)	1.0	1.1	1.2	** 0.8	0.9	1.0
Whole fruit	0.5	0.5	0.5	0.4	0.4	0.6
Total Vegetable (cup equiv.)	1.1	1.2	1.1	1.0	1.2	** 1.0
Dark green and orange vegetables, and legumes	0.1	0.1	0.1	0.1	0.1	0.2
Other vegetables	1.0	1.0	1.0	0.9	1.1	** 0.8
Total Grain (ounce equiv.)	7.2	7.2	6.8	** 6.3	7.8	7.9
Whole grain ounce equiv.	0.5	0.4	0.4	0.4	0.5	* 0.8
Non-whole grain ounce equiv.	6.7	6.8	6.5	*** 5.9	7.2	7.1
Total Milk group (cup equiv.)	2.2	2.5	2.4	*** 1.7	2.6	*** 2.1
Milk cup equiv.	1.5	1.8	1.8	*** 1.2	1.9	*** 1.3
Yogurt cup equiv.	0.0	0.0 u	0.0 u	0.0 u	0.0 u	0.1 u
Cheese cup equiv.	0.6	0.6	0.6	0.5	0.6	0.6
Total Meat and Bean (ounce equiv.)	4.2	4.5	4.3	** 3.4	4.7	* 4.0
Total lean meat from meat, poultry, fish	3.5	3.9	3.9	** 2.9	3.9	* 3.3
Total lean meat from meat alternates	0.6	0.6	0.4	0.5	0.8	0.7
Oils (grams)	16.2	16.0	15.1	14.5	17.6	17.3
Discretionary solid fats, alcoholic beverages, and added sugars						
Solid fats (grams)	47.9	51.5	49.6	** 42.4	54.1	** 46.1
Added sugars (teaspoon equiv.)	23.8	23.9	22.8	22.6	25.5	24.8
Alcoholic beverages	0.0 u	0.0 u	0.0 u	0.0 u	0.0 u	* 0.0 u

See footnotes at end of table.

Table C-20—Average Amounts of MyPyramid Groups Consumed Per Child

	5-8 years					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	578	352	238	118	114	96
Total Fruit (cup equiv.)	1.2	1.3	1.5	***0.7	1.1	1.2
Whole fruit	0.6	0.6	0.6	** 0.4	0.7	0.7
Total Vegetable (cup equiv.)	0.9	1.0	0.9	0.9	1.1	0.8
Dark green and orange vegetables, and legumes	0.1	0.1	0.1	0.2	0.1	0.2 u
Other vegetables	0.8	0.8	0.8	0.8	1.0	* 0.7
Total Grain (ounce equiv.)	6.9	6.5	6.5	6.3	6.5	* 7.8
Whole grain ounce equiv.	0.6	0.5	0.5	0.5 u	0.5	1.0
Non-whole grain ounce equiv.	6.2	6.0	6.0	5.8	6.0	6.8
Total Milk group (cup equiv.)	2.4	2.6	2.6	** 2.1	2.4	2.1
Milk cup equiv.	1.8	2.0	2.1	***1.5	1.8	1.5
Yogurt cup equiv.	0.0	0.0 u	0.0 u	0.0 u	0.1 u	0.1
Cheese cup equiv.	0.5	0.5	0.6	0.6	0.5	0.5
Total Meat and Bean (ounce equiv.)	3.5	3.6	3.5	2.9	3.9	3.6
Total lean meat from meat, poultry, fish	2.9	3.0	2.9	2.4	3.3	2.8
Total lean meat from meat alternates	0.6	0.6	0.6	0.5	0.6 u	0.8
Oils (grams)	14.1	13.8	12.0	13.6	16.8	15.6
Discretionary solid fats, alcoholic beverages, and added sugars						
Solid fats (grams)	44.4	46.0	45.4	43.8	47.0	* 40.9
Added sugars (teaspoon equiv.)	19.0	19.4	17.5	18.0	22.6	* 18.6
Alcoholic beverages	0.0 u	0.0 u	0.0 u	0.0 u	0.0 u	0.0 u

See footnotes at end of table.

Table C-20—Average Amounts of MyPyramid Groups Consumed Per Child

	9-13 years					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	998	593	390	230	203	152
Total Fruit (cup equiv.)	0.9	1.0	1.1	** 0.8	0.9	0.8
Whole fruit	0.5	0.5	0.5	0.3	0.4	0.6
Total Vegetable (cup equiv.)	1.1	1.2	1.1	** 0.8	1.2	** 0.9
Dark green and orange vegetables, and legumes	0.1	0.1	0.1	0.1	0.1	0.1
Other vegetables	0.9	1.0	1.0	* 0.8	1.1	** 0.8
Total Grain (ounce equiv.)	7.1	7.1	6.9	6.5	7.5	7.7
Whole grain ounce equiv.	0.6	0.5	0.3	0.5	0.7	0.9
Non-whole grain ounce equiv.	6.6	6.7	6.6	6.0	6.8	6.8
Total Milk group (cup equiv.)	2.2	2.4	2.2	* 1.8	2.7	** 2.1
Milk cup equiv.	1.6	1.8	1.6	** 1.2	2.0	*** 1.4
Yogurt cup equiv.	0.0 u	0.0 u	0.0 u	0.0 u	0.0 u	0.1 u
Cheese cup equiv.	0.6	0.6	0.6	0.6	0.6	0.6
Total Meat and Bean (ounce equiv.)	3.9	4.2	4.0	* 3.1	4.6	* 3.6
Total lean meat from meat, poultry, fish	3.2	3.5	3.6	* 2.6	3.4	* 2.8
Total lean meat from meat alternates	0.7	0.7	0.4	* 0.5	1.2	0.8
Oils (grams)	15.4	15.7	13.9	14.8	18.4	15.2
Discretionary solid fats, alcoholic beverages, and added sugars						
Solid fats (grams)	47.4	49.9	48.2	** 41.2	52.4	* 45.2
Added sugars (teaspoon equiv.)	22.8	22.0	21.1	23.4	23.4	24.3
Alcoholic beverages	0.0 u	0.0 u	0.0 u	0.0 u	0.0 u	0.0 u

See footnotes at end of table.

