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USDA Summer Meals Study
Volume 4. Nutritional Quality of Meals Offered at Summer Meal Program Sites

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Executive Summary

The USDA Summer Meals Study provides a comprehensive assessment of the two summer meal programs operated by the U.S. Department of Agriculture (USDA), the Summer Food Service Program (SFSP) and the Seamless Summer Option (SSO). This report, the fourth volume in the USDA Summer Meals Study report series, focuses on the **nutritional content of meals offered at summer meal program sites.**

Background

The summer meal programs provide free, nutritious meals and snacks to children ages 18 years and younger who rely on school meals during the school year. These programs serve meals at sites located in low-income areas and at sites in other areas serving a high proportion of low-income children, both in the summer when school is not in session and during long school breaks in communities with year-round school calendars. Children who participate in the summer meal programs receive meals free of charge, regardless of household income.[1] Meal types include breakfast, lunch, supper, and snack (morning, afternoon, and evening). Sites may receive reimbursement for up to two meals (including snacks) per child per day, with the exception of migrant sites and camps that can receive reimbursement for up to three meals each day.[2] To be eligible for reimbursement, meals must meet program meal patterns that specify food components and quantities.

The summer meal programs are federally funded and State administered. In both the SFSP and SSO, sponsors are approved by the State to operate one or more summer meal sites. Sites are located in a variety of settings, such as schools, parks, community centers, Boys and Girls clubs, apartment complexes, churches, and migrant centers. Sites can be open or closed-enrolled, and they can also be camps. Open sites are located in a low-income area where at least half of the children in the defined geographic area are eligible for free or reduced-price school meals; any child age 18 and under can receive free meals at these sites. Closed-enrolled sites may or may not be located in a low-income

[1] Eligibility at camps is determined based on household income at camps.

[2] Sites cannot serve a lunch and supper combination.

area; however, at least half of the children enrolled at the program site (e.g., a parks and recreation program, summer enrichment programs) must be eligible for free or reduced-price meals, and all children who are enrolled receive free meals. Residential or day camps only receive reimbursement for meals served to children who qualify for free and reduced-price meals.

Overview of the USDA Summer Meals Study

The USDA Summer Meals Study is a nationally representative study of summer meal program sites, program participants, and program nonparticipants. The study employed a mixed-methods design to address the research objectives. Results presented in this report volume are based on an analysis of menus for meals and snacks served at 745 summer meal program sites. Results are presented as descriptive statistics such as means and percentages for all sites and for SFSP and SSO sites separately.

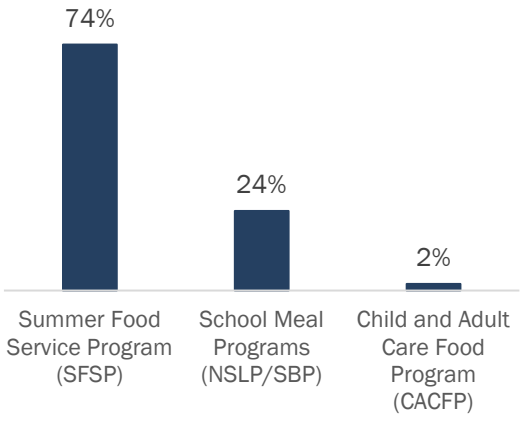
Key Findings

Meals Served at Summer Meal Sites

Nearly three out of four summer meal sites follow the SFSP meal patterns, almost one out of four sites follows the school meal program meal patterns, and only two percent follow the CACFP meal patterns (see Figure ES-1).

Almost all summer meal sites (94%) serve lunch, nearly two-thirds (63%) serve breakfast, and about one-fifth (21%) serve a snack (see Figure ES-2). More SSO sites than SFSP sites serve breakfast (85% compared with 59%) and lunch (98% compared with 93%). More SFSP sites than SSO sites serve a snack (24% compared with 10%).

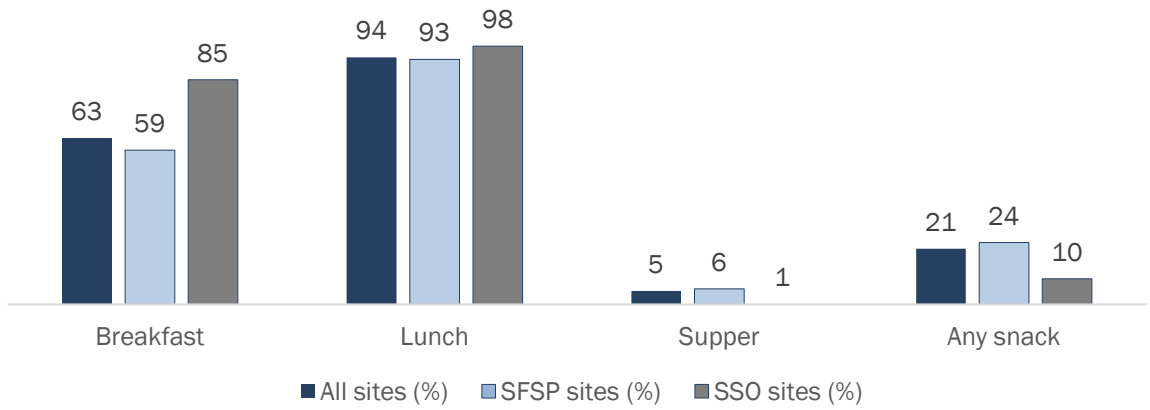
Figure ES-1. Meal patterns used by summer meal sites



Source: USDA Summer Meals Study, Menu Planning Survey, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 1,030; weighted n = 68,188.
Note: Total may not add to 100 due to rounding.

Two-thirds of sites offer two meals and/or snacks per day, one quarter offer one meal/snack, and less than 10 percent offer three or more meals/snacks. More SSO sites than SFSP sites serve two meals/snacks per day. Just over half of the sites offer breakfast and lunch (54%), 21 percent offer lunch only, 10 percent offer lunch and snack, and five percent offer breakfast, lunch, and snack. Less than two percent of sites offer other meals and combinations of meals and snacks (data not shown).

Figure ES-2. Percentage of sites that serve each meal/snack



Source: USDA Summer Meals Study, Site Survey, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 948; weighted n = 68,258.
Notes: Total may not add to 100 due to rounding. Supper is not reported for SSO sites due to an insufficient sample size. All differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Compliance with Meal Pattern Requirements

Site menus were assessed to examine the extent to which sites offer meals and snacks that comply with the daily meal pattern requirements for food components and quantities. Menus were assessed based on the meal patterns that they follow—either SFSP or school meal program (NSLP/SBP) meal patterns.[3] As site menus provided by sponsors using the NSLP/SBP meal patterns did not specify portion size adjustments by age, and since the majority of sites served children in the K-5 grade range, results are presented for the comparison to the meal pattern for the K-5 grade range. There are no age groups for the SFSP meal patterns. For lunch and breakfast, menus for sites following the school meal program meal patterns were also assessed to determine compliance with

[3] No analysis was done for the 10 sites that stated they followed the CACFP meal pattern, due to the low number.

weekly food component and quantity requirements, and for compliance with the dietary specifications for calories, saturated fat, and sodium. There are no weekly meal pattern requirements for SFSP.

Lunch

- **Nearly all sites (98%) offer foods in all of the required food components at lunch daily, and about 71 percent of sites also provide the required quantities of those components. Results are similar for sites following the SFSP and school meal program meal patterns.** For food component quantities, the vast majority of sites offer milk (99%), grains/breads (96%), fruits (93%), and vegetables (89%) in the required amounts. When less-than-required quantities of food are seen, it is primarily in the meats/meat alternates component, with 16 percent of sites offering less-than-required amount of meats/meat alternates at lunch. Insufficient quantities are seen primarily in the vegetables component for sites following the NSLP meal patterns, with about 21 percent of sites not offering the required amount of vegetables at lunch.

- **Among sites following the NSLP meal pattern, 88 percent of sites offer all required food components across the week, with 11 percent serving lunches that meet all weekly requirements, which include quantities and subgroup requirements for all components. Nearly all sites meet all weekly requirements for milk, fruits/100% fruit juice, and meats/meat alternates. There is lower compliance for the vegetable and grain/bread components.**

  - More than nine out of ten sites (94%) offer vegetables at every lunch, and slightly more than eight of ten sites (81%) provide the weekly required amounts. For vegetable subgroups, most sites offer vegetables in all subgroups over the course of a week. More than three-quarters of sites offer the required weekly amount of red/orange vegetables (80%) and starchy vegetables (78%), with slightly less than three-quarters offering the required weekly amount of dark green vegetables (70%) and other vegetables (69%); less than one-half of sites (44%) offer the required weekly amount of beans/peas.

  - Nearly all sites (99%) offer grains at every lunch, but slightly less than three-quarters (71%) meet all weekly requirements for grains (i.e., offer the required weekly amount, meet the 100 percent whole grain-rich requirement in effect at the time of the study, and meet the grain-based desserts requirement). Nearly all sites (99%) offer at least half of their grains as whole grain-rich products at lunch.

- **All sites following the NSLP meal pattern offer the minimum required daily amount of calories and meet the requirement to limit saturated fat to less than 10 percent of calories, while only 12 percent of sites meet every dietary specification.** Twenty-two percent meet the requirement for sodium (the Target 1 values in effect in SY 2017-2018), and 16 percent do not exceed the maximum daily calorie requirement.

Breakfast

- **All sites (100%) offer foods in the three required food components at breakfast daily, and 84 percent of sites provide the required quantities of those components. Results are similar for sites following the SFSP and school meal program meal patterns, though somewhat fewer sites following the school meal program meal patterns meet all quantity requirements (76% compared with 87%).** Overall, milk is offered in the required amount by nearly all sites (98%); more than 90 percent of sites meet the quantity requirements for fruits (94%) and grains/breads (92%). Fewer sites that follow the SBP meal patterns meet the quantity requirements for milk (92% compared with 100%) and fruits (85% compared with 97%).

- **Among sites following the SBP meal pattern, almost all sites (98%) offer foods in all three required food components over the week, and about half (47%) offer breakfasts that include the required weekly amounts of foods in all three components.** Most sites (95%) offer the required weekly amount of milk, while nearly three-fourths (74%) of sites meet all weekly requirements for fruits (i.e., they offer the required weekly amount of fruit and no more than half that amount as 100% fruit juice). Nearly two-thirds (65%) meet all weekly requirements for grains (i.e., they offer the required weekly amount of grains and meet the 100 percent whole grain-rich requirement in effect at the time of the study). All sites (100%) offer at least half of their grains as whole grain-rich products at breakfast.

- **All sites (100%) following the SBP meal pattern offer breakfasts that provide the minimum daily calories and meet the requirement to limit saturated fat to less than 10 percent of calories, while about 13 percent of sites meet all SBP dietary specifications.** About one-half of sites (47%) offer breakfasts that meet the sodium requirement (the Target 1 values in effect in SY 2017-2018); fewer than one-fifth (16%) do not exceed the maximum daily calorie requirement at breakfast.

Snack

- **Nearly all sites (98%) offer snacks that include two food components daily, as required; however, only about 12 percent of sites offer them in the required quantities. The two most commonly offered food components at snack are grains/breads and fruits/vegetables.** Most sites (92%) offer foods from the grains/breads component, and 85 percent offer them in the required amount. In contrast, 88 percent of sites offer foods from the fruits/vegetables component, but only one percent offer the required ¾ cup amount. Only 15 percent of sites offer foods from the meats/meat alternates food group, and nine percent offer milk at snack. When they are offered, however, sites generally provide the required amounts: 97 percent of sites provide the required quantity of meats/meat alternates, and 98 percent of sites provide the required quantity of milk.

Types of Foods Offered

Site menus were assessed to determine the foods offered at meals and snacks, including the number of choices per day and different items per week and most frequently offered foods in each food group. Foods were classified into eight major food groups and 88 minor food groups, consistent with the groups reported in the USDA, FNS, School Nutrition and Meal Cost Study (Gearan et al, 2019). One of the eight major groups is combination entrées; the other seven groups exclude items that are part of a combination entrée. The major food groups are milk; fruits/100% fruit juices; vegetables; combination entrées; separate grains/breads; separate meats/meat alternates; desserts/other menu items; and accompaniments. The 88 minor groups subdivide the major food groups on the basis of factors that affect nutrient content, such as ingredients or preparation method.

Lunch

- **On a daily basis, all sites offer one or more types of milk at lunch, and most sites offer one or more types of fruits/100% fruit juices (98%), vegetables (79%), and combination entrées (85%) that typically contain meats/meat alternates and grains/breads. In addition, about one-third (34%) of sites offer separate meats/meat alternates and 29 percent offer separate grains/breads.** Six out of ten sites (60%) offer one or more accompaniments at lunch, and about one out of ten sites (12%) offers one or more desserts/other menu items. SFSP sites are less likely than SSO sites to offer fruits/fruit juices (94% compared with 98%), vegetables[4] (76% compared with 97%) and accompaniments (57% compared with 75%) at lunch.

- **On a daily basis, almost two-thirds of sites (64%) offer two or more choices of milk at lunch, and almost half (46%) offer two or more choices of fruits/100% fruit juices.** One-quarter of sites (25%) offer only one option of separate grains/breads, and only four percent offer two or more choices of separate grains/breads (due to the inclusion of grains/breads as part of combination entrées); twenty-two percent of sites offer two or more combination entrées each day. Substantially more SSO sites offer two or more choices of vegetables each day than SFSP sites (71% of SSO sites, compared with 28% of SFSP sites).

- **Lunches offered over the course of a week typically include more than one type of food in seven of the eight major food groups, with the greatest number of items in the fruits/100% fruit juices group (an average of 5.9 different items per week), followed by the vegetables group (an average of 4.1 different items per**

[4] In the SFSP meal patterns, fruits/vegetables are combined into one component, which may partially explain why SFSP sites offer fewer vegetables than SSO sites.

week). SSO sites on average offer more items than SFSP sites in the vegetables, combination entrées, and milk food groups.

- **The most frequently offered foods at lunch are as follows:**
  - Unflavored low-fat milk is the most frequently offered type of **milk** at lunch, offered by 86 percent of sites, followed by flavored fat-free milk (offered by 65% of sites).
  - The top five most frequently offered **vegetables** at lunch are carrots (offered by 30% of sites), tomatoes (13%), broccoli (10%), French fries and other fried potatoes (9%), and corn (9%).
  - The top five most frequently offered **fruits** at lunch are apples (offered by 30% of sites), oranges (21%), peaches (21%), bananas (17%), and applesauce (17%). Slightly more than half of summer meal sites (55%) offer fresh or raw fruits at lunch, while about one-third (34%) offer sweetened canned fruits. Slightly more than one-fourth of all sites (27%) offer 100% fruit juice; fewer SSO sites than SFSP sites offer 100% fruit juice (8% compared with 31%).
  - The most frequently offered **combination entrée** is a sandwich with plain meat, poultry, or fish, offered by nearly four of ten sites (36%). A peanut butter sandwich is offered by nearly 16 percent of all sites.
  - The most frequently offered **separate grain/bread items** (not part of a combination entrée) include crackers, croutons, or pretzels; and breads, rolls, bagels, or other plain breads, both offered by 10 percent of sites.
  - The most frequently offered separate **meats/meat alternates item (not part of a combination entrée)** at lunch is cheese, offered at 15 percent of sites, followed by breaded or fried chicken/turkey, offered by eight percent of sites.
  - The most frequently offered **dessert/other menu item** at lunch is cookies, offered by six percent of sites. All other items in the desserts and other menu items category are offered by fewer than three percent of sites.
  - For **accompaniments**, almost half of sites (47%) offer condiments and toppings, such as ketchup and mayonnaise, at lunch and about one-third (32%) offer salad dressing.

Breakfast

- **All sites (100%) offer one or more types of milk at breakfast, nearly all sites offer fruits/100% fruit juices (99%), and most sites offer one or more types of a separate grain/bread item that is not part of a combination entrée (82%).** Nearly one-third of sites (32%) offer desserts/other menu items at breakfast; and one out of

five offer separate meats/meat alternates (not part of a combination entrée). Combination entrées are offered by 13% of sites.

- **On a daily basis, 62 percent of sites offer two or more choices of milk at breakfast; more than half (53%) offer two or more choices of fruits/100% fruit juices; and 21 percent offer two or more choices of separate grain/bread items.** The percentages of sites offering choices in other food groups are much lower. When examining the number of choices by program type, SSO sites are two to three times as likely as SFSP sites to offer two or more choices for milk (77% for SSO compared with 38% for SFSP), fruits/100% fruit juices (60% compared with 18%), and separate grains/breads (32% compared with 12%).

- **Breakfasts offered over the course of a week typically include more than one type of food in each of the three required components, with the greatest number of items in the fruits/100% fruit juices group (an average of 6 different items per week), followed by the grain or bread items from the separate grains/breads group (an average of 4 different items per week), and milk group (an average of 2 different items per week).** Sites offer fewer weekly items (1 or less per week) in the remaining food components.

- **The most frequently offered foods at breakfast are as follows:**

  - Unflavored low-fat milk is the most frequently offered type of **milk** at breakfast, offered by 93 percent of sites, followed by flavored fat-free milk (offered by 49% of sites). About one-quarter of sites (26%) offer fat-free, unflavored milk.

  - The most commonly offered **separate grains/breads** at breakfast include sweetened cold cereal (offered by 45% of sites), followed by unsweetened cold cereal (25%). Besides cereal, the other most commonly offered foods from the separate grains/breads group include muffins, sweet/quick breads (offered by 17% of sites); breads, rolls, bagels, and other plain breads (14%); and pancakes, waffles, or French toast (11%).

  - Fresh **fruit** is offered in nearly half of all breakfasts (44%), while sweetened canned fruit is offered in three out of ten breakfasts (29%). The most frequently offered fruits, excluding 100% juices, at breakfast are apples (offered by 23% of sites), bananas (19%), applesauce (19%), oranges (19%), and peaches (17%). Juice is the most common form of fruits/100% fruit juices offered at breakfast, offered by 60 percent of sites.

Snack

- **More than three-quarters of sites offer one or more type of fruits/100% fruit juices (84%); almost half offer desserts/other menu items (48%) and separate grains/breads (47%).** Sites offer the remaining components less frequently in snacks: meats/meats alternates are offered by 15 percent of sites; milk is offered by 10 percent of sites; and vegetables are offered by three percent of sites.

- **On a daily basis, slightly more than one 1 out of 10 sites (13%) offers two or more choices from the fruits/100% fruit juices group at snack. Most of the fruit offered at snack is in the form of 100% fruit juice.** Five percent or fewer sites offer two or more choices of milk (5%), separate grains/breads (3%), and desserts/other menu items (<1%).

- **Snacks offered over the course of the week typically include more than one type of food in four of the eight food groups: fruits/100% fruit juices, separate grains/breads, separate meats/meat alternates, and desserts/other menu items.** The fruits/100% fruit juice group includes an average of 3 different items per week, followed by separate grains/breads (an average of 2 different items per week), and desserts and other menu items (an average of 2 different items per week). For all remaining food groups, sites offer one or fewer different items per week.

- **Among the most frequently offered food components at snack, the most frequently offered foods are as follows:**

  - Apple juice (offered by 39% of sites) and fruit juice blend (39%) are the two most frequently offered **fruits/100% fruit juices** at snack. Apples are the most commonly offered whole fruit, offered by five percent of sites.

  - The most commonly offered foods at snack from the **separate grains/breads** group are crackers, croutons, or pretzels (offered by 29% of sites). About five percent of the sites offer granola (5.4%) or breakfast bars and muffins (4.9%) at snack.

  - Cookies are the most frequently offered food from the **desserts/other menu items** group, offered by 42 percent of sites.

Calorie and Nutrient Content of Summer Meals

The calorie and nutrient content of summer meals is compared with national dietary standards: the 2015-2020 Dietary Guidelines for Americans (DGA) (U.S. Department of Health and Human Services and USDA, 2015), which provides the recommended calorie needs, and the Health and Medicine Division's[5] Dietary Reference Intakes (DRIs) for children 3 to 18 years of age (National Academy of Sciences, 2019), which provides the recommended daily amounts of vitamins and minerals. Findings are discussed only for children ages 9 to 13, since elementary school age children represent the largest group served through summer meal programs (55%) (Rothstein et al., 2020),

[5] The Health and Medicine Division was previously the Institute of Medicine (IOM) program unit of the National Academies.

and the calorie and nutrient needs for children ages 9 to 13 years are the highest among elementary school age children.

Lunch

- **The average calorie content of lunches offered in summer meal programs is 659 calories, which is 30 percent of the recommended daily calorie needs of children 9 to 13 years of age.** Food items from the combination entrées and the milk groups are the largest contributors to calories at lunch, contributing 39 percent and 20 percent, respectively. The top three food sources of calories at lunch include sandwiches with plain meat, poultry, or fish; unflavored low-fat milk; and flavored fat-free milk.

- **Summer meal program lunches provide an average of 85 percent of the recommended daily amount of protein for children 9 to 13 years.** Food items from the combination entrées (48%) and the milk groups (30%) are the largest contributors to protein at lunch. Similar to calories, the top three food sources of protein at lunch include sandwiches with plain meat, poultry, or fish; unflavored low-fat milk; and flavored fat-free milk.

- **Total fat accounts for 32 percent of calories offered at lunch, and saturated fat provides 10 percent of calories at lunch.** The percentage of calories from total fat is within the daily recommended range recommended by the DRI, while the percentage of calories from saturated fat is marginally above the recommended amount. Food items from the combination entrées group contribute about half the total fat (51%) and saturated fat (53%) served at lunch. Accompaniments, such as salad dressing, are the second largest food group contributor to total fat at lunch; milk is the second largest food group contributor to saturated fat. The top food source of total fat and saturated fat at lunch is sandwiches with plain meat, poultry, or fish.

- **Lunches provide 64 percent of the recommended daily amount of vitamin A, and 71 percent of the recommended daily amount of vitamin C for children 9 to 13 years.** Milk (51%) is the largest contributing food group source of vitamin A at lunch, followed by vegetables (27%). The top three food sources of vitamin A at lunch are unflavored low-fat milk, flavored fat-free milk, and raw red and orange vegetables. Food items from the fruits/100% fruit juices (58%) and the vegetables (28%) food groups are the largest contributors of vitamin C at lunch. The top three food sources of vitamin C are fresh fruits, 100% juices, and raw red and orange vegetables.

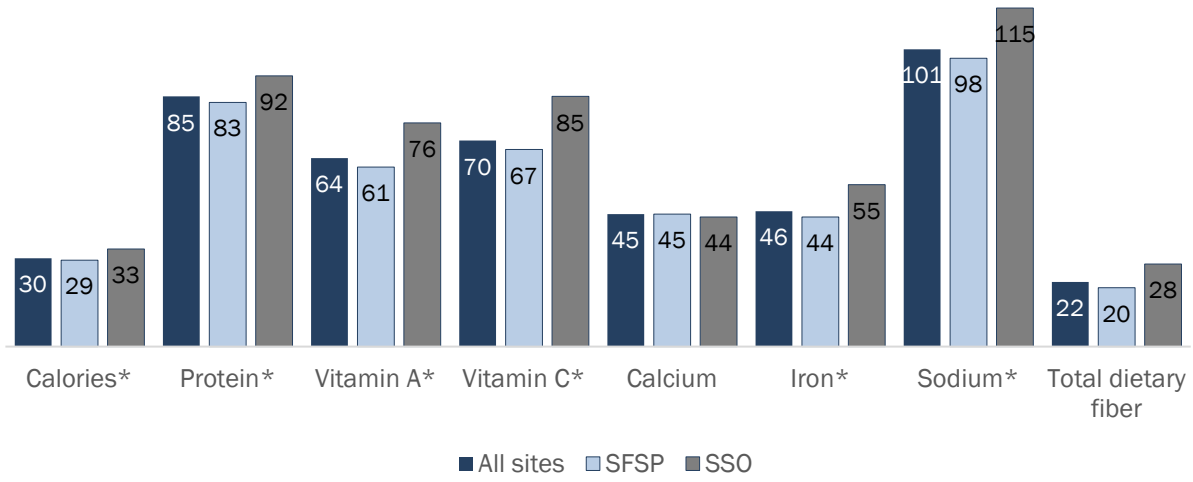
- **Lunches provide about 45 percent of the recommended daily amount for both calcium and iron, and 102 percent of the recommended daily amount for sodium.** Milk (55%) is the largest contributing food group of calcium at lunch, followed by combination entrées (29%). The top three sources of calcium at lunch are unflavored low-fat milk; flavored fat-free milk; and a sandwich with plain meat, poultry, or fish. Food items from the combination entrées group (53%) are the largest contributors to iron, and the top three food sources of iron include sandwiches with plain meat, poultry, or fish; flavored fat-free milk; and peanut butter sandwiches. Food items from

the combination entrées group (49%) are also the largest contributors to sodium. The top three food sources of sodium include sandwiches with plain meat, poultry, or fish; flavored fat-free milk; and condiments and toppings.

- **Lunches provide about 22 percent of the recommended daily amount of dietary fiber for children 9 to 13 years.** Food items from the combination entrées (33%) and the fruit groups (29%) are the largest contributors of fiber at lunch. The top three sources of fiber at lunch are fresh fruits; sandwiches with plain meat, poultry, or fish; and raw red and orange vegetables.

Figure ES-3 presents a summary of the contributions of summer meal lunches to the daily recommended amounts of energy, vitamins, and minerals discussed above.

Figure ES-3. Percent of recommended daily calories and nutrients provided by summer meal lunches, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. All sites: unweighted n = 731; weighted n = 67,285; SFSP: unweighted n = 578; weighted n = 55,926; SSO: unweighted n = 153; weighted n = 11,359.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Breakfast

- **The average caloric content of breakfasts offered in summer meal programs is 433 calories, which is 20 percent of the daily recommended calorie amounts for children 9 to 13 years of age.** Food items from the separate grains/breads (30%), milk (28%), and fruit groups (20%) are the top three contributors to calories at breakfast. The top three food sources of calories at breakfast are unflavored low-fat milk, flavored fat-free milk, and sweetened cold cereal.

- **Breakfasts provide an average of 43 percent of the recommended daily amount of protein for 9 to 13 year old children.** Food items from the milk (60%), separate grains/breads (18%), and separate meats/meat alternates groups (6%) are the largest contributors of protein at breakfast. The top three food sources of protein at breakfast are all milk: unflavored low-fat milk, flavored fat-free milk, and unflavored fat-free milk.

- Total fat provides 20 percent of calories and saturated fat provides 7 percent of the calories offered at breakfast; these are within the ranges recommended by the DRI and DGA. Food items from the separate grains/breads (36%), milk (25%), and desserts/other menu items (16%) groups are the largest contributors to total fat at breakfast. These are also the largest contributors to saturated fat, though with different contributions: milk (41%), separate grains/breads (25%), and desserts/other menu items (12%). The top food source of total fat and saturated fat is unflavored low-fat milk.

- **On average, breakfasts provide 46 percent of the recommended daily amount of vitamin A, and 68 percent of the recommended daily amount of vitamin C for children 9 to 13 years.** Similar to lunch, milk (60%) is the largest contributing food group source of vitamin A at breakfast, followed by separate grains/bread (28%) and desserts/other menu items groups (3%). The top three food sources of vitamin A at breakfast include unflavored low-fat milk, flavored fat-free milk, and unsweetened cold cereal. Food items from the fruits/100% fruit juices (80%), separate grains/breads (14%), and milk food groups (3%) are the largest contributing sources of vitamin C at breakfast. The top three food sources of fiber at breakfast are fresh fruits, sweetened cold cereal, and sweetened canned fruits. One hundred percent fruit juices and fresh fruits are the top two food sources of vitamin C at breakfast.

- **On average, breakfasts provide 34 percent of the recommended daily amount of calcium, 55 percent of the recommended amount of iron, and 38 percent of the recommended amount of sodium for children 9 to 13 years.** Food items from the milk (72%) and separate grains/breads (15%) groups are the largest contributing food groups for calcium at breakfast. The top three food sources of calcium at breakfast are all from the milk food group and include unflavored low-fat milk, flavored fat-free milk; and unflavored fat-free milk. Food items from the separate grains/breads (64%), desserts/other menu items (12%), and fruits/100% fruit juices (9%) food groups are the largest contributors to iron at breakfast. The top three sources of iron at breakfast are from the grain/breads group and include sweetened cold cereal, unsweetened cold cereal, and muffins (excluding English muffins) and sweet/quick breads.

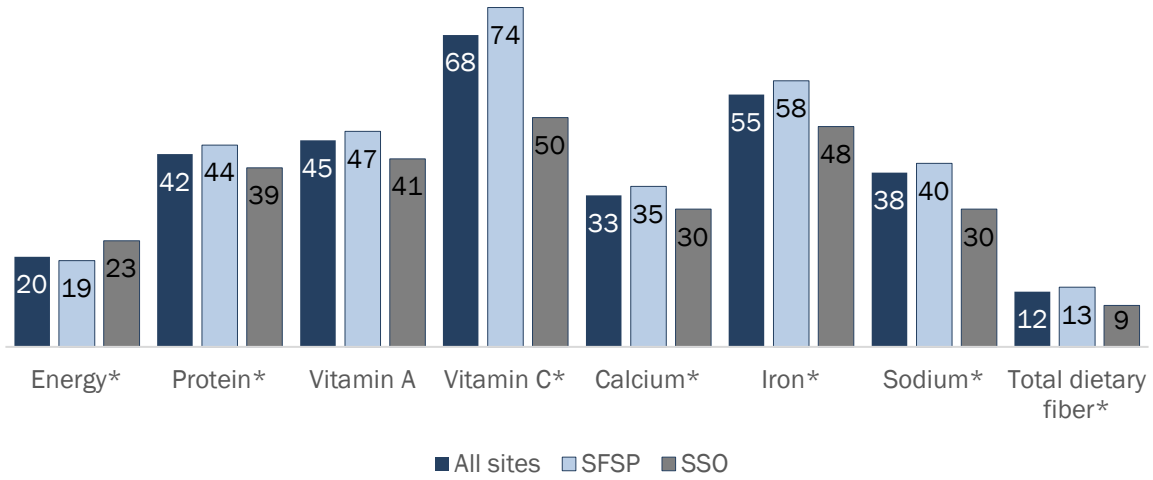
- **On average, breakfasts provide 38 percent of the recommended daily amount of sodium for children 9 to 13 years.** Food items from the separate grains/breads (39%), milk (35%), and desserts/other menu items (11%) groups are the largest contributors to sodium at breakfast. The top three food sources of sodium at breakfast are unflavored low-fat milk, flavored fat-free milk, and sweetened cold cereal.

- **Breakfasts provide an average of 12 percent of the recommended daily amount of dietary fiber for children 9 to 13 years.** Fruits/100% fruit juices (41%) is the largest

contributing food group for fiber at breakfast, followed by separate grains/breads (41%) and desserts and other menu items (10%). The top three food sources of fiber at breakfast are fresh fruits, sweetened cold cereal, and sweetened canned fruits.

Figure ES-4 presents a summary of the contributions of summer meal breakfasts to the recommended daily amounts of energy, vitamins, and minerals discussed above.

Figure ES-4. Percent of recommended daily calories and nutrients provided by summer meal breakfasts, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. All sites: unweighted n = 523; weighted n = 43,795; SFSP: unweighted n = 405; weighted n = 35,321; SSO: unweighted n = 118; weighted n = 8,475.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Snack

- **The average calorie content of snacks offered at summer meal programs is 242 calories, which is 11 percent of the recommended daily amount of calories for children 9 to 13 years of age.** Food items from the fruits/100% fruit juices (35%), desserts/other menu items (27%), and separate grains/breads (26%) food groups are the top three contributors to calories at snacks. The top three food sources of calories at snacks are 100% fruit juices; cookies; and crackers, croutons, or pretzels.

- **Snacks provide an average of 13 percent of the recommended daily amount of protein for children 9 to 13 years.** Food items in the desserts/other menu items (34%), separate grains/breads (33%), and fruits/100% fruit juices (13%) food groups are the top three contributors to protein at snacks. The top three food sources of protein at snacks are cookies; crackers, croutons, or pretzels; and 100% fruit juices.

- **Total fat provides 21 percent of the calories offered and saturated fat provides less than 6 percent of the calories offered at snacks; these are within the recommended ranges.** Food items from the desserts/other menu items (40%), separate grains/breads (37%), and separate meats/meat alternates (11%) groups are the top contributors to total fat and to saturated fat at snack. The top three food sources of both total fat and saturated fat at snack are cookies; crackers, croutons, or pretzels; and cheese.

- **On average, snacks provide eight percent of the recommended daily amount of vitamin A, and 82 percent of the recommended amount of vitamin C for children 9 to 13 years.** Food items from the separate grains/breads (33%), fruits/100% fruit juices (29%), and separate meat/meat alternates (16%) groups are the largest contributors to vitamin A at snack. The top three sources of vitamin A at snacks are 100% fruit juices; crackers, croutons, or pretzels; and cheese. Food items from the fruits/100% fruit juices (87%) food group are the largest contributors of vitamin C at snacks. The top two sources of vitamin C at snacks are 100% fruit juices and fresh fruits, with 100% fruit juices contributing 74 percent of vitamin C and fresh fruits 8 percent.

- **On average, snacks provide 8 percent of the recommended daily amount of calcium, and 19 percent of the recommended amount of iron for children 9 to 13 years.** Food items from the fruits/100% fruit juices, separate grains/breads, and desserts/other menu items groups are the largest contributors of calcium at snacks (31%, 24% and 22% respectively). The top three food sources of calcium at snacks are 100% fruit juices; cookies; and crackers, croutons, or pretzels. Food items in the grains/bread, desserts/other menu items, and fruits/100% fruit juices groups are also the largest contributors to iron at snacks (37%, 37% and 20% respectively). The top three food sources of iron at snacks are cookies; crackers, croutons, or pretzels; and 100% fruit juices.

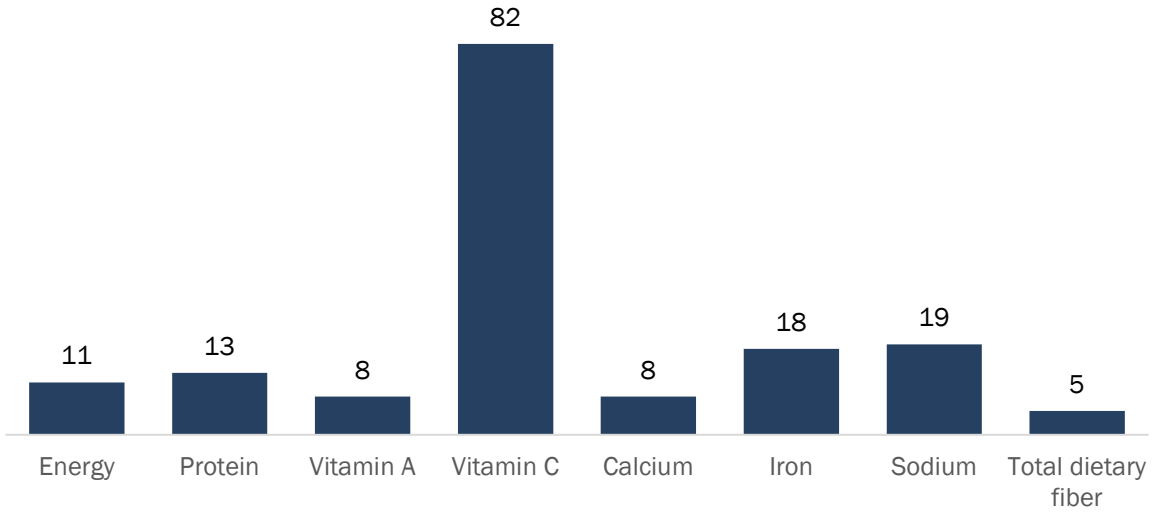
- **On average, snacks provide 19 percent of the recommended amount of sodium for children 9 to 13 years.** Food items from desserts/other menu items, separate grains/breads, and separate meats/meat alternates groups are the largest contributors to sodium at snacks (40%, 39%, and 10%, respectively). The top three food sources of sodium at snacks are cookies; crackers, croutons, or pretzels; and cheese.

- **Snacks provide about six percent of the recommended daily amount of dietary fiber for children 9 to 13 years.** Food items from the fruits/100% fruit juices (35%), desserts/other menu items (31%), and separate grains/breads (30%) groups make an almost equal contribution to the fiber at snacks. The top three food sources of fiber at snacks are cookies; 100% fruit juices;[6] and crackers, croutons, or pretzels.

[6] 100% fruit juice provides 29% of the fiber at snack, or approximately 0.5 g fiber; this is roughly equal to the amount of fiber provided by 8 ounces of 100% apple juice.

Figure ES-5 presents a summary of the contributions of summer meal snacks to the recommended daily amounts of energy, vitamins, and minerals discussed above.

Figure ES-5. Percent of recommended daily calories and nutrients provided by summer meal snacks



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 132; weighted n = 11,212.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

1. Introduction and Background

The USDA Summer Meals Study provides a comprehensive assessment of the two summer meal programs operated by the U.S. Department of Agriculture (USDA), the Summer Food Service Program (SFSP), and the Seamless Summer Option (SSO). This study examines the characteristics of participating and nonparticipating children, including sociodemographic characteristics, household food security status, reasons for participation or nonparticipation, and satisfaction with the meals served to children in the summer of 2018. The USDA Summer Meals Study also describes the operational aspects of the programs at summer meal sites, characteristics of their food service environments, and the nutritional quality of the meals served to children.

Study Objectives

The USDA Summer Meals Study addresses six study objectives focused on participation, food quality, and implementation of the summer meal programs.

1. **Identify reasons for participation and satisfaction levels with the summer meal programs;**
2. **Assess how characteristics differ between participants and nonparticipants;**
3. **Determine the reasons for nonparticipation;**
4. **Determine the food service characteristics of the summer meal sites;**
5. **Describe the characteristics and content of the summer meals; and**
6. **Assess facilitators and barriers to preparing and serving summer meals.**

This report, the fourth volume in the USDA Summer Meals Study report series, assesses the content and nutritional quality of summer meals. Volume 1 focuses on the national estimates of program coverage, characteristics of participants and nonparticipants and their households, reasons for participation and nonparticipation, and satisfaction with the summer meal programs; Volume 2 examines the operational characteristics of summer meal program sponsors and sites and program sponsor and site perspectives on children's participation in the summer meal programs; Volume 3 focuses on the characteristics of food service environments at summer meal program sites; Volume 5 provides additional information about the study methodology; and Volume 6 contains all the study instruments.

1.1 School Meal Programs

USDA's Food and Nutrition Service (FNS) administers several programs that address food insecurity among families and children, including programs that provide benefits to

In 2018, the school meal programs delivered free and reduced-price lunches to more than 21.9 million children, and free and reduced-price breakfasts to more than 12.5 million children every day (FNS, 2019).

families to purchase food or to organizations that serve meals to children in congregate settings. The largest programs that provide meals directly to children are the school meal programs—the National School Lunch Program (NSLP) and the School Breakfast Program (SBP). These programs provide meals to children attending schools during the regular academic school year. The SFSP and SSO provide meals to children during the summer months when the NSLP and SBP are not operating.

The school meal programs are part of USDA's overall effort to improve nutrition and reduce food insecurity among children in low-income households. In 2018, food insecurity—defined as not having consistent, dependable access to adequate food for active, healthy living—affected 13.9 percent of households with children at some time during the year (Coleman-Jensen et al., 2019).[7]

Six million children experienced food insecurity in 2018 (Coleman-Jensen et al., 2019).

Because families allocate food within the household to shield children from disrupted eating patterns, fewer children experience food insecurity themselves. Research also suggests that some children fear stigma around hunger and actively hide it (Popkin, Scott, and Galvez, 2016). Compared to food secure children, those who experience food insecurity are at risk of numerous negative physical, emotional, and educational outcomes, including higher rates of obesity, more behavioral problems, poorer social skills, and poorer test scores and educational achievement (Jyoti, Frongillo, and Jones, 2005; Metallinos-Katsaras, Must, and Gorman, 2012; Winicki and Jemison, 2003).

Findings from multiple studies with varying methodologies and data sources consistently show that the school meal programs reduce food insecurity. Specifically, past research shows that food insecurity rises during the summer months, when the NSLP and SBP are not operating. Using data from the Current Population Survey, Nord and Romig (2006) compared household food security during the school year to food security during the summer and found higher rates of household food insecurity when school was out for the summer. Similar analyses using the National Health and Nutrition Examination Study and the Early Childhood Longitudinal Study-Birth Cohort confirm these findings (Arteaga and Heflin, 2014; Gundersen, Kreider, and Pepper, 2012). These consistent findings from three large-scale, national studies suggest that the school meal programs play an

[7] Program participation and household food security data for 2018 are displayed because this is the year in which study data were collected.

important role in alleviating food insecurity among households with children and highlight the struggle for families to find alternative sources of food for children during the summer.