Table C-20—Average Amounts of MyPyramid Groups Consumed Per Child

	14-18 years					
			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Partic.	NSLP Partic.	Non-partic.	NSLP Partic.	Non-partic.
Sample size	1,021	347	224	338	123	293
Total Fruit (cup equiv.)	1.0	0.9	0.9	1.0	0.8 u	1.1
Whole fruit	0.4	0.3	0.4	0.4 u	0.3	0.4
Total Vegetable (cup equiv.)	1.3	1.3	1.2	1.3	1.4	1.2
Dark green and orange vegetables, and legumes	0.2	0.2	0.1 u	0.1	0.2	0.2
Other vegetables	1.1	1.1	1.1	1.2	1.2	1.0
Total Grain (ounce equiv.)	7.6	7.9	7.1	* 6.1	9.0	8.2
Whole grain ounce equiv.	0.4	0.3	0.3	0.3	0.4	* 0.6
Non-whole grain ounce equiv.	7.1	7.6	6.8	* 5.8	8.6	7.6
Total Milk group (cup equiv.)	2.0	2.5	2.3	** 1.4	2.6	** 2.0
Milk cup equiv.	1.3	1.7	1.7	** 0.9	1.8	*** 1.1
Yogurt cup equiv.	0.0 u	0.0 u	0.0 u	0.0 u	0.0	* 0.0 u
Cheese cup equiv.	0.7	0.7	0.7	* 0.5	0.8	0.8
Total Meat and Bean (ounce equiv.)	4.9	5.4	5.4	4.2	5.5	4.9
Total lean meat from meat, poultry, fish	4.3	4.9	5.0	3.7	4.8	4.3
Total lean meat from meat alternates	0.6	0.5	0.4	0.5	0.6	0.6
Oils (grams)	18.5	18.2	18.8	14.9	17.5	20.8
Discretionary solid fats, alcoholic beverages, and added sugars						
Solid fats (grams)	51.2	57.6	54.5	** 42.5	61.6	51.3
Added sugars (teaspoon equiv.)	28.9	29.4	28.9	25.5	30.1	30.3
Alcoholic beverages	0.1 u	0.0 u	0.0 u	0.0 u	0.0 u	* 0.2 u

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants. NSLP participants were identified as children likely to have received a reimbursable school meal on the intake day (see Appendix A).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation. Statistically significant differences involving unreliable point estimates indicate the direction, but not magnitude of between-group differences.

Sources:NHANES 1999-2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994-2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5-18)' are age adjusted.

Table C-21—Fruit Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Citrus juice	25.2	24.7	25.8	28.5	23.1	21.2
2. Non-citrus juice	20.9	25.5	28.0	* 16.2	19.5	14.6
3. Fresh apple	13.4	12.7	12.1	12.0	14.6	19.4
4. Noncarbonated sweetened drink	6.9	5.6	4.7	** 8.4	7.7	7.5
5. Fresh banana	5.6	4.8	4.9	6.9	4.3	7.0
6. Fresh orange	3.8	4.1	4.8	4.6	<3	2.0
7. Fresh watermelon	<3	<3	<3	5.7 u	<3	1.8 u
All other food groups[2]	22.0	21.2	18.3	17.8	26.7	26.4
	5-8 years					
Sample size	578	352	238	118	114	96
1. Citrus juice	18.8	21.3	22.5	14.5 u	18.5	15.3
2. Non-citrus juice	23.4	25.8	33.4	24.3	8.6 u	* 18.6
3. Fresh apple	15.1	11.5	7.6	12.4	20.2	23.1
4. Noncarbonated sweetened drink	6.2	5.9	3.7	** 9.8	10.9	4.8
5. Fresh banana	8.7	8.8	9.9	16.7	6.4	5.9 u
6. Fresh orange	4.1	4.8	5.6 u	3.3 u	3.1 u	2.9 u
7. Fresh watermelon	<3	<3	<3	0.8 u	<3	0.7 u
All other food groups[2]	22.8	20.8	17.0	18.2	29.3	28.7
	9-13 years					
Sample size	998	593	390	230	203	152
1. Citrus juice	23.2	23.6	21.4	35.1	27.7	** 12.0
2. Non-citrus juice	20.7	25.2	29.4	** 13.8	17.2	10.0 u
3. Fresh apple	15.7	12.7	13.0	14.0	12.0 u	** 28.1
4. Noncarbonated sweetened drink	5.5	4.9	4.3	5.2	6.1	7.8
5. Fresh banana	4.9	3.7	3.8	3.8 u	3.5 u	* 9.4
6. Fresh orange	4.8	5.5	6.2 u	6.5 u	4.2	* <3
7. Fresh watermelon	<3	<3	<3	2.6 u	<3	2.2 u
All other food groups[2]	24.3	24.2	21.6	19.0	29.1	29.6
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Citrus juice	32.3	28.7	33.1	33.0	22.1 u	35.5
2. Non-citrus juice	19.0	25.6	22.2	12.1	30.6 u	16.2
3. Fresh apple	9.8	13.8	14.6	9.7	12.6 u	7.5
4. Noncarbonated sweetened drink	8.8	6.2	5.8	10.5	6.7 u	9.5
5. Fresh banana	3.8	<3	<3	2.2 u	3.4 u	5.5
6. Fresh orange	<3	<3	<3	3.6 u	<3	2.3 u
7. Fresh watermelon	4.8 u	<3	3.8 u	12.7 u	<3	2.2 u
All other food groups[2]	19.0	18.5	16.0	16.2	22.2	21.4