1.2 Summer Meal Programs

The summer meal programs help children who rely on school meals during the school year access nutrition assistance during the summer months. The SFSP and SSO, authorized under section 13(a) of the Richard B. Russell National School Lunch Act (42 U.S.C. 1761(a)), provide free, nutritious meals and snacks to children ages 18 years and younger.[8] These programs serve meals at sites located in low-income areas and at sites in other areas serving a high proportion of low-income children, both in the summer when school is not in session and during long school breaks in communities with year-round school calendars. Children who participate in the summer meal programs receive meals free of charge, regardless of household income.[9] Sponsors may receive reimbursement on behalf of sites for up to two meals (including snacks) per child per day, with the exception of migrant sites and camps that can receive reimbursement for up to three meals each day. Meal types include breakfast, lunch, supper, and snack (morning, afternoon, and evening).

The summer meal programs are federally funded and State administered. In both the SFSP and SSO, sponsors are approved by the State to operate one or more summer meal sites. Sites are located in a variety of settings, such as schools, parks, community centers, Boys and Girls clubs, apartment complexes, churches, and migrant centers. Sites can be open or have closed enrollment, and they can also be camps. Open sites are located in a low-income area where at least half of the children in the area are eligible for free or reduced-price school meals; any child aged 18 and under can receive free meals. Closed-enrollment sites may or may not be located in a low-income area; however, at least half of the children enrolled at the program site (e.g., a parks and recreation program, summer enrichment programs) must be eligible for free or reduced-price meals, and all children who are enrolled receive free meals. Residential or day camps only receive reimbursement for meals served to children who qualify for free and reduced-price meals.

In many ways, the SSO program is an extension of the school meal programs, while the SFSP differs in terms of management structure, meal pattern requirements, and reimbursements. First, SFSP

[8] Individuals over age 18 who are enrolled in school programs for persons with disabilities may also receive meals.

[9] Except for children in camps, who must be individually eligible for free or reduced-price meals to receive free summer meals.

program sponsors can include a variety of entities, including school food authorities (SFAs), private nonprofit organizations, and local governments. SSO program sponsors, in contrast, are exclusively SFAs. While all SSO sponsors are SFAs, SSOs can operate in a variety of settings. Second, the SFSP and SSO programs follow different meal patterns, with SSO sites required to follow the meal patterns set forth for the school meal programs. There are key differences between the SFSP and school meal patterns for milk, grains, fruits and vegetables, and for calories, sodium and saturated fat (see Table 1-1).

Table 1-1. Differences in the meal patterns used in SFSP and SSO in summer 2018

Meal component	SFSP	SSO
Milk	All varieties allowed	Only low-fat (1% milk fat or less, unflavored) or fat-free (unflavored or flavored) allowed
Grain	Whole grain-rich or enriched products allowed	All grain products must be whole grain-rich (unless the site has a waiver)
Fruits and vegetables	Single requirement for fruit and/or vegetable quantity	Requires separate quantities of fruits and vegetables at lunch
	No weekly quantity requirements for types of vegetables	Weekly quantity requirements for types of vegetables
Calories, sodium, and saturated fat	No limits	Limits

Finally, the federal per meal reimbursement rates differ between SFSP and SSO; SFSP reimbursement rates for meals are higher (the snack reimbursement rate is the same) (see Table 1-2). With simplified meal patterns and higher reimbursement rates, many SFA sponsors choose to operate the SFSP over the SSO; however, the SSO offers continuity in operations over the entire year and requires less paperwork, making it easier and more attractive for many schools to serve meals to children during the summer months.

Table 1-2. Federal reimbursement rates for meals served in SFSP and SSO, summer 2018[1]

Meal type	SFSP rates for rural and self-prep sites	SFSP rates for all other types of sites	SSO[2]
Breakfast	$2.1900	$2.2325	$2.14
Lunch or supper	$3.8575	$3.9225	$3.48
Snack	$0.9100	$0.9300	$0.91

[1] Reimbursement rates are higher in Alaska, Hawaii, and Puerto Rico.

[2] SSO reimbursement rates are the same as the free reimbursement rates for the NSLP and the SBP. SSO reimbursement rates also differ for SFAs that serve fewer than 60 percent free or reduced-price meals and severe need sites. In addition, for SSO sites, school food authorities certified as meeting the meal pattern and nutrition standard requirements set forth in 7 CFR 210 and 220 are eligible to receive performance-based cash assistance for each reimbursable lunch served (an additional six cents per lunch, adjusted annually).

Participation rates in the summer meal programs are much lower than in the school meal programs, suggesting that the programs may not reach everyone who may need food assistance. In July 2018, an average of 2.7 million children per day received meals through SFSP. An additional 1.0 million children received free and reduced-price lunches in NSLP[10] that same month, some of which were lunches served through SSO (FNS, 2019). This is far below the school-year free and reduced-price lunch participation level of 21.9 million children per day in 2018 (FNS, 2019).

There are several fundamental differences between the summer meal programs and the school meal programs that likely account for the lower participation levels. First and foremost, USDA offers the school meal programs through schools where attendance is mandatory, thus ensuring access to all children. Provision of summer meals, in contrast, is through a variety of summer programs and delivery sites for which attendance is voluntary. Additionally, virtually every public school and many private schools make the school meal programs available and provide transportation, while the summer meal programs are primarily offered in areas with high concentrations of low-income children and may or may not provide transportation.[11] Furthermore, summer meal sites may serve different populations or subgroups of children, depending on the programs and activities of the site. Finally, while the school meal programs operate for the entire duration of the school year, summer meal programs are available for varying lengths of time, ranging from less than one week to the entire summer and at specific times during the day.

[10]FNS does not collect separate program data for the SSO but reports it as part of NSLP/SBP.

[11]The Richard B Russell National School Lunch Act (NSLA) allows the use of school or census data to establish area eligibility in the Summer Food Service Program. When determining area eligibility using school data, the proposed meal site must be located in the attendance area of a school where at least 50 percent of the children are eligible for free or reduced price school meals. When using census data to determine eligibility, the proposed site must be located in a Census Block Group (CBG) or Census Tract in which 50 percent or more of the children are eligible for free or reduced price meals.

2. Methods

The USDA Summer Meals Study is a nationally representative study of summer meal program sites and program participants and nonparticipants. The study employed a mixed-methods design to address the research objectives. Surveys were administered to sponsors, site staff, and participating and nonparticipating caregivers and children.[12] In-depth interviews were conducted with a subset of current and former sponsors, site staff, and participant and nonparticipant caregivers. Table 2-1 illustrates the primary data collection activities supporting each study objective. The results featured in this report volume respond to research questions related to characterizing the content of summer meals (Study Objective 5).

Study Objectives

The USDA Summer Meals Study addresses six study objectives focused on participation, food quality, and implementation of the summer meal programs.

1. **Identify reasons for participation and satisfaction levels with the summer meal programs;**
2. **Assess how characteristics differ between participants and nonparticipants;**
3. **Determine the reasons for nonparticipation;**
4. **Determine the food service characteristics of the summer meal sites;**
5. **Describe the characteristics and content of the summer meals; and**
6. **Assess facilitators and barriers to preparing and serving summer meals.**

Table 2-1. Primary data collection activities supporting the research objectives

Respondent type and data collection method	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6
Caregivers of participants and nonparticipants						
Survey	✓	✓	✓			
In-depth interviews	✓		✓			
Child participants and teen participants and nonparticipants[1]						
Survey	✓		✓			
Site staff						
Survey				✓		✓
Menus					✓	
In-depth interviews						✓
Current and former sponsors[2]						
Survey				✓		✓
In-depth interviews						✓

[1] Child nonparticipants did not complete a survey.
[2] Former sponsors did not complete a survey.

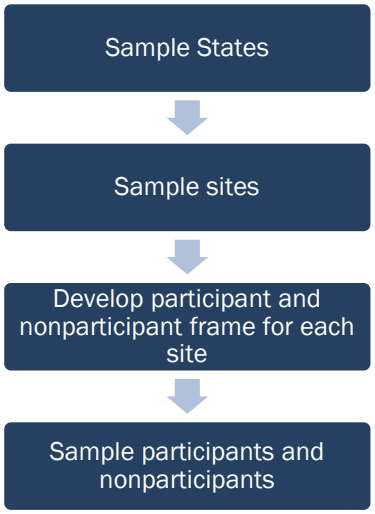
[12] Site Surveys and Caregiver Surveys were available in Spanish.

Provided below is a summary of the sampling methodology for the entire study. Following that is a description of the data sources, response rates, and analyses that underpin the results presented in this report. A more detailed description of the technical details of the study is provided in Volume 5 (Vericker et al., 2020).

2.1 Sampling

This study implemented a multi-stage sampling procedure to obtain a nationally representative sample of summer meal sites and program participants and nonparticipants. Figure 2-1 illustrates the sampling approach employed.

Figure 2-1. Sampling approach

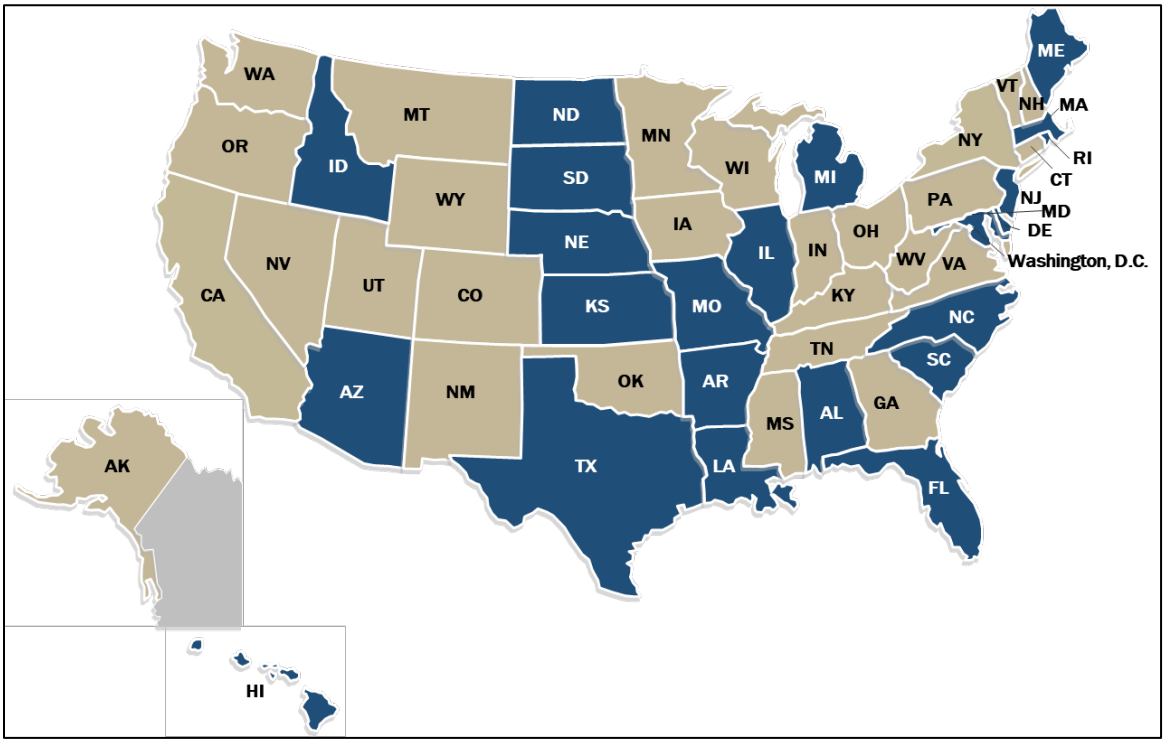


First, 24 States were randomly selected using a systematic sampling method after first sorting by FNS region and a measure of size.[13] Twenty-three States agreed to participate in the study. Figure 2-2 depicts the States that participated in the study.

The study States provided lists of summer meal sites planned for operation in 2018. From those lists, 3,349 sites were sampled using a stratified sampling approach. The site sample size was designed to allow for comparisons between several key subgroups of interest (e.g., program type [SFSP/SSO] and SFA status [SFA/non-SFA]).

[13]The measure of size used in this study was a normalized value for each State that combined the number of summer meal sites in the State with the average daily number of meals served in July 2018.

Figure 2-2. States that participated in the USDA Summer Meals Study



Note: The following States highlighted in blue participated in the study: Alabama, Arizona, Arkansas, Delaware, Florida, Hawaii, Idaho, Illinois, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, North Carolina, North Dakota, Nebraska, New Jersey, Rhode Island, South Carolina, South Dakota, and Texas.

A multipronged approach was used to develop a sample frame of summer meal participants and nonparticipants, as neither FNS nor the States had lists of these groups. The sample frame for participants and nonparticipants is based on defining site catchment areas. The concept is that the catchment area represents the community the site serves and where the participating children live. A 0.75-mile catchment area was drawn around each urban site and a five-mile catchment area was drawn around each rural site.[14] To be eligible for the study, a household living in a catchment area had to have at least one child age 5 through 18. To determine presence of children in the household and summer-meal participation status, screeners were mailed to a sample of addresses in the catchment areas. From the responses to the screener, the sample frames of participants and nonparticipants were built.

[14]This study used the U.S. Census Bureau's definition of an urban area. Census defines an urban area as one that has at least 2,500 people. Rural includes all areas that are not included in an urban area.

Sampling Participants. Participants were sampled using two strategies. First, hard copies of the survey were provided to the sites to distribute to caregivers and children directly. This was the most direct way to contact participants. Second, additional participants were identified through the screener process. All caregivers who responded to the screener and said there were children in the household who went to the sampled site were asked to complete a survey. Survey responses were reviewed to ensure that no individuals provided more than one survey response.

Sampling Nonparticipants. For nonparticipants, the screener was used to create the sample frame. A subsample of households was drawn from those that responded to the screener indicating that they had children but that no one in the household participated in the summer meal programs. This sample of nonparticipants was asked to complete a survey.

2.2 Data Collection and Analysis

The primary source of data underpinning the analysis results presented in this report is a weekly menu for meals and snacks provided by summer meals program sites. To provide context about the meal patterns followed and the types of meals offered at summer meal program sites, results are also presented from the Menu Planning Survey and Site Survey. Data collection activities took place between June and November 2018. Study instruments are provided in Volume 6 (Rothstein et al., 2020).

Analyses reported in this report volume are based on a sample size of 745 sites providing a weekly menu for meals and snacks offered.[15] Respondents were a nationally representative sample of sites in 2018. Characteristics of these sites are displayed in Figure 2-3.

Site menus were entered into USDA's Survey Net Application (Raper, et al., 2004) to append nutrients for all menu items and classify foods into major and minor food groups.[16,17] Menus were

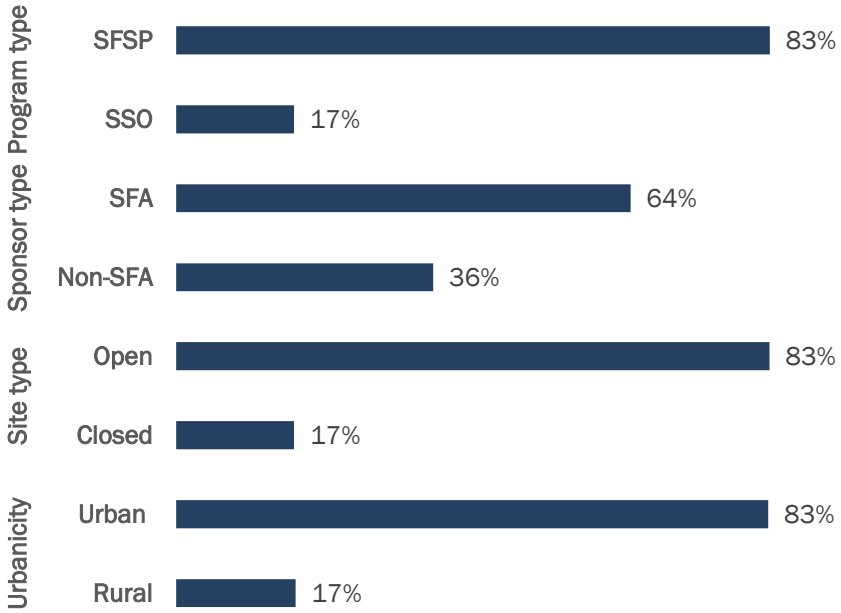
[15]Thirty percent of sites contacted to provide menus responded to the request; however, of the 750 site menus targeted for analysis, 745 complete site menus were obtained (99%).

[16]Data entered into the SurveyNet application is linked to USDA's Food and Nutrient Database for Dietary Studies (U.S. Department of Agriculture, Agricultural Research Service, 2018) and the Food Pattern Equivalent Database (Bowman, et al., 2018). Menu data was linked to the 2015-2016 versions.

[17]The food classification is consistent with that used in Gearan, et al. (2019) wherein foods are classified into eight major and 88 minor food groups.

weighted to represent meals offered at each summer meals site in the U.S. Additional details regarding the methodology are provided in Volume 5 (Vericker et al., 2020).

Figure 2-3. Characteristics of study sites



Source: USDA Summer Meals Study, site menu analysis, Summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 745; weighted n = 68,611.
Note: Total may not add to 100 due to rounding.
SFSP = Summer Food Service Program
SSO = Seamless Summer Option
SFA = School Food Authority

Descriptive statistics such as proportions and means were used to summarize results. Differences between SFSP and SSO program types were also examined. Statistically significant differences between subgroups of interest were assessed using t-tests; results significant at the 0.05 confidence level are reported.[18] Survey weights were applied to analyses to account for survey nonresponse, and standard errors were adjusted to account for the complex survey design.

[18]The Bonferroni correction was used to account for multiple comparisons when comparisons were made between more than two groups.

3. Compliance with Meal Pattern Requirements

This chapter examines the extent to which summer meals comply with the meal pattern requirements (food components and quantities) and dietary specifications for calories, saturated fat, and sodium.[19] In general, children served through the summer meal programs are offered meals and snacks that include all of the required food components, but not always in the required quantities. Almost all sites (98% or more) offer foods in the required components at lunch, breakfast, and snack. The majority of sites meet the daily quantity requirements for all food components at lunch (70%) and breakfast (84%); about 12 percent of sites meet the daily quantity requirements for snack. Among summer meal sites that follow the school meal patterns (primarily SSO sites), about ten percent meet all of the weekly dietary specifications for lunch (11%) and breakfast (13%), primarily because meals exceed the maximum calorie and sodium requirements.

Sponsors operating summer meal programs must ensure that meals and snacks meet the meal pattern requirements. Although the SFSP has specific meal patterns for summer meals, SFAs that operate the SFSP have the option to offer meals in accordance with the SFSP meal pattern or the school meal program meal pattern requirements.[20] In contrast, SFAs that operate the SSO are required to offer meals in accordance with the school meal program meal pattern requirements.[21] Additionally, there are several instances in which the meal patterns for the Child and Adult Care Program (CACFP) may be used. First, State agencies may authorize sponsors to follow the CACFP meal pattern requirements for children under six years old, which include smaller serving sizes than are indicated in the SFSP meal pattern. Second, sponsors serving teenagers may choose to follow the adult meal patterns found in CACFP, which have larger portion sizes than the SFSP meal patterns.[22] The detailed meal patterns for SFSP, the School Meal Programs, and CACFP are provided in Appendix C.

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[19]SFSP meal patterns are in 7 CFR 225.16; NSLP meal patterns are in 7 CFR 210.10; SBP meal patterns are in 7 CFR 220.8.

[20]See 7 CFR 225.16(f).

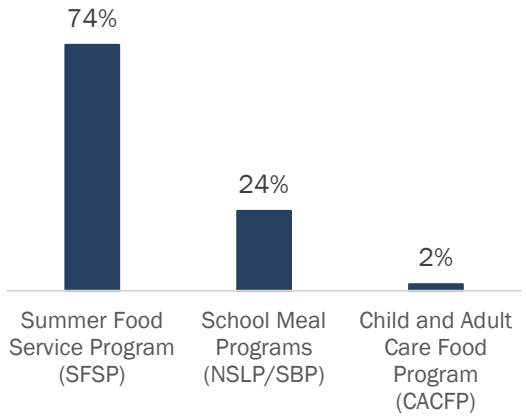
[21]SSO sites follow the CACFP meal patterns if they serve preschool-age children. Since very few sites follow the CACFP meal patterns, the results presented in this chapter are limited to sites that follow the SFSP and NSLP/SBP meal pattern requirements.

[22]Sponsors that choose to provide larger portions to teens still receive the usual SFSP reimbursement rates.

Nearly three out of four summer meal sites follow the SFSP meal patterns, almost one out of four sites follows the school meal program meal patterns, and only two percent follow the CACFP meal patterns (see Figure 3-1).

Among SFSP sites with SFA sponsors, 80 percent follow the SFSP meal patterns, 17 percent follow the school meal program meal patterns, and three percent follow the CACFP meal patterns (data not shown).

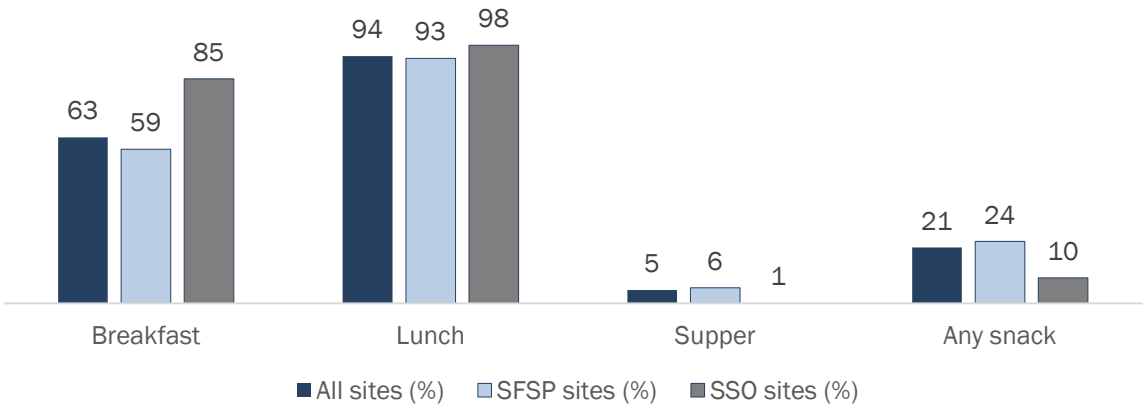
Figure 3-1. Meal patterns used by summer meal sites



Source: USDA Summer Meals Study, Menu Planning Survey, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 1,030; weighted n = 68,188.
Note: Total may not add to 100 due to rounding.

Almost all summer meal sites (94%) serve lunch, nearly two-thirds (63%) serve breakfast, and 21 percent serve a snack (see Figure 3-2). More SSO sites than SFSP sites serve breakfast (85% compared with 59%) and lunch (98% compared with 93%). More SFSP sites than SSO sites serve a snack (24% compared with 10%).

Figure 3-2. Percentage of sites that serve each meal/snack



Source: USDA Summer Meals Study, Site Survey, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 948; weighted n = 68,258.
Note: Total may not add to 100 due to rounding. Supper is not reported for SSO sites due to insufficient sample size. All differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Two-thirds of the sites offer two meals and/or snacks per day, one quarter offer one meal/snack, and less than ten percent offer three or more meals/snacks. More SSO sites than SFSP sites serve two meals/snacks per day. Just over half of sites offer breakfast and lunch (54%), about one-fifth offer just lunch (21%), 10 percent offer lunch and snack, and 5 percent offer breakfast, lunch, and snack (see Table 3-1). Less than two percent of sites offer other meals and combinations of meals and snacks.

Table 3-1. Number and types of meals and/or snack services per day, overall and by summer meal program type

Number and type of meals/snacks served	All sites (%)	SFSP sites (%)	SSO sites (%)
Number of meals/snacks served[1]			
One	25.3	27.7*	13.1
Two	65.6	62.6*	80.5
Three or more	9.2	9.7	6.5
Types of meals/snacks served			
Lunch	20.9	22.9*	11.2
Breakfast and lunch	53.6	48.8*	77.7
Lunch and snack	10.2	11.7*	2.8
Breakfast, lunch, and snack	5.4	5.6	4.6
Unweighted n	948	744	204
Weighted n	68,258	56,899	11,359

Source: USDA Summer Meals Study, Site Survey, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.
Notes: Total may not add to 100 due to rounding. A small number of sites reporting more than three meals/snacks per day may be serving different groups of children during different parts of the day, or not receiving reimbursement for all meals served.
[1] Except for migrant sites and camps, which receive reimbursement for up to three meals/snacks per child per day, most summer meal program sites receive reimbursement for up to two meals/snacks per day. The small number of sites reporting more than three meals/snacks may be serving different groups of children on the same day, or not receiving reimbursement for all meals served.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

To assess the extent to which sites offer foods in all components and in specified quantities, site menus were compared with the meal pattern that each site follows. Site menu analysis provides food groups from the Food Pattern Equivalent Database, which disaggregates foods into food groups tied to the U.S. Meal Pattern from the Dietary Guidelines for Americans. These food groups were updated to reflect the food component definitions used in Child Nutrition Programs, allowing comparisons to the meal pattern requirements. More details are provided in USDA Summer Meals Study, Volume 5. Methodology (Vericker, et al., 2020). Results in this chapter are presented for all

sites, and by the meal pattern followed by the sites. Adjustments made in the analysis to reflect differences in the meal patterns are discussed below.

Tables and figures presented in this chapter are key results; supplementary tables are provided in Appendix A.

3.1 Meal Pattern Requirements

There are daily food component and quantity requirements in both the SFSP and school meal program meal patterns. The food components are the same across the programs for breakfast[23] and snack.[24] The SFSP meal pattern for lunch has a combined fruit/vegetable component, whereas the NSLP meal pattern has separate fruit and vegetable components. For the analysis comparing all lunches offered in summer meal programs with the meal pattern requirements, sites that follow the SFSP meal pattern and offer the required amount of fruits/vegetables combined are considered to meet the requirement for the fruit/vegetable component even though the menu may have included only fruit or only vegetable.

The SFSP meal pattern specifies minimum serving sizes for children 6 to 12 years of age; SFSP regulations allow sponsors to serve larger portion sizes than the minimum serving size specified in the SFSP meal pattern. The school meal program meal patterns specify quantity requirements by student grades (grades K-5, 6-8, and 9-12). The site menus provided by sponsors did not specify portion size adjustments by age. Since the majority of sites served children in the K-5 grade range, results are presented for the comparison to the meal pattern for the K-5 grade range.[25]

Only the school meal program meal patterns specify weekly meal pattern requirements; there are no weekly requirements in the SFSP meal patterns. The school meal program meal patterns' weekly requirements expand on the daily meal patterns, resulting in a set of requirements that sites must meet in addition to meeting the daily requirements for each day in operation. Sites must meet the

[23]While fruit and vegetable components are separate in SBP, there is no requirement that vegetables be served in breakfast. Menu planners have the option to substitute vegetables for fruits, with some limitations on the service of starchy vegetables.

[24]SSO sites follow the NSLP afterschool snack meal pattern requirements.

[25]Of the 175 sites following the school meal program meal patterns, all but 11 sites were classified as serving K-5 age children. These 11 sites were excluded from the analysis.

weekly quantity requirements for the milk, fruits, and vegetables components, though within the weekly vegetable quantity, there are minimum quantities specified for five vegetable subgroups, and limits on the service of juice to count toward the fruits and vegetables components. For grains and separate meats/meat alternates, the weekly quantities are ranges which exceed the daily quantities; thus, sites must serve more than the daily minimum quantities of these components to meet the weekly requirements. In addition, all grains served must be whole grain-rich, unless the site has been granted a waiver by the State agency.[26] The waiver allows sites to offer enriched grain products, provided that at least one-half of all grains served are whole grain-rich. The school meal program meal patterns also include dietary specifications for calories, saturated fat, and sodium. They are applied to meals served over the course of a week, and represent the average content of the meals offered.

Table 3-2 depicts an abbreviated version of the SFSP and school meal program meal pattern requirements; complete meal patterns are provided in Appendix C.[27]

[26]The whole grain-rich waiver process was in effect when study data were collected in Summer 2018.

[27]Weekly totals and dietary specifications for school meal program meal pattern sites operating fewer than five days per week are found in Appendix C.

Table 3-2. SFSP daily and school meal program daily and weekly meal pattern requirements

Food components	SFSP	NSLP/SBP (grades K-5)	
	Daily requirements	Daily requirements[a]	Weekly requirements[a]
Breakfast			
Milk	1 cup	1 cup	5 cups
Fruits/vegetables[b]	½ cup	1 cup	5 cups[c]
Grains/breads	1 serving[d]	1 oz. equiv.	7-10 oz. equiv.[e,f]
Dietary specifications: Daily amount based on average for the week			
Min-max calories (kcal)		350-500	
Saturated fat (% of total kcal)		<10	
Sodium (mg)		<540[g]	
Trans fat (g)		0	
Lunch or supper			
Milk	1 cup	1 cup	5 cups
Fruits/vegetables	¾ cup		
Fruits		½ cup	2½ cups
Vegetables		¾ cup	3¾ cups
Dark green[h]			½ cup
Red/orange[h]			¾ cup
Beans/peas (legumes)[h]			½ cup
Starchy[h]			½ cup
Other[h,i]			½ cup
Additional veg to reach total[j]			1 cup
Grains/breads	1 serving[b]	1 oz. equiv.	8-9 oz. equiv.[e,k]
Meats/meat alternates	1 serving[l]	1 oz. equiv.	8-10 oz. equiv.
Dietary specifications: daily amount based on average for the week			
Min-max calories (kcal)		550-650	
Saturated fat (% of total kcal)		<10	
Sodium (mg)		<1230[g]	
Trans fat (g)[n]		0	
Snack	**Grades K–12**		
Milk	1 cup	1 cup	

Table 3-2. SFSP daily and school meal program daily and weekly meal pattern requirements (continued)

Food components	SFSP	NSLP/SBP (grades K-5)	
	Daily requirements	Daily requirements[a]	Weekly requirements[a]
Fruits/vegetables	¾ cup	¾ cup	
Fruits			
Vegetables			
Grains/breads	1 serving[d]	1 serving[d]	
Meats/meat alternates	1 serving[m]	1 serving[m]	

[a] Food items included in each food component and subgroup and amount equivalents. Minimum creditable serving is ⅛ cup.
[b] In SBP, the requirement is for fruits, but vegetables may be substituted for fruit provided that the first two such substitutions per week are not from the starchy vegetables subgroup.
[c] One quarter-cup of dried fruit counts as ½ cup of fruit; 1 cup of leafy greens counts as ½ cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.
[d] One serving of grains/breads is 1 slice of bread; 1 serving of cornbread, biscuit, roll, muffin; ¾ cup cold dry cereal; ½ cup hot cooked cereal; or ½ cup pasta, noodles, grains.
[e] All grains offered must be whole grain-rich unless the site has received a whole grain waiver from the State; with the whole grain waiver, at least half of the grains offered must be whole grain-rich.
[f] There is no separate meat/meat alternate component in the SBP. Beginning July 1, 2013 (SY 2013-2014), schools may substitute 1 oz. eq. of meat/meat alternate for 1 oz. eq. of grains after the minimum daily grains requirement is met.
[g] Sodium values are the Target 1 values in effect in SY 2017-2018.
[h] Larger amounts of these vegetables may be served.
[i] This category consists of "Other vegetables" as defined in §210.10(c)(2)(iii)(E). For the purposes of the NSLP, "Other vegetables" requirement may be met with any additional amounts from the dark green, red/orange, and beans/peas (legumes) vegetable subgroups as defined in §210.10(c)(2)(iii).
[j] Any vegetable subgroup may be offered to meet the total weekly vegetable requirement.
[k] Grain-based desserts are allowed a maximum of two days per week.
[l] At lunch, 1 serving of meat/meat alternates is 2 oz. lean meat, poultry, fish, alternate protein product or cheese; 1 large egg; ½ cup cooked dry beans or peas; 4 TBSP peanut or other nut or seed butter; 1 oz. nuts and/or seeds; or 8 oz. yogurt.
[m] At snack, 1 serving of meat/meat alternates is 1 oz. lean meat, poultry, fish, alternate protein product or cheese; ½ large egg; ¼ cup cooked dry beans or peas; 2 TBSP peanut or other nut or seed butter; 1 oz. nuts and/or seeds; or 4 oz. yogurt.
[n] Food products or ingredients used to prepare meals must contain 0 grams of trans fat per serving or a minimal amount of naturally occurring trans fat.
SFSP = Summer Food Service Program NSLP = National School Lunch Program SBP = School Breakfast Program

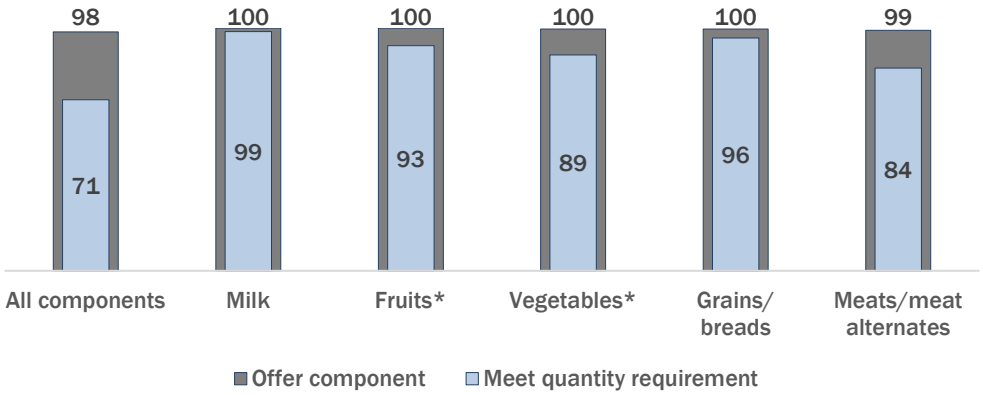
3.2 Lunch

This section describes the extent to which daily and weekly lunches include foods in the required components and in the required quantities. Results are presented for all sites combined and by type of meal pattern (SFSP or NSLP) followed by the site. The analysis of weekly lunches is limited to sites that follow the NSLP meal pattern.

3.2.1 Comparison to Daily Meal Pattern Requirements

Nearly all sites (98%) offer foods in all of the required food components at lunch, and about 71 percent of sites also provide the required quantities of those components (see Figure 3-3). For food component quantities, the vast majority of sites offer milk (99%), grains/breads (96%), fruits (93%), and vegetables (89%) in the required amounts. Less than the required quantities of food are seen primarily in the meats/meat alternates component, with 17 percent of sites offering less than the required amount of meats/meat alternates at lunch.

Figure 3-3. Percentage of sites# offering food components and meeting daily quantity requirements† for lunch



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 709; weighted n = 64,777.
Excludes menus for 10 sites following NSLP meal pattern that served only grades 9-12.
† Denominator includes sites that did not offer foods from food component.
* Includes SFSP sites that meet the combined fruit/vegetable requirement.

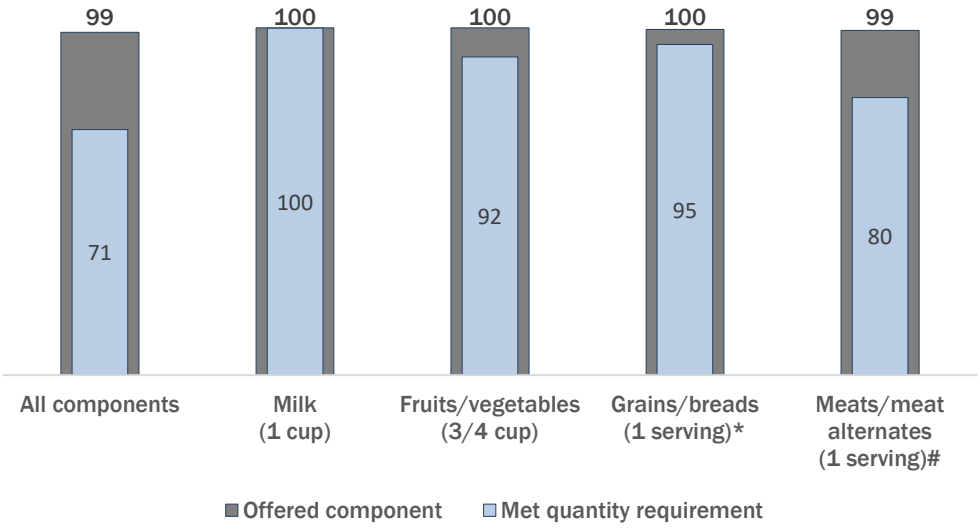
Sites Following the SFSP Meal Pattern

Almost all sites in the SFSP follow the SFSP meal pattern.[28] Similar to the results for all summer meals sites, the vast majority of sites following the SFSP meal pattern (99%) offer foods in the required food components at lunch, and 71 percent meet the quantity requirements for all components (see Figure 3-4). Sites following the SFSP meal pattern offer the required amount of milk at lunch; over 90 percent of these sites also offer the required amount of fruits/vegetables

[28]Among the 565 SFSP sites in the study, 530 follow the SFSP meal patterns, or 94 percent.

(92%) and grains/breads (95%) at lunch. Consistent with the results for all summer meal sites, over three-quarters (80%) of SFSP sites offer the required quantity of meats/meat alternates.

Figure 3-4. Percentage of sites offering food components and meeting daily quantity requirements† for lunch, among sites following SFSP meal patterns



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 530; weighted n = 50,369.
† Denominator includes sites that did not offer foods from food component.
* One serving of grains/breads is 1 slice of bread; 1 serving of cornbread, biscuit, roll, muffin; ¾ cup cold dry cereal; ½ cup hot cooked cereal; or ½ cup pasta, noodles, grains.
# At lunch, 1 serving of meat/meat alternates is 2 oz. lean meat, poultry, fish, alternate protein product or cheese; 1 large egg; ½ cup cooked dry beans or peas; 4 TBSP peanut or other nut or seed butter; 1 oz. nuts and/or seeds; or 8 oz. yogurt.
SFSP = Summer Food Service Program

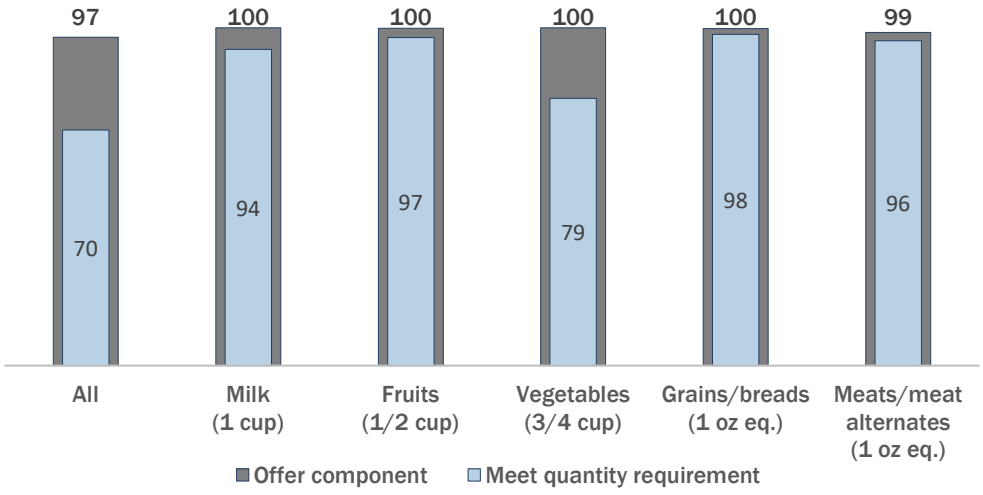
Among sites following the SFSP meal patterns that do not meet the quantity requirements, the deficit in meeting the quantity requirements at lunch ranges from 20 to 25 percent,[29] meaning that, on average, these sites offer three-quarters or more of the required amounts of foods in these food components at lunch (data not shown). The median portion of the fruits/vegetables component served at lunch is 0.61 cups of the required 0.75 cups, which is 81 percent of the required amount; the median portion of grains/breads is 0.76 servings (76% of the required amount); and the median portion of meats/meat alternates is 0.75 servings (75% of the required amount).

[29]This calculation includes sites that do not offer the food component at all.

Sites Following the NSLP Meal Pattern

The majority of sites following the NSLP meal pattern are SSO sites; however, a small number of SFSP sites also follow this meal pattern.[30] Among sites that follow the NSLP meal pattern, the vast majority (97%) offer all required food components at lunch, and 70 percent meet the quantity requirements for all food components (see Figure 3-5). More than 90 percent of sites met the daily quantity requirements for milk, fruit, grains/bread, and meats/meat alternate. Although insufficient quantities of foods are seen primarily in the vegetables component, nearly eight out of ten sites (79%) offer the required amount of vegetables at lunch.

Figure 3-5. Percentage of sites# offering food components and meeting daily quantity requirements† for lunch, among sites following NSLP meal patterns



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 179; weighted n = 14,408.
Excludes menus for 10 sites that served only grades 9-12.
† Denominator includes sites that did not offer foods from food component.
NSLP = National School Lunch Program

Among sites following the NSLP meal pattern that do not meet the quantity requirements, the deficit in meeting the quantity requirements ranges from 26 percent to 40 percent (data not shown). The median portion of the grains/breads component provided is 0.77 ounce equivalents (77% of the required amount); vegetables, 0.51 cups (68% of the required amount); milk, 0.67 cups (67% of the required amount); meats/meat alternates, 0.67 ounce equivalents (67% of the required amount); and fruits, 0.3 cups (60% of the required amount).