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-22—Vegetable Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
			All ages (5-18)			
Sample size	2,597	1,292	852	686	440	541
1. Cooked potatoes-fried	13.1	14.1	13.6	12.8	15.1	12.4
2. Salad (greens)	9.0	8.5	7.7	7.3	10.0	8.6
3. Potato chips	8.4	6.8	8.2	12.0	5.0	* 8.4
4. Cooked potatoes-not fried	7.2	7.6	6.6	5.8	8.9	6.6
5. Pizza w/ meat	5.4	5.9	6.1	4.8	5.5	5.4
6. Pasta dishes, italian style	4.9	6.0	4.3	5.6 u	8.2	** <3
7. Cooked corn	3.9	4.8	4.1	* <3	5.6	3.0
8. Sandwiches (excl. burgers)	3.0	<3	<3	2.4	<3	*** 5.2
All other food groups[2]	45.0	44.1	46.8	47.2	39.8	48.0
			5-8 years			
Sample size	578	352	238	118	114	96
1. Cooked potatoes-fried	11.9	12.4	9.9	8.9 u	16.0	13.1
2. Salad (greens)	6.1	7.7	4.1 u	1.9 u	12.8	* 4.0 u
3. Potato chips	8.3	6.6	7.8	12.2 u	5.0 u	9.9
4. Cooked potatoes-not fried	6.6	6.8	5.6 u	5.7 u	8.6 u	6.8 u
5. Pizza w/ meat	5.0	5.1	4.9 u	*** <3	5.4	6.3 u
6. Pasta dishes, italian style	4.8 u	6.0 u	<3	2.5 u	11.5 u	3.6 u
7. Cooked corn	6.0	7.2	6.6	5.0	8.1	4.3 u
8. Sandwiches (excl. burgers)	<3	<3	<3	3.1 u	<3	4.1 u
All other food groups[2]	48.9	46.8	57.9	59.2	31.0	47.9
			9-13 years			
Sample size	998	593	390	230	203	152
1. Cooked potatoes-fried	12.8	13.3	10.8	12.8	16.9	12.6
2. Salad (greens)	7.4	7.1	5.1	4.6 u	10.0	8.1 u
3. Potato chips	9.6	9.3	11.7	15.6	5.9	6.9
4. Cooked potatoes-not fried	7.8	9.1	8.3	2.4 u	10.3	6.9 u
5. Pizza w/ meat	5.6	5.5	6.2	6.8	4.6	5.3 u
6. Pasta dishes, italian style	4.5	5.2	5.3	5.5 u	4.9 u	1.4 u
7. Cooked corn	3.8	4.4	4.5	*** <3	4.3 u	2.5 u
8. Sandwiches (excl. burgers)	<3	<3	<3	2.2 u	<3	* 5.9
All other food groups[2]	45.8	44.1	46.6	49.3	40.7	50.4
			14-18 years			
Sample size	1,021	347	224	338	123	293
1. Cooked potatoes-fried	14.4	16.2	19.5	15.9	12.6	11.5
2. Salad (greens)	13.1	10.6	13.2	14.3	7.7 u	12.8
3. Potato chips	7.4	4.5	4.9 u	8.3 u	4.0 u	8.6
4. Cooked potatoes-not fried	7.0	6.6	5.8 u	9.4	7.5 u	6.3
5. Pizza w/ meat	5.5	6.9	7.1	5.3	6.6	4.6
6. Pasta dishes, italian style	5.4	6.8	4.9 u	8.3 u	8.8 u	2.6 u
7. Cooked corn	<3	3.2	<3	1.3 u	4.9 u	2.4 u
8. Sandwiches (excl. burgers)	3.8	3.5	5.0	* <3	<3	** 5.4
All other food groups[2]	41.0	41.8	37.9	35.3	46.0	45.8

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

See additional notes on table 6-2.