[30]Thirty-five SFSP sites in the study follow the NSLP/SBP meal patterns.

3.2.2 Comparison to Weekly Meal Pattern Requirements

Among sites following the NSLP meal patterns, 87 percent of sites offer all required food components across the week of operation, with about one in ten sites (11%) serving lunches that meet the NSLP weekly meal pattern requirements for all components (see Table 3-3). For comparison, the School Nutrition and Meal Cost Study (SNMCS) found that seven percent of weekly elementary lunch menus met all of the weekly meal pattern requirements (Gearan, et al., 2019).

Nearly all sites (96%) offer the required weekly amount of milk and meet all requirements for fruits (99%; requirements include offering the required weekly amount of fruits and offering no more than half the fruit quantity as 100% fruit juice). Results from SNMCS found that virtually all weekly elementary lunch menus met the weekly quantity requirement for milk, 95 percent met the weekly quantity requirements for fruits, and 97 percent met the requirement that no more than half of the fruit quantity be 100% fruit juice.

More than nine out of ten sites (94%) offer vegetables over the week, and slightly more than eight of ten sites (81%) provide the weekly required amounts; in SNMCS, 80 percent of weekly lunch menus met the weekly quantity requirement. For vegetable subgroups, nearly all sites offer vegetables in all subgroups over the course of a week; approximately 90 percent offer dark green vegetables and beans and peas, while 95 to 100 percent offer red and orange vegetables, starchy vegetables, and other vegetables. However, the amounts offered vary somewhat across the vegetable subgroups. Most sites offer the required weekly amount of red/orange vegetables (80%) and starchy vegetables (80%). Seven out of ten sites offer the required weekly amount of other vegetables (70%), and dark green vegetables (70%); less than one-half of sites (44%) offer the required weekly amount of beans and peas.

Over 90 percent offer meats/meat alternates, and 97 percent of these provide the weekly required amounts; in SNMCS, 66 percent of elementary lunch menus met the weekly required amount of meats/meat alternates.

Nearly all sites (99%) offer grains at every lunch and slightly more than three-quarters (76%) meet all weekly requirements for grains (i.e., they offer the required weekly amount of grains, meet the 100

percent whole grain-rich requirement,[31] and meet the grain-based desserts requirement). Nearly all sites (99%) offer at least half of their grains as whole grain-rich products at lunch (data not shown).

Table 3-3. Percentage of sites# offering food components and meeting weekly requirements at lunch, among sites following NSLP meal patterns

Food component	Percentage of sites	
	Offer every day*	Meet weekly requirements
All weekly meal pattern requirements	87.7	11.3
Milk	100.0	96.0
Fruits	99.5	98.8[a]
Meet quantity requirement		99.5
Meet fruit juice requirement		99.2
Vegetables	93.9	26.6[b]
Meet quantity requirement		81.7
Meet vegetable juice requirement		100.0
Meet all subgroup requirements		26.6
Dark green	88.9	69.6
Red and orange	100.0	80.0
Beans and peas (legumes)	90.9	43.5
Starchy	94.8	78.3
Other	96.8	69.1
Grains	99.2	76.0[c]
Meet quantity requirement		97.3
Meet whole grain-rich requirement[d]		77.1
Meet grain-based desserts requirement[e]		99.7
Meats/meat alternates	93.6	96.7
Number of sites (unweighted)	178	
Number of sites (weighted)	14,292	

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.

[a] Percentage of sites that provide the weekly required quantity and meet the fruit juice requirement of providing less than 50% of fruits as 100% fruit juice.

[b] Percentage of sites that meet all weekly vegetable requirements, including weekly required quantity, providing less than 50% of vegetables as 100% vegetable juice, and the weekly required quantity of all vegetable subgroups.

[c] Percentage of sites that meet all weekly grain requirements, including the weekly required quantity, whole grain-rich requirement, and the grain-based dessert requirement.

[d] All grains served must be whole grain-rich, unless the site has been granted a waiver by the State agency.

[e] For sites following the NSLP meal pattern, grain-based desserts are allowed a maximum of two days per week.

Excludes menus for 10 sites following NSLP meal pattern that served only grades 9-12.

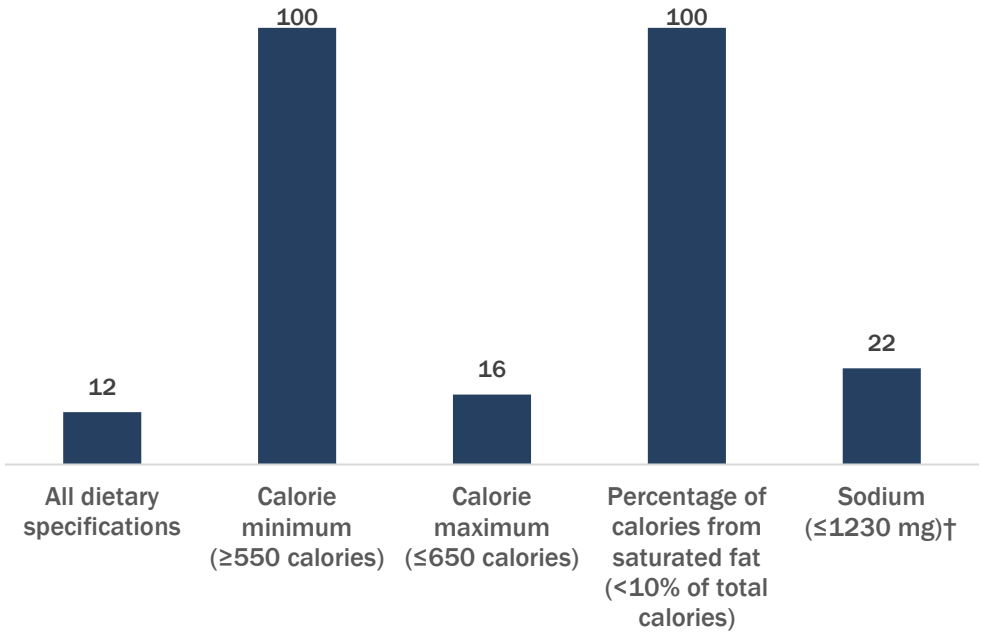
*Vegetable subgroups show the percentage of sites offering the item at least once per week.

NSLP = National School Lunch Program

[31] In 2019, the requirement that all grains be whole grain-rich was amended to require that one half of all grains be whole grain-rich.

Twelve percent of sites following the school meal program meal patterns meet all dietary specifications at lunch (see Figure 3-6). All sites offer the minimum required amount of calories and meet the requirement for saturated fat. Twenty-two percent meet the requirement for sodium and 16 percent do not exceed the maximum calorie requirement.

Figure 3-6. Percentage of sites# meeting the weekly dietary specifications at lunch, among sites following NSLP meal patterns



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. All sites unweighted n = 178; weighted n = 14,292.
Excludes 10 sites that served only grades 9-12; includes 15 sites that only served grades 6-8.
† Sodium values are the Target 1 values in effect in SY 2017-2018.

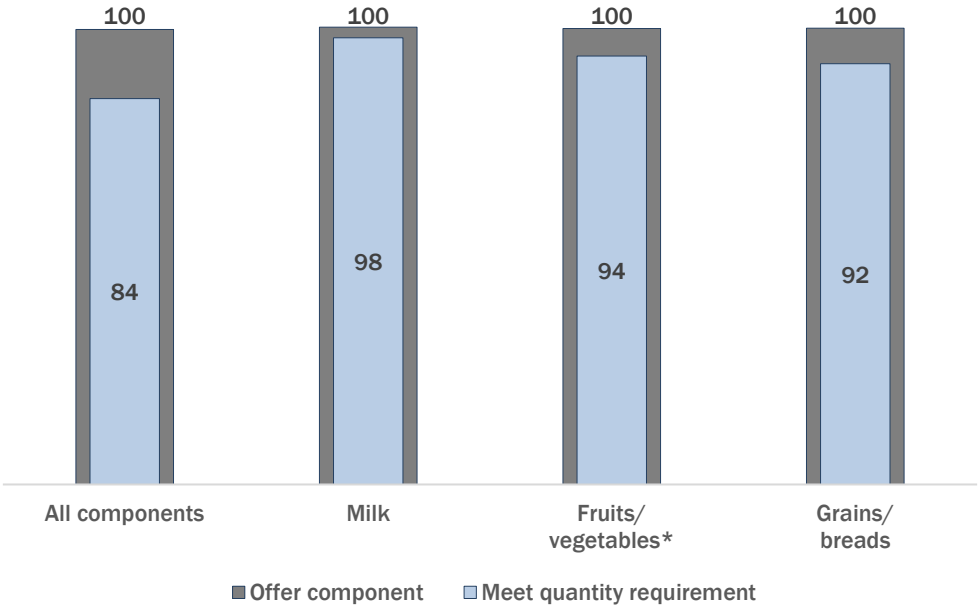
3.3 Breakfast

This section details the extent to which sites offer breakfasts that include both foods in the required components and in the required quantities. Results are presented for all sites combined and by type of meal pattern (SFSP or SBP) followed by the site. The analysis of weekly breakfasts is limited to sites that follow the SBP meal pattern.

3.3.1 Comparison to Daily Meal Pattern Requirements

All sites (100%) offer foods in the required food components at breakfast, and 84 percent of sites provide the required quantities of those components (see Figure 3-7). Milk is offered in the required amount by nearly all sites (98%); more than 90 percent of sites meet the quantity requirements for fruits (94%) and grains/breads (92%).

Figure 3-7. Percentage of sites# offering food components and meeting daily quantity requirements† at breakfast



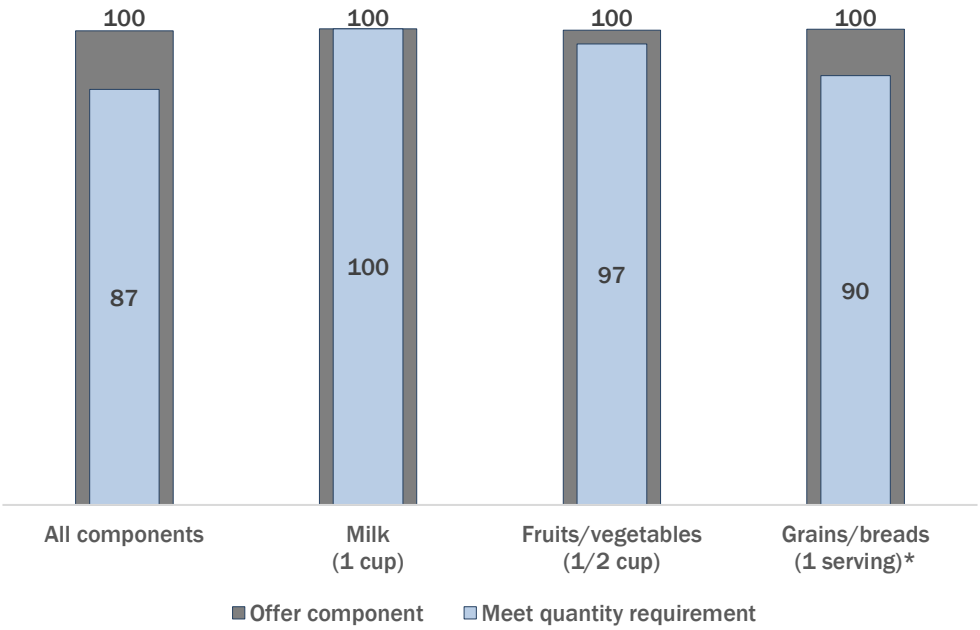
Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 504; weighted n = 33,983.
Excludes menus for 8 sites following the SBP meal pattern that served only grades 9-12.
† Denominator includes sites that did not offer foods from food component.
* The SFSP meal pattern lists a single requirement for fruits and vegetables at breakfast; the SBP meal pattern has no requirement for vegetables, but when offered, they are applied to the fruit requirement.
SFSP = Summer Food Service Program

Sites Following the SFSP Meal Patterns

All sites (100%) that follow the SFSP meal patterns offer all required food components at breakfast, and 87 percent also provide the required quantities in the three food components (see Figure 3-8). All sites (100%) provide the required amount of milk at breakfast; nearly all sites also provide the required amount of fruits/vegetables (97%) and grains/breads (90%). Among the small number of sites that do not meet the fruit/vegetable quantity requirement, the median quantity of fruits and

vegetables they provide is 0.43 cups of the required 0.50 cups, or 86 percent of the required amount. Similarly, among the sites that do not meet the grains/breads quantity requirements, the median portion of grains/breads provided is 0.73 servings (73% of the required amount).

Figure 3-8. Percentage of sites offering food components and meeting daily quantity requirements† for breakfast, among sites following SFSP meal patterns

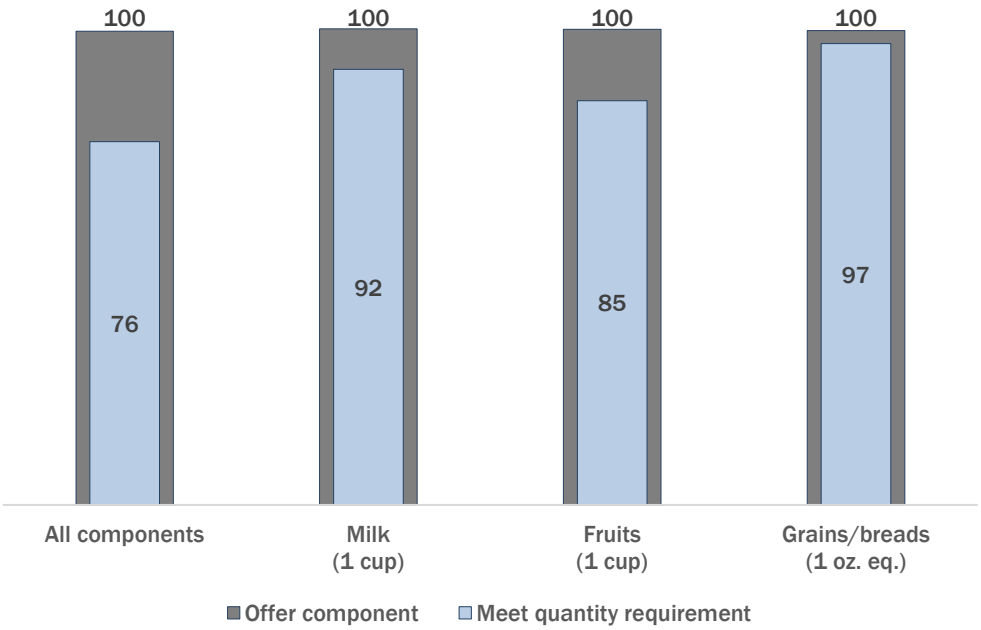


Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 361; weighted n = 30,143.
† Denominator includes sites that did not offer foods from food component.
* One serving of grains/breads is 1 slice of bread; 1 serving of cornbread, biscuit, roll, muffin; ¾ cup cold dry cereal; ½ cup hot cooked cereal; or ½ cup pasta, noodles, grains.
SFSP = Summer Food Service Program

Sites Following the SBP Meal Patterns

Among sites that follow the SBP meal patterns, all sites (100%) offer foods in the three required food components at breakfast, and more than three-quarters (76%) meet the quantity requirements for all food components (see Figure 3-9). The vast majority of sites also provide the required quantities of the components at breakfast: 97 percent offer the required quantity of grains/breads; 91 percent offer the required quantity of milk; and 85 percent offer the required quantity of fruits.

Figure 3-9. Percentage of sites# offering food components and meeting daily quantity requirements† for breakfast, among sites following SBP meal pattern



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 143; weighted n = 11,334.
Excludes 8 sites that served only grades 9-12.
† Denominator includes sites that did not offer foods from food component.
SBP = School Breakfast Program

There is a range in the average portions of food components served by sites following the SBP meal pattern that fall short of meeting the quantity requirements at breakfast. The median portion of grains/breads provided at breakfast is 0.82 ounce equivalents (82% of the minimum daily requirement); the median quantity of milk is 0.67 cups (67% of the requirement); and the median portion of fruit is 0.50 cups (50% of the requirement). This is the same deficit shown for lunch for the milk component. It is possible that these sites are using six-ounce single-serve milk containers instead of eight-ounce single-serve containers. The average deficit for fruits is higher at breakfast than lunch: 50 percent deficit for fruits at breakfast compared to a 40 percent deficit at lunch.

3.3.2 Comparison to Weekly Meal Pattern Requirements

Among sites following the SBP meal patterns, almost all sites (98%) offer foods in all three required food components over the week, and 38 percent offer breakfasts that include the required weekly amounts of foods in all three components (see Table 3-4). Most sites (95%) offer the required

weekly amount of milk, while 74 percent of sites meet all weekly requirements for fruits (i.e., they offer the required weekly amount of fruit and no more than half that amount as 100% fruit juice). Nearly two-thirds (65%) meet all weekly requirements for grains (i.e., they offer the required weekly amount of grains and meet the whole grain-rich requirement). All sites (100%) offer at least half of their grains as whole grain-rich products at breakfast (data not shown).

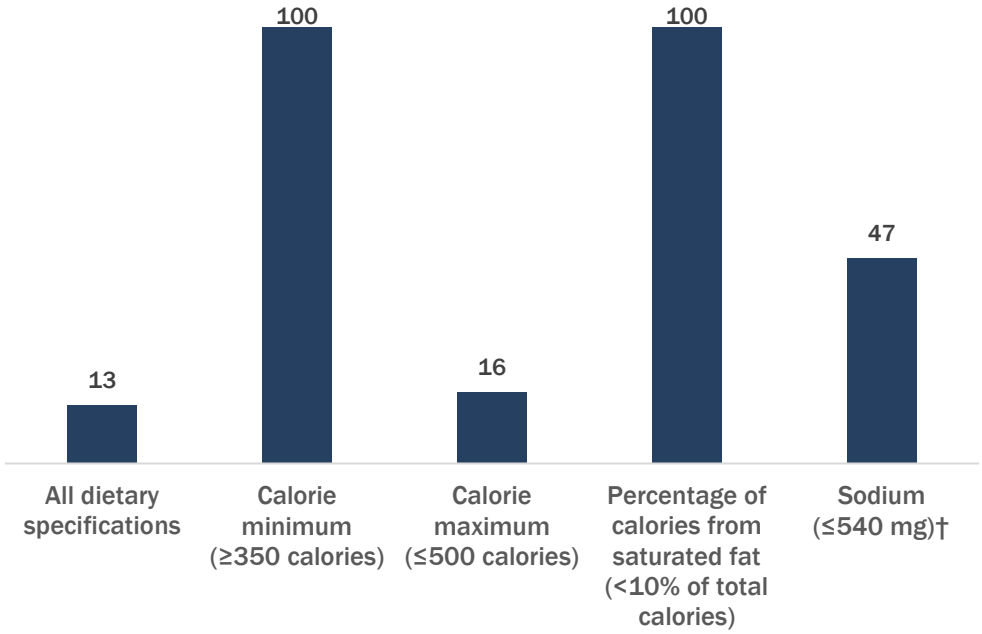
Table 3-4. Percentage of sites# offering food components and meeting the weekly requirements at breakfast, among sites following the SBP meal pattern

Food component	Percentage of sites	
	Offer	Meet requirements
All weekly meal pattern requirements	97.5	47.0
Milk	100.0	95.0
Fruits	99.5	73.5[a]
Meet quantity requirement		78.9
Meet fruit juice requirement		87.7
Grains	97.9	65.2[b]
Meet quantity requirement		95.5
Meet whole grain-rich requirement[c]		69.7
Number of sites (unweighted)	143	
Number of sites (weighted)	11,334	

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.
[a] Percentage of sites that provide the weekly required quantity and meet the fruit juice requirement of providing less than 50% of fruits as 100% fruit juice.
[b] Percentage of sites that meet all weekly grain requirements, including the weekly required quantity, whole grain-rich requirement
[c] All grains served must be whole grain-rich, unless the site has been granted a waiver by the State agency.
# Excludes menus for 8 sites following the SBP meal pattern that served only grades 9-12.
SBP = Summer Breakfast Program

Thirteen percent of sites meet all SBP dietary specifications. All sites (100%) offer breakfasts that provide the minimum calories and meet the requirement to limit saturated fat. Slightly less than one-half of sites (47%) offer breakfasts that meet the sodium requirement. Less than one-fifth (16%) do not exceed the maximum calorie requirement at breakfast (see Figure 3-10).