Table C-23—Grain Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Sandwiches (excl. burgers)	14.0	13.0	13.0	13.7	13.0	16.3
2. Pizza w/ meat	7.7	9.2	9.7	6.6	8.5	6.2
3. Cold cereal	7.2	7.6	7.8	7.4	7.4	6.8
4. Bread	5.9	5.5	5.7	5.3	5.1	5.6
5. Corn-based salty snacks	5.6	4.8	5.8	8.0	3.9	5.5
6. Hamburgers/cheeseburgers	5.0	5.7	6.2	5.3	5.0	3.9
7. Cookies	4.5	4.2	4.0	5.2	4.5	4.7
8. Popcorn	3.5	3.5	<3	1.3	5.8 u	4.9
9. Pasta dishes, italian style	<3	3.7	<3	2.6 u	5.4	** <3
All other food groups[2]	43.8	42.9	44.0	44.6	41.3	44.8
	5-8 years					
Sample size	578	352	238	118	114	96
1. Sandwiches (excl. burgers)	15.8	13.8	13.9	14.2	13.7	19.2
2. Pizza w/ meat	5.6	7.0	6.4 u	*** <3	7.9	4.9 u
3. Cold cereal	8.3	8.8	8.8	9.6	8.9	6.8
4. Bread	6.6	7.2	7.8 u	6.6 u	6.2	6.0
5. Corn-based salty snacks	4.5	4.4	4.6	5.5 u	4.0	4.6 u
6. Hamburgers/cheeseburgers	3.4	4.6	4.7	3.2 u	4.4 u	1.5 u
7. Cookies	5.1	5.0	4.6	5.9	5.8	5.0
8. Popcorn	3.6 u	<3	3.1 u	1.0 u	<3	* 7.0 u
9. Pasta dishes, italian style	<3	3.9 u	<3	1.0 u	8.7 u	1.9 u
All other food groups[2]	44.3	43.1	45.2	50.8	39.6	43.2
	9-13 years					
Sample size	998	593	390	230	203	152
1. Sandwiches (excl. burgers)	13.3	11.8	11.3	14.2	12.5	16.7
2. Pizza w/ meat	8.0	8.8	10.2	7.7 u	6.9	6.5 u
3. Cold cereal	7.1	6.9	6.6	7.7	7.2	7.3
4. Bread	5.6	7.0	7.7	4.5	5.9	3.2 u
5. Corn-based salty snacks	5.5	4.8	4.8	9.6	4.8	4.3
6. Hamburgers/cheeseburgers	5.6	6.1	6.8	3.8 u	5.0	5.4
7. Cookies	4.5	4.1	4.2	5.4	4.0	5.0
8. Popcorn	3.7	4.0 u	<3	1.4 u	8.0 u	4.7 u
9. Pasta dishes, italian style	<3	3.2	3.5	2.8 u	<3	* <3
All other food groups[2]	44.0	43.4	43.7	42.8	43.0	46.3
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Sandwiches (excl. burgers)	13.4	13.4	13.9	12.8	12.9	13.6
2. Pizza w/ meat	8.9	11.3	12.0	9.2	10.7	6.8
3. Cold cereal	6.4	7.2	8.1	5.3	6.3	6.2
4. Bread	5.5	<3	<3	5.1	3.5 u	7.9
5. Corn-based salty snacks	6.7	5.3	7.6	8.3	<3	** 7.5
6. Hamburgers/cheeseburgers	5.8	6.1	6.7	8.4	5.6 u	4.2
7. Cookies	4.0	3.6	3.3	4.3	3.9	4.1
8. Popcorn	3.3	4.1 u	<3	1.5	7.8 u	3.4

See footnotes at end of table.

Table C-23—Grain Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources — Continued

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	14-18 years					
9. Pasta dishes, italian style	<3	4.2 u	<3	3.8 u	5.5 u	1.5
All other food groups[2]	43.2	42.1	43.2	41.4	41.0	44.6

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-24—Milk Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Unflavored 2% milk	16.9	17.3	18.4	13.4	15.7	19.6
2. Unflavored whole milk	15.9	16.0	17.6	***31.5	13.0	*8.1
3. Flavored milk-%fat nfs	9.3	14.2	14.7	***3.1	13.4	***<3
4. Sandwiches (excl. burgers)	6.1	4.1	4.5	7.8	3.5	**8.6
5. Unflavored 1% milk	5.7	4.2	<3	1.8	8.3	11.0
6. Pizza w/ meat	5.6	6.1	6.6	5.6	5.6	4.9
7. Cheese	5.1	4.2	3.7	**7.3	4.9	5.3
8. Unflavored skim milk	4.6	<3	<3	1.7 u	5.0	*9.8
9. Flavored whole milk	3.7	4.4	5.5	3.3	3.1	2.5
10. Unflavored milk-%fat nfs	3.2	3.8	4.8	3.6	<3	1.8 u
All other food groups[2]	23.8	23.2	22.4	21.0	24.8	26.0
	5-8 years					
Sample size	578	352	238	118	114	96
1. Unflavored 2% milk	15.8	15.8	18.0	*7.6 u	12.1	20.8
2. Unflavored whole milk	19.6	17.0	23.1	***44.5	6.3 u	11.6 u
3. Flavored milk-%fat nfs	9.1	12.5	13.0	***<3	11.4	*5.0 u
4. Sandwiches (excl. burgers)	6.2	4.3	5.2	9.7 u	<3	8.9 u
5. Unflavored 1% milk	5.4	<3	<3	0.4 u	6.7 u	12.2 u
6. Pizza w/ meat	3.7	4.3	3.8 u	***<3	5.1	3.6 u
7. Cheese	4.1	3.7	3.7	5.6 u	3.8	4.5 u
8. Unflavored skim milk	4.1 u	3.5 u	<3	0.5 u	8.7 u	7.6 u
9. Flavored whole milk	4.6	5.8	6.1 u	5.0 u	5.2 u	1.9 u
10. Unflavored milk-%fat nfs	3.3	4.4	3.5 u	3.1 u	5.9	1.1 u
All other food groups[2]	24.1	26.1	22.7	19.3	32.1	22.9
	9-13 years					
Sample size	998	593	390	230	203	152
1. Unflavored 2% milk	18.5	17.5	15.0	16.3	20.7	22.8
2. Unflavored whole milk	12.8	12.5	13.5	*23.0	11.1	8.0 u
3. Flavored milk-%fat nfs	12.3	17.5	18.9	***4.3 u	15.7	***<3
4. Sandwiches (excl. burgers)	4.2	3.8	3.8	4.6 u	3.7	5.3 u
5. Unflavored 1% milk	6.4	5.2	<3	3.7 u	10.1	12.1
6. Pizza w/ meat	5.6	5.9	7.1	6.5	4.2	4.5
7. Cheese	5.6	4.9	4.4	*11.4	5.5	3.8
8. Unflavored skim milk	3.8	<3	<3	2.5 u	3.7 u	9.0 u
9. Flavored whole milk	3.9	4.6	6.0 u	1.9 u	<3	3.3 u
10. Unflavored milk-%fat nfs	5.2	5.8	8.5	5.4	<3	3.3 u
All other food groups[2]	21.8	20.0	20.0	20.4	20.0	26.6
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Unflavored 2% milk	16.2	18.2	22.3	15.0	13.6	15.5
2. Unflavored whole milk	16.2	18.8	17.5	*29.8	20.3	**5.4 u
3. Flavored milk-%fat nfs	6.4	12.2	11.8	**<3	12.7	***<3
4. Sandwiches (excl. burgers)	7.9	4.3	4.7	*9.5	3.9	**11.6
5. Unflavored 1% milk	5.4	4.4 u	<3	1.0 u	7.8 u	8.8

See footnotes at end of table.

Table C-24—Milk Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources — Continued

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	14-18 years					
6. Pizza w/ meat	7.2	7.8	8.2	8.0	7.4	6.3
7. Cheese	5.5	3.9	<3	4.5	5.1	7.4
8. Unflavored skim milk	5.7	<3	<3	1.8 u	3.3 u	* 12.5
9. Flavored whole milk	<3	3.2 u	4.5 u	3.3 u	<3	2.0 u
10. Unflavored milk-%fat nfs	<3	<3	<3	2.2 u	<3	0.6 u
All other food groups[2]	25.7	24.2	24.5	23.0	23.9	27.9

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-25—Meat and Bean Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Sandwiches (excl. burgers)	21.5	18.8	17.0	18.1	21.3	** 30.3
2. Chicken	17.1	17.0	17.4	21.3	16.4	14.3
3. Hamburgers/cheeseburgers	9.8	11.3	12.2	9.0	10.1	7.5
4. Beef	8.6	7.8	8.6	8.3	6.5	9.0
5. Pork	3.8	5.2	7.5	1.9	<3	3.7
6. Pasta dishes, italian style	<3	3.2	<3	4.3 u	5.3	* <3
7. Nuts	<3	<3	<3	1.4 u	5.6 u	0.9 u
All other food groups[2]	34.2	34.0	34.8	35.6	32.5	33.2
	5-8 years					
Sample size	578	352	238	118	114	96
1. Sandwiches (excl. burgers)	22.0	19.0	14.8	15.2	25.0	29.5
2. Chicken	19.5	19.8	19.2	20.7	20.8	18.8
3. Hamburgers/cheeseburgers	6.4	7.8	8.4	7.3 u	7.0 u	3.0 u
4. Beef	9.5	9.8 u	13.2 u	8.8 u	4.9 u	9.4 u
5. Pork	<3	<3	3.4 u	2.6 u	<3	1.4 u
6. Pasta dishes, italian style	3.2 u	4.4 u	<3	1.2 u	8.9 u	1.8 u
7. Nuts	<3	3.6 u	<3	0.9 u	5.7 u	0.1 u
All other food groups[2]	35.1	33.0	37.5	43.2	26.4	35.9
	9-13 years					
Sample size	998	593	390	230	203	152
1. Sandwiches (excl. burgers)	21.8	17.5	16.7	23.0	18.6	** 36.4
2. Chicken	14.2	15.4	18.0	21.8	12.0	* 6.6 u
3. Hamburgers/cheeseburgers	11.5	12.2	14.2	* 7.5 u	9.6	10.9
4. Beef	6.8	5.9 u	4.8 u	6.8 u	7.4 u	5.6 u
5. Pork	4.4	4.3 u	5.1 u	1.4 u	3.2 u	7.4 u
6. Pasta dishes, italian style	<3	<3	<3	3.0 u	<3	* <3
7. Nuts	3.9 u	5.0 u	<3	1.8 u	10.9 u	1.4 u
All other food groups[2]	36.0	38.0	39.4	34.9	36.2	31.6
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Sandwiches (excl. burgers)	20.8	19.9	19.0	15.5	21.0	24.7
2. Chicken	18.1	16.2	15.3	21.2	17.3	18.5
3. Hamburgers/cheeseburgers	10.7	13.2	13.1	12.1	13.2	7.6
4. Beef	9.8	8.0 u	8.9 u	9.4	6.9 u	12.2
5. Pork	4.4	8.4 u	13.4 u	2.0	<3	1.8 u
6. Pasta dishes, italian style	3.6	3.8 u	<3	8.1 u	5.6 u	1.3 u
7. Nuts	<3	<3	<3	1.5 u	<3	1.1 u
All other food groups[2]	31.8	30.6	28.0	30.2	33.8	32.7