Figure 3-10. Percentage of sites# meeting the weekly dietary specifications at breakfast, among sites following SBP meal patterns



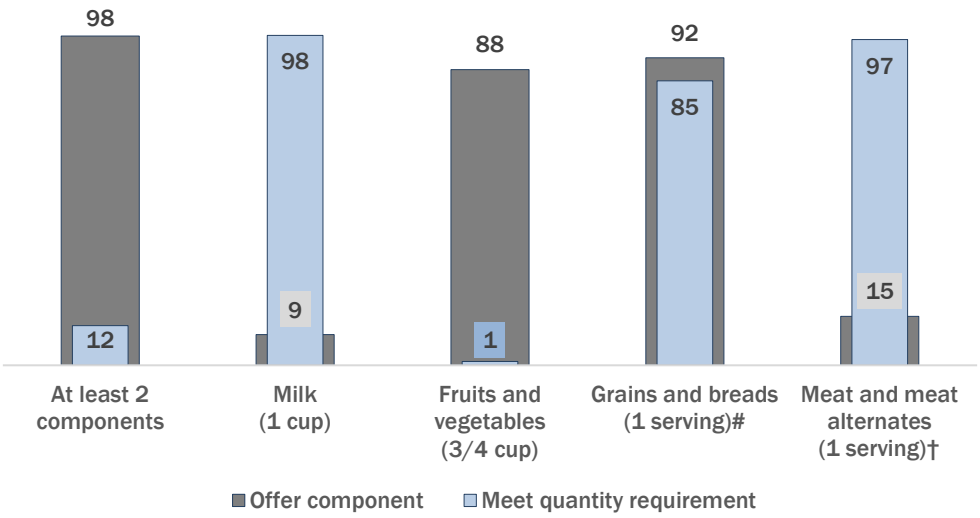
Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. All sites unweighted n = 143; weighted n = 11,334.
Excludes 8 sites that served only grades 9-12; includes 12 sites that only served grades 6-8.
† Sodium values are the Target 1 values in effect in SY 2017-2018.

3.4 Snack

This section presents the extent to which sites meet the daily meal pattern requirements for snacks; there are no weekly snack meal pattern requirements. The snack meal patterns require sites to offer foods from any two of the four food components. Nearly all sites (98%) offer snacks that include two food components; however, only about 12 percent of sites offer them in the required quantities (see Figure 3-11). The two most commonly offered food components at snack are grains/breads and fruits/vegetables. Most sites (92%) offer foods from the grains/breads component, and 85 percent offer them in the required amount. In contrast, 88 percent of sites offer foods from the fruits/vegetables component, but only one percent offer the required ¾ cup amount.

Only 15 percent of sites offer foods from the meats/meat alternates food group and nine percent offer milk at snack. When they are offered, however, sites generally provide the required amounts: 97% of sites provide the required quantity of meats/meat alternates, and 98% of sites provide the required quantity of milk.

Figure 3-11. Percentage of all sites offering food components and meeting daily quantity requirements* for snack



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 129; weighted n = 10,966.

One serving of grains/breads is 1 slice of bread; 1 serving of cornbread, biscuit, roll, muffin; ¾ cup cold dry cereal; ½ cup hot cooked cereal; or ½ cup pasta, noodles, grains.

† At snack, 1 serving of meat/meat alternates is 1 oz. lean meat, poultry, fish, alternate protein product or cheese; ½ large egg; ¼ cup cooked dry beans or peas; 2 TBSP peanut or other nut or seed butter; ½ oz. nuts and/or seeds; or 4 oz. yogurt.

* Denominator is only sites that offered foods from the food component.

Among sites that do not provide the required serving amounts at snack, the average quantities they provide are relatively low. The median portions for the food components are as follows: fruits/vegetables, 0.4 cups (53% of the required amount); grains/breads, 0.60 servings (60% of the required amount), and, among the few sites not meeting the requirements for milk, 0.5 cups (50% of the required amount); and meats/meat alternates, 0.58 servings (58% of the required amount).

4. Types of Foods Offered

This chapter describes the characteristics of foods offered through summer meal programs. The findings presented in this chapter describe the types of meals offered at summer meal programs; meal patterns used by sites; and foods offered at meals, including the number of choices per day and different items per week and most frequently offered foods in each food group. Tables and figures presented here are key results; supplementary tables are provided in Appendix A. All differences between program types (SFSP compared with SSO) discussed in the text are statistically significant, unless otherwise noted.

4.1 Foods Offered at Meals

This section describes the types of foods offered, the extent to which choices are offered within food groups, and characteristics of the foods offered by all sites and by sites based on program type (SFSP and SSO). For the analysis of the types of foods offered, foods were classified into eight major food groups and 88 minor food groups, consistent with the groups reported in the USDA/FNS School Nutrition and Meal Cost Study (Gearan et al, 2019). One of the eight major groups is combination entrées; the other seven groups exclude items that are part of a combination entrée. The major food groups, with descriptions and examples noted below, are as follows:

- **Milk:** Flavored and unflavored fat-free, low-fat (1%), reduced fat (2%), whole milk and other milk beverages.
- **Fruits/100% fruit juices:** Fresh, canned, frozen, and dried fruits and 100% fruit juice.
- **Vegetables:** Cooked and raw vegetables and legumes, vegetable and bean soups, side salads, French fries and other fried potatoes.
- **Combination entrées:** Sandwiches, Mexican-style entrées, pizza, spaghetti with sauce.
- **Separate grains/breads:** Breads, rolls, cold or hot cereal, biscuits, muffins, pasta, rice.
- **Separate meats/meat alternates:** Plain or breaded meat, poultry, or fish, cheese, eggs, nuts and nut butters, yogurt.

- **Desserts/other menu items:** Cookies, cakes, salty snacks, bacon.[32]
- **Accompaniments:** Condiments and toppings, such as ketchup, mayonnaise, mustard and syrup; and salad dressings.

The 88 minor groups subdivide the major food groups on the basis of factors that affect nutrient content, such as ingredients or preparation method. For example, minor groups in combination entrées include "sandwich with meat, poultry or fish," "peanut butter sandwich," and "hamburger and similar beef/pork sandwiches." Examples of the minor groups in the vegetable group include "cooked, red and orange" and "raw, red and orange" vegetables. Appendix B provides the listing of all major and minor groups as well as examples of the types of foods included in each group.

4.1.1 Foods Offered at Lunch

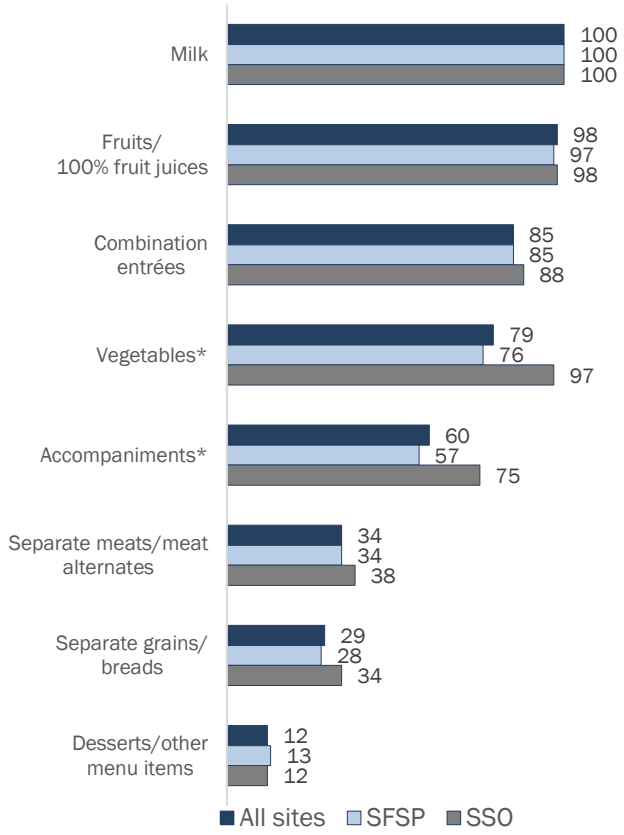
This section describes the foods offered at lunch by summer meal sites, including the types of foods offered, the extent to which choices are offered within food groups, and characteristics of the foods offered.[33]

[32]Note that graham crackers, animal crackers, cinnamon rolls and doughnuts are creditable in the grains/breads meal pattern group at breakfast, but are considered desserts at lunch.

[33]Analysis of lunches also includes the small number of supper meals served, as lunches and suppers use the same meal pattern.

The types of foods offered in the eight major food groups were examined for sites that offer lunch on one or more days. All sites offer one or more types of milk at lunch, and most sites offer one or more types of fruits/100% fruit juices (98%) and vegetables (79%), and 85 percent of sites offer at least one combination entrée that typically contains a meat/meat alternate and grain or breads item (see Figure 4-1). About one-third (34%) of sites offer separate meat/meat alternates, and just under one-third of sites (29%) offer separate grain or bread items (not part of a combination entrée). Six out of ten sites (60%) offer one or more accompaniments at lunch, and about one out of ten sites (12%) offers one or more desserts/other menu items. SFSP sites are less likely than SSO sites to offer fruits/fruit juices (94% compared with 98%), vegetables (76% compared with 97%) and accompaniments (57% compared with 75%) at lunch.

Figure 4-1. Percentage of sites offering one or more items from the major food groups at lunch per day, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.
All sites: unweighted n = 731; weighted n = 67,285; SFSP: unweighted n = 578; weighted n = 55,926; SSO: unweighted n = 153; weighted n = 11,359.
*** Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.**
SFSP = Summer Food Service Program
SSO = Seamless Summer Option

Choices Offered at Lunch

On a daily basis, almost two-thirds of sites (64%) offer two or more choices of milk at lunch, and almost half (46%) offer two or more choices of fruits/100% fruit juices. One-quarter of sites (25%)

offer only one option for separate grains/breads, and only four percent offer two or more choices of separate grains/breads (due to the inclusion of separate grains/breads as part of combination entrées); twenty-two percent of sites offer two or more combination entrées each day (see Table 4-1). Almost half of SFSP sites (48%) offer only one choice in the vegetable group each day. Substantially more SSO sites offer two or more choices of vegetables each day than SFSP sites (71% of SSO sites, compared with 28% of SFSP sites).

Table 4-1. Number of choices offered at lunch per day, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of milks			
None	<0.1	<0.1	0.0
1	35.9	43.2*	0.6
2	42.9	38.8*	63.0
3	16.1	12.4*	34.2
4 or more	5.0	5.5	2.3
Number of fruits/100% fruit juices			
None	2.3	2.5	1.7
1	52.5	53.1	49.6
2	23.5	23.6	23.0
3	4.6	3.3*	11.1
4	5.3	5.8*	2.7
5 or more	11.7	11.7	11.9
Number of vegetables/100% juices			
None	20.5	24.1*	2.8
1	44.3	47.9*	26.7
2	21.8	17.8*	41.6
3	5.9	4.0*	15.5
4	5.2	4.4	9.6
5 or more	2.2	1.9	3.8
Number of combination entrées			
None	14.8	15.4	11.9
1	63.7	64.7*	58.9
2	13.9	13.4	16.4
3	5.2	4.7	7.7
4 or more	2.4	1.8	5.1

Table 4-1. Number of choices offered at lunch per day, overall and by summer meal program type (continued)

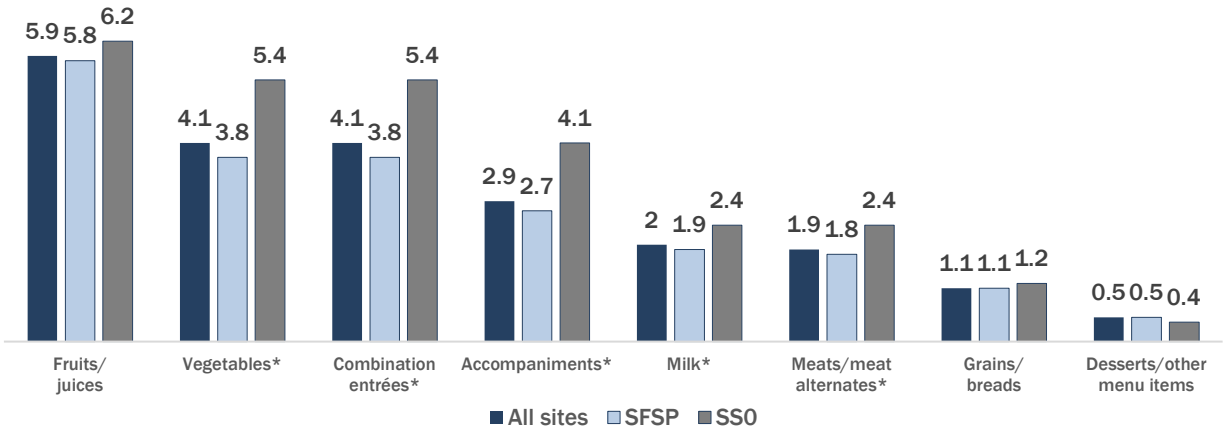
Menu items	Percentage of sites		
	All sites	Program type	
		SFSP	SSO
Number of separate grains/breads[b,c]			
None	70.7	71.6	65.9
1	25.2	24.7	27.8
2	3.1	2.5	6.0
3	0.7	0.7	0.3
4 or more	0.4	0.4	0.0
Number of separate meats/meat alternates			
None	61.1	63.1*	51.5
1	26.8	25.3*	34.0
2	9.6	9.7	8.7
3 or more	2.5	1.8*	5.8
Number of desserts and other menu items			
None	87.7	87.5	88.5
1	11.4	11.5	10.8
2 or more	0.9	1.0	0.7
Number of accompaniments			
None	39.6	42.6*	25.0
1	25.9	25.3	29.0
2	16.9	16.5	18.9
3	10.3	9.6*	13.4
4	3.4	2.8*	6.6
5 or more	3.9	3.2*	7.2
Number of sites (unweighted)	731	578	153
Number of sites (weighted)	67,285	55,926	11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.
Note: Total may not add to 100 due to rounding.
[b] Excluding combination entrées.
[c] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Figure 4-2 depicts the average number of foods offered at lunch per week in the eight major food groups, for all sites, and by program type. Lunches offered over the course of a week typically include more than one type of food in seven of the eight major food groups, with the greatest number of items in the fruits/100% fruit juices group (an average of 5.9 different items per week), followed by the vegetables group (an average of 4.1 different items per week). Fewer numbers of

separate grains/breads and separate meats/meat alternates are due to the inclusion of combination entrées in the menus that typically include grains/breads and meats/meat alternatives. SSO sites on average offer more items than SFSP sites in the vegetables, combination entrées, and milk food groups.

Figure 4-2. Average number of items offered in the major food groups at lunch per week, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. All sites: unweighted n = 731; weighted n = 67,285; SFSP: unweighted n = 578; weighted n = 55,926; SSO: unweighted n = 153; weighted n = 11,359.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Frequency and Forms of Foods Offered at Lunch

This section provides a summary of the most frequently offered foods at lunch, the frequency with which vegetable subgroups are offered, and the forms in which fruits and vegetables are offered (i.e., fresh/raw, cooked, juice). Table 4-2 lists the five most frequently offered items in each of the eight major food groups at lunch. In some instances, fewer than five foods are listed either because there are fewer than five options offered at lunch, or because they are offered by fewer than three percent of sites.

Milk. Unflavored low-fat milk (86%) is the most frequently offered type of milk at lunch, followed by flavored fat-free milk (65%).

Table 4-2. Most frequently offered foods at lunch per day, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Milk	**100**	**100**	**100**
Low-fat unflavored	86.0	83.5*	97.9
Fat-free flavored	64.5	58.3	94.9
Fat-free unflavored	22.1	20.5	30.1
Low-fat flavored	4.4	5.1*	0.7
Vegetables[a]	**79.3**	**75.7***	**97.2**
Fruits/100% fruit juices[a]	**97.5**	**97.4**	**98.3**
Combination entrées	**85.1**	**84.5**	**88.1**
Sandwich with plain meat, poultry, or fish	36.3	40.1*	17.8
Peanut butter sandwich	15.7	15.5	16.7
Mexican-style entrées	7.4	7.1	8.9
Hot dogs, corn dogs, similar sausage sandwiches	7.2	6.8	9.3
Pizza without meat	6.9	6.0*	11.2
Entrée salads	3.2	3.4	2.0
Baked beans	3.1	2.4*	6.6
Pizza pockets, pizza sticks, and calzones	2.5	2.7*	1.4
Sandwich with mayonnaise-based poultry, tuna, or egg salad	2.1	1.7*	4.1
Sandwich with cheese only	2.1	2.3	1.2
Separate grains/breads[a,b]	**32.4**	**28.3**	**34.1**
Crackers, croutons, or pretzels	10.8	11.3	8.3
Breads, rolls, bagels, and other plain breads	10.3	8.7	18.3
Corn/tortilla chips	4.3	3.9	6.3
Separate meats/meat alternates[a]	**34.4**	**33.6**	**38.0**
Cheese	15.3	16.1	11.4
Chicken and turkey, breaded or fried	8.2	7.5*	11.4
Chicken and turkey, plain	4.6	4.5	5.1
Nuts, nut butters and seeds	4.1	4.6*	1.3
Yogurt	3.4	3.9*	1.2
Meat substitutes, hummus, legumes[c]	3.3	2.3*	8.3
Sausage, frankfurters and cold cuts	2.7	1.9*	6.8
Desserts and other menu items	**12.3**	**12.5**	**11.5**
Cookies	5.9	6.0	5.6
Accompaniments	60.3	57.3*	75.0
Condiments and toppings	46.5	44.5*	56.1

Table 4-2. Most frequently offered foods at lunch per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Salad dressing	31.5	27.7*	50.1
Number of sites (unweighted)	731	578	153
Number of sites (weighted)	67,285	55,926	11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.
[a] Excluding combination entrées.
[b] Excluding grain-based desserts.
[c] Includes beans and peas credited as meat alternates in the site menu analysis.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

Table 4-3. Most frequently offered vegetables and fruits at lunch per day, overall and by summer meal program type

All sites		SFSP		SSO	
Menu items	Percentage of sites	Menu items	Percentage of sites	Menu items	Percentage of sites
Vegetables[a]	**79.3**	**Vegetables[a]**	**75.7**	**Vegetables[a]**	**97.2**
Carrots	30.4	Carrots	28.8	Carrots	37.8
Tomatoes	12.6	Tomatoes	11.7	Broccoli	21.1
Broccoli	10.4	Cucumber	8.5	French fries, other fried potatoes	18.5
French fries, other fried potatoes	8.7	Broccoli	8.2	Tomatoes	17.0
Corn	8.5	Celery	7.6	Corn	15.8
Fruits/100% fruit juices[a]	**97.5**	**Fruits/100% fruit juices[a]**	**97.4**	**Fruits/100% fruit juices[a]**	**98.3**
Apples (excluding juice)	29.9	Apples (excluding juice)	29.5	Apples (excluding juice)	31.8
Oranges (excluding juice)	21.4	Oranges (excluding juice)	20.5	Peaches	28.3
Peaches	20.6	Peaches	19.0	Oranges (excluding juice)	25.9
Bananas	17.2	Banana	17.9	Applesauce	20.3
Applesauce	16.6	Applesauce	15.9	Mixed fruit	15.7
Number of sites (unweighted)	731		578		153
Number of sites (weighted)	67,285		55,926		11,359

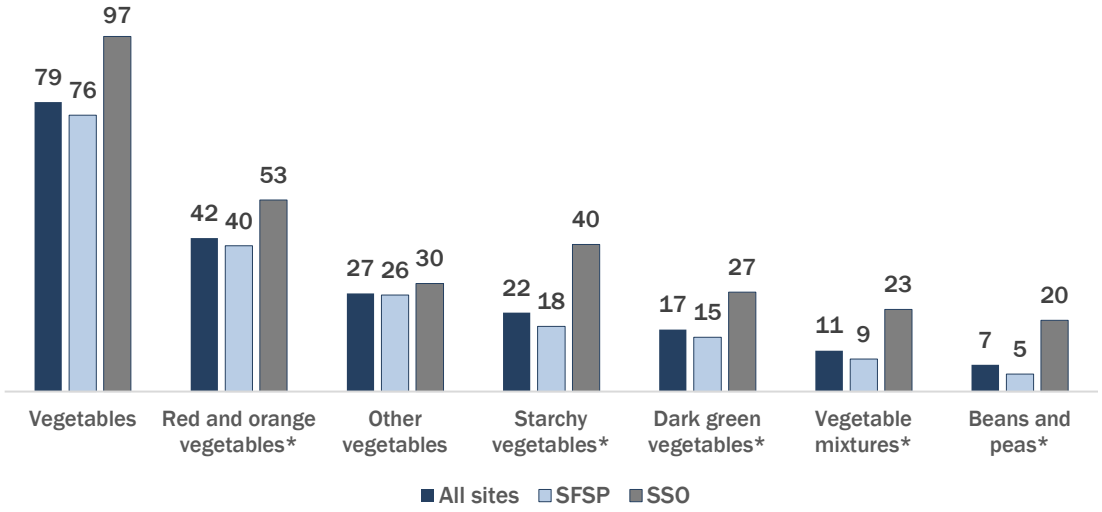
Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.
[a] Excluding combination entrées.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Vegetables. The top five frequently offered vegetables at lunch are carrots (30%), tomatoes (13%), broccoli (10%), French fries and other fried potatoes (9%), and corn (9%). The top five most frequently offered vegetables differ slightly between SFSP and SSO sites, though both include carrots, broccoli, and tomatoes; SFSP sites also include cucumber and celery in the top five, while SSO sites include French fried and other fried potatoes, and corn.