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-26—Oil Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Sandwiches (excl. burgers)	15.8	13.7	13.9	14.1	13.5	** 22.6
2. Corn-based salty snacks	14.6	13.4	16.0	19.8	10.2	13.7
3. Chicken	10.9	12.1	10.3	10.4	14.4	* 8.6
4. Potato chips	10.3	9.0	11.4	15.7	6.2	8.2
5. Salad (greens)	9.0	9.8	10.2	5.9	9.1	8.8
6. Salad dressing	4.7	4.7	5.8	6.7 u	3.1	4.0 u
7. Nuts	<3	3.4	<3	1.6 u	5.9 u	1.1 u
All other food groups[2]	32.0	33.9	31.4	25.8	37.6	33.0
	5-8 years					
Sample size	578	352	238	118	114	96
1. Sandwiches (excl. burgers)	19.9	16.7	20.7	12.5 u	12.0 u	** 28.7
2. Corn-based salty snacks	13.1	13.1	15.4	14.1 u	10.4	13.0
3. Chicken	14.2	17.2	13.9	8.1 u	21.0	12.3 u
4. Potato chips	8.9	8.1	10.4	15.7 u	5.4 u	7.1 u
5. Salad (greens)	5.4 u	7.5 u	5.0 u	2.7 u	10.4 u	3.1 u
6. Salad dressing	4.8 u	<3	<3	20.8 u	<3	1.9 u
7. Nuts	<3	4.2 u	3.2 u	1.0 u	5.4 u	0.2 u
All other food groups[2]	31.2	30.9	28.9	25.1	33.3	33.8
	9-13 years					
Sample size	998	593	390	230	203	152
1. Sandwiches (excl. burgers)	14.8	10.5	8.9	14.7	12.2	* 27.4
2. Corn-based salty snacks	15.2	13.9	15.8	23.3	11.8	12.4
3. Chicken	8.5	9.7	8.4	11.6	11.2	* 3.6 u
4. Potato chips	12.4	12.7	17.4	18.2 u	7.4	7.8 u
5. Salad (greens)	7.4	7.1	5.3 u	5.2 u	9.2	9.2 u
6. Salad dressing	<3	3.6 u	<3	*** <3	4.4 u	1.2 u
7. Nuts	4.4	6.0 u	<3	1.7 u	12.0 u	1.6 u
All other food groups[2]	34.7	36.4	40.5	** 25.1	31.8	36.9
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Sandwiches (excl. burgers)	13.6	14.5	13.5	14.9	16.0	12.8
2. Corn-based salty snacks	15.2	13.1	16.6	20.7	8.3	*** 15.7
3. Chicken	10.7	10.6	9.3	11.1	12.4 u	10.6
4. Potato chips	9.3	5.8	6.0 u	13.1 u	5.6 u	9.4
5. Salad (greens)	13.7	14.5	19.3 u	9.0	8.0 u	13.1
6. Salad dressing	6.8	7.7	11.4 u	2.0 u	<3	8.6 u
7. Nuts	<3	<3	<3	1.9 u	<3	1.4 u
All other food groups[2]	29.8	33.8	24.0	27.2	47.1	* 28.4

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-27—Saturated Fat Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
			All ages (5-18)			
Sample size	2,597	1,292	852	686	440	541
1. Sandwiches (excl. burgers)	11.5	10.2	10.2	11.3	10.3	14.0
2. Unflavored whole milk	6.4	6.6	7.4	** 11.5	5.1	3.3
3. Hamburgers/cheeseburgers	6.0	6.8	7.4	5.4	5.9	4.8
4. Ice cream	5.3	4.6	3.2	5.0	6.5	6.8
5. Pizza w/ meat	4.9	5.5	5.8	4.2	5.2	4.2
6. Flavored milk-%fat nfs	3.5	5.6	5.8	*** <3	5.3	*** <3
All other food groups[2]	62.4	60.7	60.2	61.5	61.7	65.9
			5-8 years			
Sample size	578	352	238	118	114	96
1. Sandwiches (excl. burgers)	12.4	11.1	11.1	12.1	11.2	14.7
2. Unflavored whole milk	9.1	8.1	11.3	** 19.0	<3	5.3 u
3. Hamburgers/cheeseburgers	3.5	4.3	4.2	3.0 u	4.5 u	1.8 u
4. Ice cream	5.9	5.2	3.7 u	3.9 u	7.8	8.3
5. Pizza w/ meat	3.9	4.6	4.2	*** <3	5.2	3.7 u
6. Flavored milk-%fat nfs	4.0	5.6	6.0	*** <3	5.0	** <3
All other food groups[2]	61.3	61.0	59.5	59.6	63.5	64.0
			9-13 years			
Sample size	998	593	390	230	203	152
1. Sandwiches (excl. burgers)	10.2	9.4	9.1	10.8	9.7	12.8
2. Unflavored whole milk	5.1	5.0	5.4	8.5	4.6	3.2 u
3. Hamburgers/cheeseburgers	6.5	6.8	8.2	** 3.9	4.9	6.4
4. Ice cream	6.0	5.2	3.7	* 7.0	7.4	7.2
5. Pizza w/ meat	5.1	5.4	6.4	5.3	4.1	4.1
6. Flavored milk-%fat nfs	4.6	6.8	7.0	*** <3	6.5	*** <3
All other food groups[2]	62.5	61.3	60.2	62.9	62.8	66.0
			14-18 years			
Sample size	1,021	347	224	338	123	293
1. Sandwiches (excl. burgers)	12.1	10.4	10.6	11.2	10.1	14.6
2. Unflavored whole milk	5.5	6.9	6.3	8.6	7.5	** <3
3. Hamburgers/cheeseburgers	7.4	8.7	9.2	9.0	8.1	5.5
4. Ice cream	4.2	3.4 u	<3	3.9	4.6 u	5.3
5. Pizza w/ meat	5.5	6.4	6.6	5.3	6.3	4.8
6. Flavored milk-%fat nfs	<3	4.3	4.3	* <3	4.2	*** <3
All other food groups[2]	63.2	59.9	60.7	61.5	59.0	67.3