There is considerable diversity in the types of vegetables (i.e., subgroups) offered at lunch (see Figure 4-3). Red/orange vegetables are offered at lunch by 42 percent of all sites, while beans and peas are offered at seven percent of sites. Except for the "other" vegetables subgroup, SSO sites offer items from each vegetable subgroup in lunches more frequently than SFSP sites, attributable to the fact that these subgroup requirements are specified in the NSLP meal pattern used by SSO sites, but not in the SFSP meal pattern.

Figure 4-4 presents sites offering different forms of vegetables at lunch per day. More than half of summer meal sites (56%) offer fresh or raw vegetables at lunch. About three out of four SSO sites (76%) offer cooked vegetables at lunch, and one out of three SFSP sites (34%) does so. Overall, one out of four sites (24%) does not offer any vegetables (raw or cooked) at lunch, with more SFSP than SSO sites offering lunch without any vegetables (24% compared with 3%). This difference is likely attributable to the difference in the SFSP and NSLP meal pattern requirements. The SFSP meal pattern requires two different choices from within the combined fruit/vegetable food group at lunch; it does not specifically require that vegetables be offered. In contrast, the NSLP meal pattern has separate requirements for vegetables and fruits at lunch.

Figure 4-3. Percentage of sites offering vegetables in the vegetable subgroups at lunch per day, overall and by summer meal program type

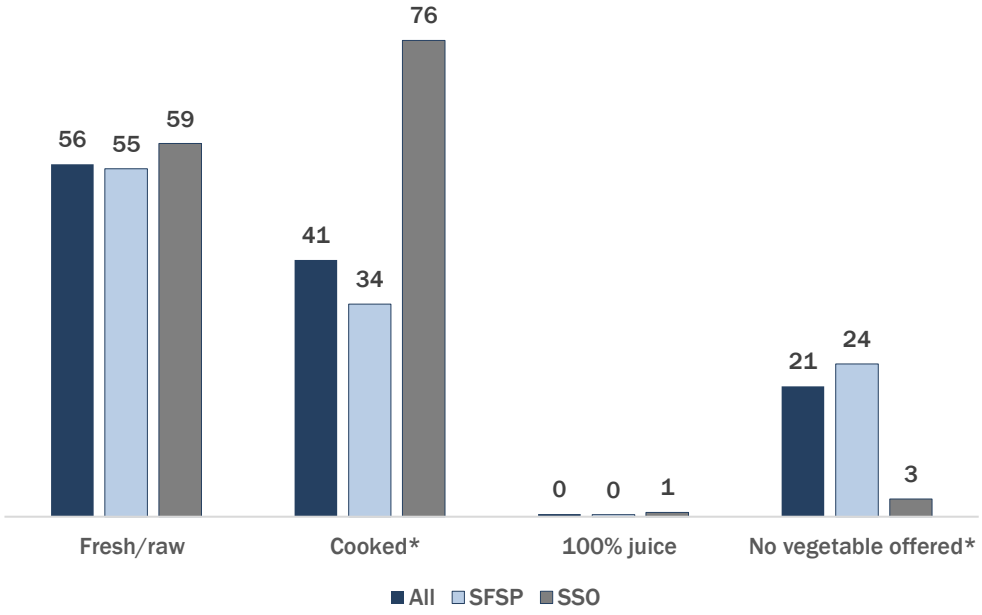


Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. All sites: unweighted n = 731; weighted n = 67,285; SFSP: unweighted n = 578; weighted n = 55,926; SSO: unweighted n = 153; weighted n = 11,359.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Figure 4-4. Percentage of sites offering vegetables in different forms at lunch per day, overall and by summer meal program type

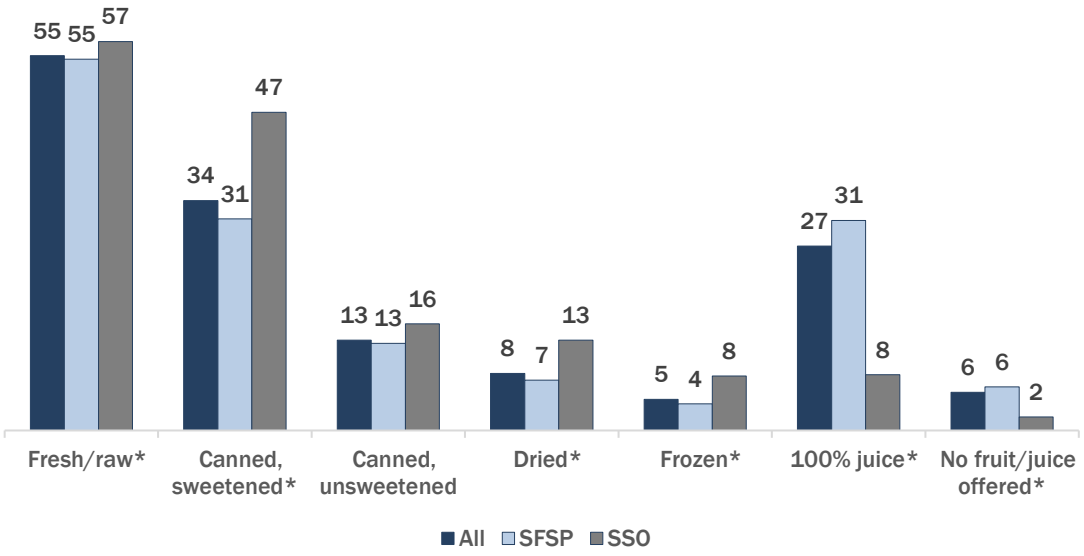


Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. All sites: unweighted n = 731; weighted n = 67,285; SFSP: unweighted n = 578; weighted n = 55,926; SSO: unweighted n = 153; weighted n = 11,359.
*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Fruits/100% Fruit Juices. The top five frequently offered fruits at lunch are apples (30%), oranges (21%), peaches (21%), bananas (17%), and applesauce (17%) (see Table 4-2).

Over 95 percent of summer meal sites offer fruits/100% fruit juices at lunch, with more SSO sites than SFSP sites offering fruits/100% fruit juices. Fresh/raw fruits are the most common, and frozen fruit is the least common form of fruits/100% fruit juices at lunch (see Figure 4-5). Slightly more than half of summer meal sites (55%) offer fresh or raw fruits at lunch, while about one-third (34%) offer sweetened canned fruits. More SSO sites than SFSP sites offer fresh or raw fruit; sweetened canned fruit; frozen fruit; and dried fruit; unsweetened canned fruit are offered equally by both SSO and SFSP sites. Slightly more than one-fourth of all sites (27%) offer 100% fruit juice; fewer SSO sites than SFSP sites offer 100% fruit juice (8% compared with 31%).

Figure 4-5. Percentage of sites offering fruits in different forms at lunch per day, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 731; weighted n = 67,285.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Combination Entrées. The vast majority of sites (85%) offer combination entrées at lunch (see Table 4-2). The most frequently offered combination entrée is a sandwich with plain meat, poultry, or fish, offered by nearly four of ten sites (36%). A peanut butter sandwich is offered by nearly 16 percent of all sites, while Mexican-style entrées, hot dogs, corn dogs and similar sausage sandwiches and pizza (without meat) are each offered by approximately seven percent of all sites.

Separate Grains/Breads (Not Part of a Combination Entrée). The most frequently offered separate grains/breads at lunch include crackers, croutons, or pretzels (10%); breads, rolls, bagels, or other plain breads (not part of a combination entrée) (10%); and corn or tortilla chips (4%) (see Table 4-2).

Separate Meats/Meat Alternates (Not Part of a Combination Entrée). The most frequently offered separate meats/meat alternates item at lunch is cheese, offered at 15 percent of sites, followed by breaded or fried chicken/turkey, offered by eight percent of sites (see Table 4-2). Five percent or less of sites offer plain chicken or turkey (5%); nuts, nut butters, and seeds (4%); and yogurt (3%) at lunch.

Desserts and Other Menu Items. Overall, about 12 percent of sites offer desserts and other menu items at lunch (see Table 4-2). The most frequently offered dessert/other menu item at lunch is cookies, offered by six percent of sites. All other items in the desserts and other menu items category are offered by fewer than three percent of sites.

Accompaniments. Although not part of a reimbursable meal, 60 percent of all sites offer accompaniments at lunch; SSO sites offer accompaniments more frequently than SFSP sites (75% compared with 57%) (see Table 4-2). Almost half of sites (47%) offer condiments and toppings such as ketchup and mayonnaise at lunch, and about one-third (32%) offer salad dressing.

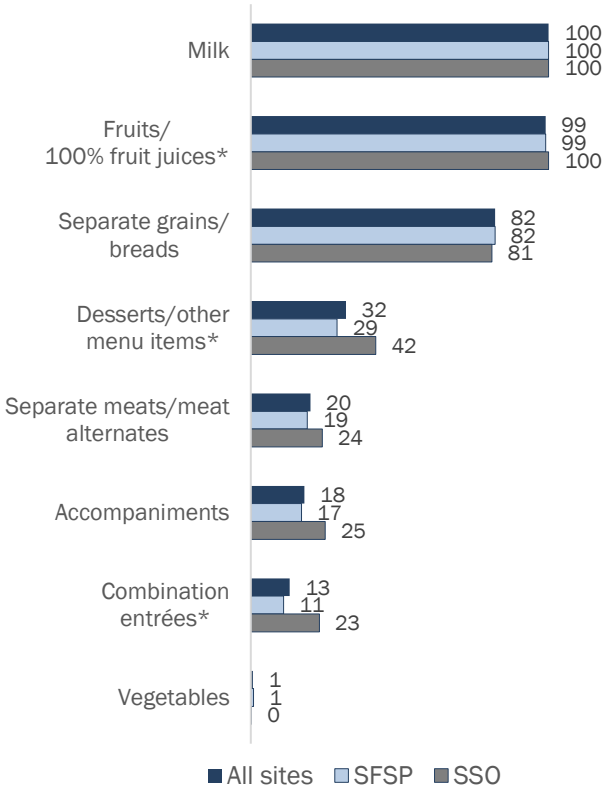
4.1.2 Foods Offered at Breakfast

The section describes the foods offered at breakfast by summer meal sites, including the types of foods offered, the extent to which choices are offered within food groups, and characteristics of the foods offered.

The types of foods offered in the eight major groups are examined for sites that offer breakfast on one or more days. Breakfasts served through summer meal programs are required to include items from the milk, separate grains/breads, and fruits food components; sites offer more than one choice in each of these three food components.

All sites offer one or more types of milk at breakfast, and most sites offer one or more types of fruits/100% fruit juices (99%) and separate grains/breads that are not part of a combination entrée (82%) (see Figure 4-6). Nearly one-third of sites (32%) offer desserts/other menu items at breakfast; and one out of five offer separate meats/meat alternates (not part of a combination entrée). Combination entrées are offered by 13% of sites. SFSP sites are less likely than SSO sites to offer fruits/fruit juices (78% compared with 99%), desserts/other menu items (29% compared with 42%) and combination entrées (11% compared with 23%) at breakfast.

Figure 4-6. Percentage of sites offering one or more items from the major food groups at breakfast per day, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. All sites: unweighted n = 523; weighted n = 43,795; SFSP: unweighted n = 405; weighted n = 35,321; SSO: unweighted n = 118; weighted n = 8,475.
*** Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.**
SFSP = Summer Food Service Program
SSO = Seamless Summer Option

Choices Offered at Breakfast

On a daily basis, 62 percent of sites offer two or more choices of milk at breakfast; more than half (53%) offer two or more choices of fruits/100% fruit juices; and 21 percent offer two or more choices of separate grains/breads (see Table 4-4). The percentages of sites offering choices in other food groups are much lower. When examining the number of choices by program type, approximately two to three times more SSO sites than SFSP sites offer two or more choices for milk (77% for SSO compared with 38% for SFSP), fruits/100% fruit juices (60% compared with 18%), and separate grains/breads (32% compared with 12%).

Table 4-4. Number of choices offered at breakfast per day, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of milks			
None	0.0	0.0	0.0
1	38.2	46.3*	4.5
2	45.7	38.1*	77.0
3	10.2	8.9	15.4
4 or more	6.0	6.7	3.1
Number of fruits/100% fruit juices			
None	0.3	0.4	0.2
1	46.6	55.4*	9.9
2	26.2	18.0*	60.1
3	5.5	5.1	6.8
4	3.1	2.8	4.2
5 or more	18.4	18.3	18.8
Number of combination entrées			
None	86.6	89.0*	76.7
1	12.8	10.5*	22.3
2 or more	0.6	0.5	1.1
Number of separate grains/breads[a,b]			
None	17.9	17.6	18.9
1	60.8	65.3*	42.3
2	16.0	12.3*	31.5
3	3.4	2.8	5.8
4	0.3	0.2	0.5
5 or more	1.6	1.8	0.9

Table 4-4. Number of choices offered at breakfast per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of separate meats/meat alternates			
None	80.0	81.0	75.7
1	18.2	17.4	21.8
2	0.7	0.3	2.1
3 or more	1.1	1.3	0.5
Number of desserts and other menu items[c]			
None	68.5	71.1*	57.6
1	27.3	25.6	34.5
2 or more	4.2	3.4	7.9
Number of accompaniments			
None	81.9	83.4*	75.3
1	12.8	11.0*	20.0
2	4.5	4.6	4.3
3 or more	0.9	0.9	0.5
Number of sites (unweighted)	523	405	118
Number of sites (weighted)	43,795	35,321	8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Excluding combination entrées.

[b] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

[c] Items in the desserts/other menu items category including graham crackers, animal crackers, cinnamon rolls and doughnuts are creditable in the grains/breads meal pattern component at breakfast.

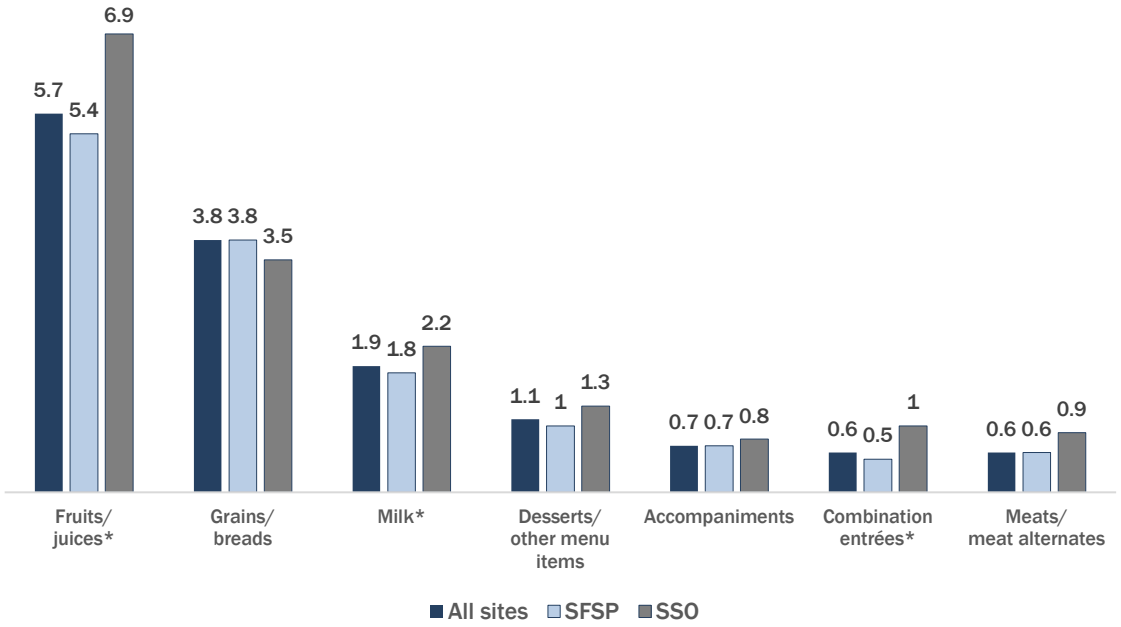
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Figure 4-7 depicts the average number of foods offered at breakfast per week in each of seven of the eight major food groups.[34] Breakfasts offered over the course of a week typically include more than one type of food in each of these three required components, with the greatest number of items in the fruits/100% fruit juices group (an average of 5.7 different items per week), followed by separate grains/breads group (an average of 3.8 different items per week), and milk group (an average of 1.9 different items per week). Sites offer fewer weekly items (1 or less per week) in the remaining food components, which are not required by the program meal patterns.

[34] The number of groups presented is one less for breakfast than lunch as vegetables are offered by a very small percentage of sites at breakfast.

Figure 4-7. Average number of items offered in the major food groups at breakfast per week, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. All sites: unweighted n = 523; weighted n = 43,795; SFSP: unweighted n = 405; weighted n = 35,321; SSO: unweighted n = 118; weighted n = 8,475.
*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Frequency and Forms of Foods Offered at Breakfast

This section provides a summary of the most frequently offered foods at breakfast, and the forms in which fruits are offered. Table 4-5 lists the foods that are most frequently offered in each of the major food groups at breakfast, and Table 4-6 lists the most frequently offered fruits/100% fruit juices. Consistent with the approach used for analyzing foods offered at lunch, the most frequently offered foods are limited to the top five foods offered. In some instances, fewer than five foods are listed either because there were fewer than five different options offered at breakfast, or because they are offered by fewer than three percent of sites.

Milk. Unflavored low-fat milk is the most frequently offered type of milk at breakfast (93%), followed by flavored fat-free milk (49%). About one-quarter of sites (26%) offer fat-free, unflavored milk. The same pattern occurs at SFSP and SSO sites, though more SSO sites than SFSP sites offer each variety of milk.

Table 4-5. Most frequently offered foods at breakfast per day, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Milk	**100**	**100**	**100**
Low-fat unflavored	93.2	92.2*	97.1
Fat-free flavored	48.5	41.9*	76.1
Fat-free unflavored	26.2	25.1	30.9
Separate grains/breads[a,c]	**82.1**	**82.4**	**81.1**
Cold cereal, sweetened[b]	44.8	43.1	52.0
Cold cereal, unsweetened	24.5	21.4*	37.6
Muffins (excluding English muffins), sweet/quick breads	16.7	16.2	18.7
Breads, rolls, bagels, and other plain breads	14.3	13.4	18.2
Pancakes, waffles, French toast	11.1	10.2	14.6
Granola and breakfast bars	8.8	10.0*	3.7
Fruits/100% fruit juices[a]	**99.4**	**99.3**	**99.8**
Vegetables[a]	**0.7**	**0.9**	**0.2**
Combination entrées	**13.4**	**11.0***	**23.3**
Breakfast sandwich	4.7	3.8*	8.7
Separate meats/meat alternates[a]	**20.0**	**19.0**	**24.3**
Cheese	6.5	6.5	6.4
Yogurt	6.3	6.9	3.7
Nuts, nut butters and seeds	3.3	2.8	5.3
Eggs	3.1	3.4	2.2
Sausage, frankfurters and cold cuts	3.0	2.1*	6.7
Desserts and other menu items	**31.5**	**28.9***	**42.4**
Cookies (graham crackers and animal crackers)	15.4	15.3	15.9
Cakes (cinnamon rolls and doughnuts)	9.6	8.1*	16.1
Fruit cobblers and crisps	7.3	5.5	14.7
Accompaniments	**18.1**	**16.6**	**24.7**
Condiments and toppings	18.1	16.6	24.7
Number of sites (unweighted)	523	405	118
Number of sites (weighted)	43,795	35,321	8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Excluding combination entrées.

[b] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

[c] Excluding grain-based desserts.