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-28—Sodium Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Sandwiches (excl. burgers)	14.9	13.2	13.1	13.4	13.3	** 18.4
2. Pizza w/ meat	5.4	6.3	6.7	4.7	5.8	4.6
3. Hamburgers/cheeseburgers	4.9	5.5	6.1	4.6	4.6	4.2
4. Pasta dishes, italian style	3.2	4.4	<3	<3	6.4	** <3
All other food groups[2]	71.6	70.7	71.2	74.4	69.9	71.5
	5-8 years					
Sample size	578	352	238	118	114	96
1. Sandwiches (excl. burgers)	14.9	12.9	12.9	12.4	13.0	18.8
2. Pizza w/ meat	4.3	5.1	4.8 u	*** <3	5.6	4.1 u
3. Hamburgers/cheeseburgers	3.1	3.9	4.0	2.7 u	3.6 u	1.5 u
4. Pasta dishes, italian style	3.0	4.2 u	<3	1.2 u	8.8 u	1.8 u
All other food groups[2]	74.8	73.9	77.0	82.0	69.1	73.8
	9-13 years					
Sample size	998	593	390	230	203	152
1. Sandwiches (excl. burgers)	14.4	13.2	12.6	14.3	13.9	18.1
2. Pizza w/ meat	5.7	6.1	7.0	5.9	4.8	4.7
3. Hamburgers/cheeseburgers	5.4	5.6	6.6	* 3.4	4.2	5.8
4. Pasta dishes, italian style	<3	3.6	3.7	3.9 u	3.3 u	* <3
All other food groups[2]	71.5	71.5	70.0	72.4	73.7	71.0
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Sandwiches (excl. burgers)	15.4	13.4	13.8	13.4	13.0	18.5
2. Pizza w/ meat	6.0	7.4	7.8	5.9	7.0	4.9
3. Hamburgers/cheeseburgers	5.9	6.6	7.3	7.2	5.8	4.7
4. Pasta dishes, italian style	3.5	5.4 u	3.5 u	3.3 u	7.5 u	1.7
All other food groups[2]	69.2	67.2	67.7	70.2	66.7	70.2

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-29—Discretionary Solid Fat Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Sandwiches (excl. burgers)	9.5	8.9	9.0	9.4	8.9	10.0
2. Cooked potatoes-fried	6.7	7.0	6.6	7.5	7.7	5.9
3. Pizza w/ meat	6.1	6.9	7.3	5.2	6.4	5.4
4. Unflavored whole milk	5.8	6.1	6.8	** 10.3	4.7	3.0
5. Hamburgers/cheeseburgers	5.1	5.7	6.4	4.6	4.9	4.3
6. Cookies	4.8	4.5	4.2	5.7	4.9	5.2
7. Ice cream	4.8	4.1	<3	4.6	5.8	6.2
8. Flavored milk-%fat nfs	3.1	4.9	5.2	*** <3	4.6	*** <3
9. Macaroni & cheese	<3	<3	<3	1.9	3.0	5.3
All other food groups[2]	51.3	50.0	50.6	49.9	49.1	53.8
	5-8 years					
Sample size	578	352	238	118	114	96
1. Sandwiches (excl. burgers)	10.1	9.8	9.7	10.2	10.0	9.7
2. Cooked potatoes-fried	5.4	5.8	4.3	3.9 u	8.2	5.9
3. Pizza w/ meat	4.7	5.6	5.2	*** <3	6.2	4.6 u
4. Unflavored whole milk	8.2	7.4	10.5	** 16.6	<3	4.8 u
5. Hamburgers/cheeseburgers	<3	3.6	3.6 u	2.4 u	3.5 u	1.6 u
6. Cookies	5.2	4.9	4.4	6.3	5.7	5.4
7. Ice cream	5.2	4.6	3.4 u	3.6 u	6.6	7.5
8. Flavored milk-%fat nfs	3.4	4.9	5.3	*** <3	4.3	** <3
9. Macaroni & cheese	<3	<3	<3	1.4 u	3.7 u	5.5 u
All other food groups[2]	52.0	51.2	52.6	53.1	49.1	53.2
	9-13 years					
Sample size	998	593	390	230	203	152
1. Sandwiches (excl. burgers)	8.5	8.6	8.6	9.2	8.7	8.0
2. Cooked potatoes-fried	6.6	7.0	5.7	6.4 u	8.9	* 5.9
3. Pizza w/ meat	6.4	6.8	7.9	6.8	5.2	5.2
4. Unflavored whole milk	4.7	4.7	4.9	8.0	4.4	2.9 u
5. Hamburgers/cheeseburgers	5.6	5.7	6.8	* 3.6	4.2	6.0
6. Cookies	5.1	4.4	4.5	6.5	4.2	6.2
7. Ice cream	5.4	4.7	3.3	* 6.5	6.6	6.4
8. Flavored milk-%fat nfs	4.1	6.0	6.3	*** <3	5.7	*** <3
9. Macaroni & cheese	<3	<3	<3	2.7 u	<3	6.4 u
All other food groups[2]	50.7	50.2	50.6	48.8	49.5	52.8
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Sandwiches (excl. burgers)	10.0	8.5	8.8	8.8	8.2	12.2
2. Cooked potatoes-fried	8.0	7.8	9.3	11.6	6.1	6.0
3. Pizza w/ meat	6.9	8.1	8.4	6.4	7.8	6.2
4. Unflavored whole milk	5.0	6.3	5.9	7.5	6.8	** <3
5. Hamburgers/cheeseburgers	6.4	7.6	8.3	7.5	6.8	4.8
6. Cookies	4.3	4.3	3.9	4.3	4.8	4.2
7. Ice cream	3.8	3.0 u	<3	3.5	4.1 u	4.9

See footnotes at end of table.

Table C-29—Discretionary Solid Fat Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources — Continued

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	14-18 years					
8. Flavored milk-%fat nfs	<3	3.8	3.9	* <3	3.7	*** <3
9. Macaroni & cheese	<3	<3	<3	1.5 u	<3	4.2
All other food groups[2]	51.3	48.8	49.0	48.5	48.6	55.3

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.

Table C-30—Added Sugar Intakes: Percentage of MyPyramid Intakes Contributed by Different Food Sources

			Income-eligible for Free/RP Meals[1]		Higher-income[1]	
	All Children	All NSLP Participants	NSLP Participants	Non-participants	NSLP Participants	Non-participants
	All ages (5-18)					
Sample size	2,597	1,292	852	686	440	541
1. Regular soda	30.8	29.9	31.8	** 38.5	27.5	28.3
2. Noncarbonated sweetened drink	14.7	13.4	13.0	* 16.1	13.8	15.3
3. Candy	7.2	7.8	8.2	7.1	7.4	6.6
4. Cold cereal	7.4	7.8	7.6	7.6	8.0	6.8
5. Ice cream	4.3	3.9	<3	3.6	5.3	5.4
6. Cake/cupcakes	3.8	<3	3.4	2.9	<3	** 5.4
7. Syrups/sweet toppings	3.7	3.6	<3	3.5	5.1	3.6
All other food groups[2]	28.3	30.7	30.6	*** 20.8	31.0	28.6
	5-8 years					
Sample size	578	352	238	118	114	96
1. Regular soda	18.3	17.0	18.4	24.7	15.2	18.7
2. Noncarbonated sweetened drink	18.1	17.4	16.3	22.4	18.8	16.0
3. Candy	5.5	5.4	5.9	5.4 u	4.7	6.0
4. Cold cereal	10.1	9.2	10.2	10.8	7.8	10.6
5. Ice cream	5.5	4.9	3.7	3.7 u	6.3	7.8
6. Cake/cupcakes	3.5	3.9	4.3	3.5 u	3.5	2.8 u
7. Syrups/sweet toppings	4.1	4.8	<3	2.7 u	7.6 u	3.5 u
All other food groups[2]	34.9	37.5	38.6	*** 26.9	36.1	34.6
	9-13 years					
Sample size	998	593	390	230	203	152
1. Regular soda	30.5	29.2	31.7	* 39.3	25.7	27.9
2. Noncarbonated sweetened drink	13.1	12.5	13.0	11.9	11.9	14.8
3. Candy	7.8	8.0	7.6	8.4	8.6	6.8
4. Cold cereal	6.8	7.0	7.0	7.9	6.9	5.8
5. Ice cream	4.6	4.3	3.1	4.6	6.0	5.2
6. Cake/cupcakes	3.4	<3	3.5	1.9 u	<3	* 6.0
7. Syrups/sweet toppings	4.5	4.3	3.2	6.5	5.8	3.4 u
All other food groups[2]	29.4	32.1	31.0	*** 19.4	33.5	30.1
	14-18 years					
Sample size	1,021	347	224	338	123	293
1. Regular soda	41.2	41.2	42.8	48.8	39.2	36.6
2. Noncarbonated sweetened drink	13.6	11.0	10.5	* 15.2	11.7	15.2
3. Candy	7.9	9.6	10.8	7.1	8.2	6.8
4. Cold cereal	5.8	7.6	6.2	4.6	9.4	* 4.8
5. Ice cream	<3	<3	<3	2.6	3.7 u	3.6
6. Cake/cupcakes	4.3	<3	<3	3.4 u	<3	** 6.8
7. Syrups/sweet toppings	<3	<3	<3	1.0 u	<3	* 4.0
All other food groups[2]	21.8	23.9	23.8	* 17.4	24.1	22.2

Notes Estimate is not displayed when percentage is <3 or >97. Table shows the percent of MyPyramid equivalents contributed by each food source for each population subgroup (column). Food sources are ranked by their contribution to overall (All children, all ages) intake. Food sources shown separately are those contributing at least 5 percent to the Pyramid intake of any population subgroup (column).

u Denotes individual estimates not meeting the standards of reliability or precision due to inadequate cell size or large coefficient of variation.

1 T-tests were used to test for statistically significant differences between NSLP participants and nonparticipants within income groups. Significant differences are noted by * (.05 level), ** (.01 level), or *** (.001 level) on the estimates for nonparticipants.

2 For each age group, "All other" includes all food groups that each contribute less than 5 percent of MyPyramid Intakes to every population subgroup (column).

Sources: NHANES 1999–2002 dietary recalls and MyPyramid Equivalents Database for USDA Survey Food Codes, 1994–2002, Version 1.0. Sample includes school children with weekday recalls during periods when school was in session. Excludes pregnant and breastfeeding girls. Estimates are based on a single dietary recall per child. Results for 'All ages (5–18)' are age adjusted.