*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table 4-6. Most frequently offered fruits at breakfast per day, overall and by summer meal program type

All sites		Program type			
		SFSP		SSO	
Menu items	Percentage of sites	Menu items	Percentage of sites	Menu items	Percentage of sites
Fruits/100% fruit juices[a]	**99.4**	**Fruits/100% fruit juices[a]**	**99.3**	**Fruits/100% fruit juices[a]**	**99.8**
Fruits, excluding 100% juice	**71.4**	**Fruits, excluding 100% juice**	**65.2***	**Fruits, excluding 100% juice**	**97.3**
Apples	23.4	Apple	23.0	Apple	24.7
Bananas	19.3	Banana	20.5	Applesauce	23.8
Applesauce	18.5	Orange	17.4	Orange	22.8
Oranges	18.5	Applesauce	17.2	Peach	20.4
Peaches	17.2	Peach	16.4	Banana	14.6
100% fruit juice	**60.2**	**100% fruit juice**	**55.4***	**100% fruit juice**	**84.1**
Orange juice	29.0	Apple juice	26.6	Orange juice	39.7
Apple juice	28.8	Orange juice	26.4	Apple juice	38.3
Fruit juice blend	25.3	Fruit juice blend	22.3	Fruit juice blend	37.5
Number of sites (unweighted)	523		405		118
Number of sites (weighted)	43,795		35,321		8,475

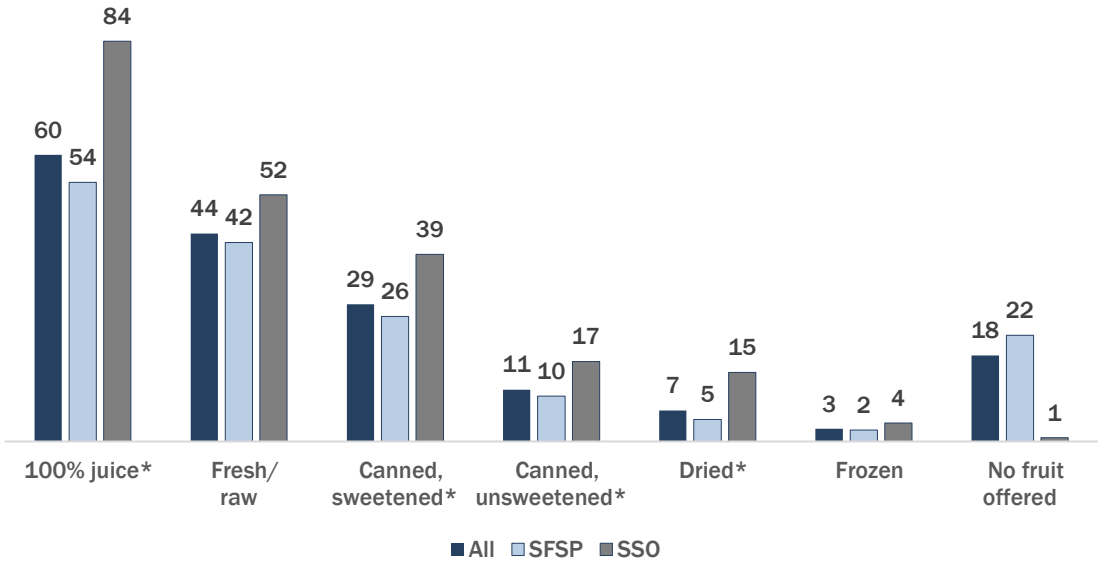
Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.
[a] Excluding combination entrées.
*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Separate Grains/Breads. The most frequently offered separate grains/breads at breakfast include sweetened cold cereal (45%), followed by unsweetened cold cereal (25%). Besides cereal, the other most commonly offered foods from the separate grains/breads group include muffins, sweet/quick breads (17%); breads, rolls, bagels, and other plain breads (14%); and pancakes, waffles, or French toast (11%). Among SFSP and SSO sites, the rankings are similar to those seen overall, but more SSO sites than SFSP sites offer unsweetened cold cereal (38% compared with 21%), while more SFSP sites than SSO sites offer granola and breakfast bars (10% compared with 4%).

Fruits/100% Fruit Juices. Juice is the most common (60%) and frozen fruit is the least common (3%) form of fruits/100% fruit juices offered at breakfast (see Figure 4-8). Fresh fruit is offered in

nearly half of all breakfasts (44%), while sweetened canned fruit is offered in three out of ten breakfasts (29%).

Figure 4-8. Percentage of sites offering fruits in different forms at breakfast per day, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. All sites: unweighted n = 523; weighted n = 43,795; SFSP: unweighted n = 405; weighted n = 35,321; SSO: unweighted n = 118; weighted n = 8,475.
*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

The top five most frequently offered fruits, excluding 100% fruit juice, at breakfast are apples (23%), bananas (19%), applesauce (19%), oranges (19%), and peaches (17%), which are also the most frequently offered fruits at lunch. These are also the top five most frequently offered fruits at breakfast for both SFSP and SSO sites, though the ranking differs slightly. The most frequently offered fruit juices include orange (29%), apple (29%), and fruit juice blend (25%); apple juice is the most frequently offered juice at SFSP sites, while orange juice is the most frequently offered fruit juice at SSO sites.

Separate Meats/Meat Alternates. Two out of ten sites (20%) offer separate meat or meat alternate items. The top four most frequent separate meats/meat alternates offered at breakfast are cheese (offered by 7% of sites); yogurt (6%); nuts, nut butters and seeds (3%); and sausage,

frankfurters, and cold cuts (3%). Findings are similar for SFSP and SSO sites, though SSO sites offer sausages, frankfurters and cold cuts more frequently than SFSP sites (7% compared to 2%).

Combination Entrées. The majority of sites (87%) do not offer combination entrées at breakfast. When they are offered, the most frequently offered combination entrée is a breakfast sandwich (5%), such as sandwich with egg or sausage biscuit. This is true also at SFSP and SSO sites, though more SSO sites than SFSP sites offer combination entrées (23% compared to 11%) and also offer breakfast sandwiches more frequently (9% compared to 4%).

Desserts and Other Menu Items. About one-third of sites (32%) offer desserts/other menu items at breakfast, with SSO sites offering desserts/other menu items more frequently than SFSP sites (42% compared to 29%). The most frequently offered desserts/other menu items at breakfast are cookies (15%) such as graham crackers and animal crackers, followed by cakes (cinnamon rolls and doughnuts) (10%) and fruit cobblers and crisps (7%). Although included in desserts/other menu items group for this analysis, graham crackers, animal crackers, cinnamon rolls and doughnuts are creditable in the separate grains/breads meal pattern component at breakfast. SSO sites offer cakes such as cinnamon rolls and doughnuts more frequently than SFSP sites (16% compared with 8%).

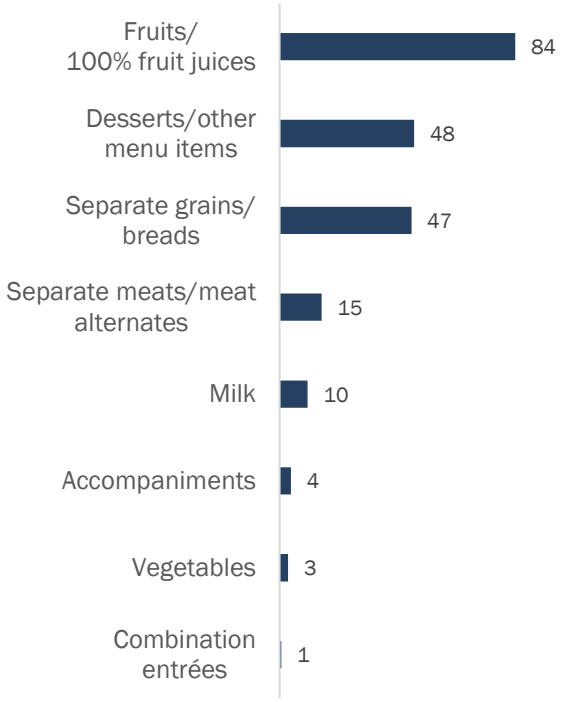
Accompaniments. Nearly two out of ten sites (18%) offer accompaniments at breakfast. Condiments and toppings (such as syrup) are the most common item in this food group offered at breakfast, offered by 18 percent of sites. Fewer than five percent of sites offered other accompaniments, such as jam, jelly, butter or other spreads.

4.1.3 Foods Offered at Snack

The section describes the foods offered at snack by summer meal sites, including the types of foods offered, the extent to which choices are offered within food groups, and characteristics of the foods offered. Results are not displayed by program type, due to an insufficient sample size of SSO sites offering snack.

The types of foods offered in the eight major groups were examined for sites that offer snacks on one or more days. More than three-quarters of sites offer one or more type of fruits/100% fruit juices (84%); almost half offer desserts/other menu items (48%) and separate grains/breads (47%). Sites offer the remaining components less frequently in snacks: meats/meats alternates are offered by 15% of sites; milk is offered by 10% of sites; and vegetables are offered by 3% of sites (see Figure 4-9).

Figure 4-9. Percentage of sites offering snacks that include one or more items from the major food groups



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. Unweighted n = 132; weighted n = 11,212.

Choices Offered at Snack

On a daily basis, slightly more than one out of ten sites (13%) offers two or more choices from the fruits/100% fruit juices group at snack (see Table 4-7). Most of the fruit offered at snack is in the form of 100% fruit juice (data not shown). Five percent or fewer sites offer two or more choices of milk (4.7%), separate grains/breads (2.7%), and desserts/other menu items (<1%).

Table 4-7. Number of choices offered at snack per day

Menu items	Percentage of sites
	All sites
Number of milks	
None	89.9
1	5.5
2	4.5
3 or more	0.2
Number of fruits/100% fruit juices	
None	15.6
1	58.5
2	10.7
3	2.8
4 or more	12.4
Number of vegetables/juices	
None	97.2
1	2.8
2 or more	0
Number of combination entrées	
None	99.4
1	0.6
Number of separate grains/breads[a,b]	
None	52.9
1	44.5
2 or more	2.6
Number of separate meats/meat alternates	
None	85.4
1	14.6
Number of desserts and other menu items	
None	52.4
1	47.3
2 or more	0.3
Number of accompaniments	
None	96.5
1	3.5
Number of sites (unweighted)	132
Number of sites (weighted)	11,212

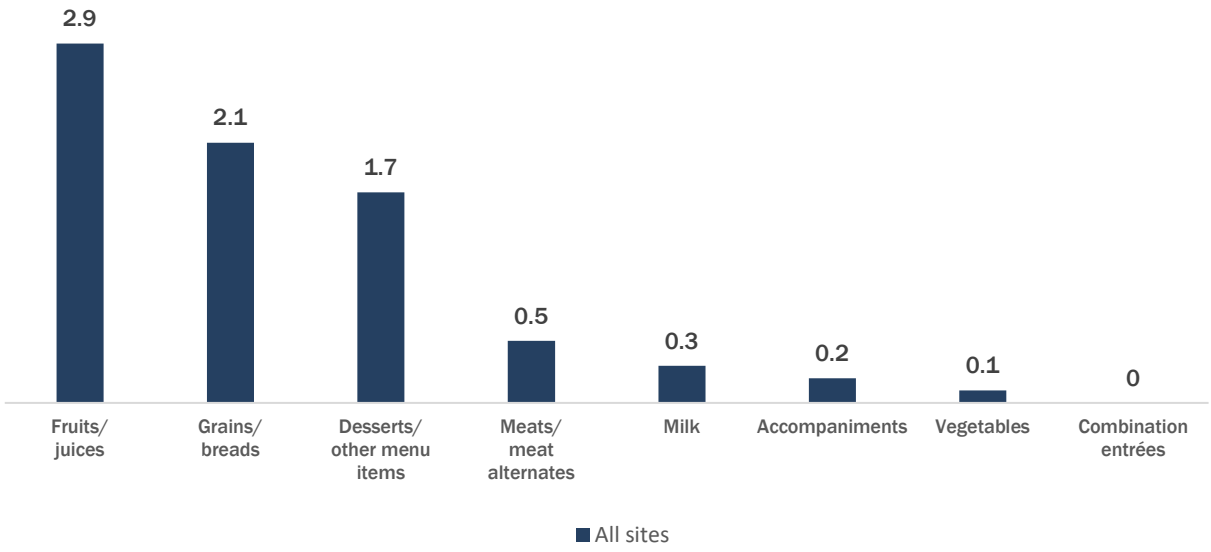
Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Excluding combination entrées.

[b] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

Figure 4-10 depicts the average number of foods offered per week within each of the eight major food groups. Snacks offered over the course of the week typically include more than one type of food in four of the eight food groups, with the greatest number of items in the food components that are most frequently offered. The fruits/juice group includes an average of 2.9 different items per week, followed by separate grains/breads (an average of 2.1 different items per week), and desserts and other menu items (an average of 1.7 times per week). For all remaining food groups, sites offer one or fewer different items per week.

Figure 4-10. Average number of items offered in the major food groups at snack per week



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. Unweighted n = 132; weighted n = 11,212.

Frequency of Foods Offered at Snacks

Table 4-8 lists the foods most frequently offered in each of the major food groups at snack. Consistent with the approach used for analyzing foods offered at lunch and breakfast, the most frequently offered foods are limited to the top five foods offered. In some instances, fewer than five foods are listed either because there were fewer than five different options offered at snack, or because they were offered in fewer than three percent of sites. Vegetables and combination entrées are offered in fewer than three percent of snacks and therefore the examination of frequently offered vegetables and combination entrées at snack is not presented here.

Milk. Unflavored low-fat milk is the most commonly offered type of milk at snack (9%), followed by flavored fat-free milk (3%).

Fruits/100% Fruit Juices. Apple juice (39%) and fruit juice blend (39%) are the two most frequently offered fruits/100% fruit juices at snack. Apples are the most commonly offered whole fruit offered at snack–offered by five percent of sites.

Separate Grains/Breads. The most commonly offered items from the separate grains/breads group are crackers, croutons, or pretzels (29%). About five percent of the sites offer granola (5.4%) or breakfast bars and muffins (4.9%) at snack.

Separate Meats/Meat Alternates. Cheese is the most frequently offered separate meats/meat alternates at snack (9%).

Desserts/Other Menu Items. Cookies are the most frequently offered food from the desserts/other menu items group, offered by 42 percent of sites.

Table 4-8. Most frequently offered foods at snack per day

Menu items	Percentage of sites
Milk	**10.1**
Low-fat unflavored	9.4
Fat-free flavored	3.1
Vegetables[a]	**2.8**
Fruits/100% fruit juices[a]	**84.2**
Fruits, excluding 100% juice	**13.3**
Apple (excluding juice)	5.4
100% fruit juice	**71.3**
Apple juice	39.4
Fruit juice blend	39.0
Grape juice	17.7
Separate grains/breads[a,b]	**47.0**
Crackers, croutons, or pretzels	29.0
Granola and breakfast bars	5.4
Muffins (excluding English muffins), sweet/quick breads	4.9
Separate meats/meat alternates[a]	**14.5**
Cheese	8.8

Table 4-8. Most frequently offered foods at snack per day (continued)

Menu items	Percentage of sites
Desserts and other menu items	**47.5**
Cookies	42.4
Fruit cobblers and crisps[a]	1.5
Accompaniments	**3.5**
Number of sites (unweighted)	132
Number of sites (weighted)	11,212

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site. Unweighted n = 132; weighted n = 11,212.

[a] Excluding combination entrées.

[b] Excluding grain-based desserts.

5. Calorie and Nutrient Content of Summer Meals

This chapter describes the nutritional quality of summer meals. Results provide information on the average calorie and nutrient content of summer meals; the proportion of recommended amounts of daily calories and selected nutrients; and the relative contribution of foods to the calories and selected nutrients in summer meals.

Summer meals are not intended to provide the entire day's intake of calories and nutrients; rather, these meals are intended to supplement intake from foods consumed away from the summer meal site. The comparison of the calories and nutrients provided in summer meals to national recommended daily amounts serves as a means of assessing the contribution of summer meals to the daily energy and nutrients requirements of participants. The nutrient content of summer meals is compared with two national dietary standards: the 2015-2020 Dietary Guidelines for Americans (DGA) (U.S. Department of Health and Human Services and USDA, 2015), which provides the recommended calorie needs, and the Health and Medicine Division's[35] Dietary Reference Intakes (DRIs) for children 3 to 18 years of age (National Academy of Sciences, 2019), which provides the Recommended Dietary Allowances (RDA) and Adequate Intakes (AI) of vitamins and minerals. The contribution of summer meals towards meeting the DGAs and DRIs is assessed and presented for four age groups (children ages 3 years; 4 to 8 years; 9 to 13 years; and 14 to 18 years). Findings are discussed only for children ages 9 to 13 in the report because elementary school age children represent the largest group served through summer meal programs (55%) (Gabay et al., 2020), and the calorie and nutrient needs for children ages 9 to 13 years are the highest among elementary school age children.

The analysis assesses calories and 64 nutrients; a subset of nutrients is discussed in this chapter: calories, protein, total fat, saturated fat, fiber, vitamin A, vitamin C, calcium, iron, and sodium. These nutrients are consistent with those reported in the School Nutrition and Meal Cost Study (Gearan et al., 2019), which assessed the nutrient content of school meals. Supplementary tables contained in Appendix A provide information about all nutrients examined by age group.

[35]The Health and Medicine Division was previously the Institute of Medicine (IOM) program unit of the National Academies.

The analysis was conducted at the site level; therefore, if a site offered more than one menu for the same meal service (e.g., lunch) on a given day, then all of the menus for that meal service were averaged. Descriptive statistics such as means and proportions are used to summarize results. Results are presented for all sites and comparing program types (SFSP compared with SSO). Results discussed in the text are statistically significant, unless otherwise noted.

Coding procedures matched items listed on menus to food codes with "school" in the description, when available. These food codes are often whole grain-rich or 100% whole grain or fortified to meet the school meal program requirements. Food codes for 100% fruit juice were selected to match the description provided for the addition of calcium and vitamin C.

5.1 Calorie and Nutrient Content of Lunch

Table 5-1 presents the calorie and nutrient content of lunches offered at summer meal programs, including the average content and the percent of recommended daily amount provided for children 9 to 13 years. Results are presented for all sites collectively, and also separately by summer meal program type (SFSP and SSO).

Calories. The average calorie content of lunches offered in summer meal programs is 659 calories. Lunches offered in summer meal programs provide 30 percent of the recommended daily caloric needs of children 9 to 13 years of age. On average, SSO lunches provide 84 more calories than SFSP lunches (729 kcal compared with 645 kcal), thereby providing a slightly larger share of the daily recommended amount for children 9 to 13 years (33% compared with 29% of the recommended daily amount).

Protein. Lunches provide an average of 85 percent of the recommended daily amount of protein for children 9 to 13 years. SSO lunches offer more protein than SFSP lunches, and provide a larger share of the recommended daily amount of protein for children 9 to 13 years (92 percent of the DRI compared with 84 percent of the DRI).

Table 5-1. Calorie and nutrient content of lunch and percent of recommended daily amount met for 9 to 13 year old children, overall and by summer meal program type

Nutrient	All sites		SFSP		SSO	
	Mean	% DRI	Mean	% DRI	Mean	% DRI
Calories (kcal)[a]	659.0	30.0	644.9*	29.3	729.0	33.1
Protein, g[b]	29.0	85.2	28.5*	83.7	31.4	92.2
Total fat, g	23.5	ND	23.2	ND	24.9	ND
Total fat, % kcal[c]	32.1	25-35%[d]	32.4	25-35%[d]	30.7	25-35%[d]
Saturated fat, g	7.3	ND	7.3	ND	7.2	ND
Saturated fat, % kcal[e]	10.0	<10%[e]	10.2	<10%[e]	8.9	<10%[e]
Vitamin A, µg (RAE)[b]	385.6	64.2	371.0*	61.8	457.3	76.2
Vitamin C, mg[b]	31.9	70.8	30.5*	67.8	38.4	85.2
Calcium, mg[b]	590.0	45.3	591.6	45.5	582.2	44.7
Iron, mg[b]	3.7	46.4	3.6*	44.5	4.5	55.7
Sodium, mg[f]	1,219.9	101.6	1,185.4*	98.7	1,389.8	115.8
Total dietary fiber, g[f]	6.9	22.2	6.5	20.8	9.0	28.9
Number of sites (unweighted)	731		578		153	
Number of sites offering lunch (weighted)	67,285		55,926		11,359	

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.

[a] Recommended amount from the DGA 2015-2020; for calorie comparison, the highest estimated calorie needs within the age and sex range was selected.

[b] Recommended Dietary Allowance (RDA): average daily dietary intake level, sufficient to meet the nutrient requirements of nearly all (97-98 percent) healthy individuals in a group.

[c] Acceptable Macronutrient Distribution Range (AMDR): range of intake for a particular calorie source that is associated with reduced risk of chronic disease while providing intakes of essential nutrients. Percentage met value is the percentage of the high end of the range.

[d] The range shown is the AMDR for children ages 9-13 years.

[e] The Dietary Guidelines for Americans recommend consuming less than 10 percent of total calories from saturated fat per day.

[f] Adequate Intake (AI): amount believed to cover the needs of all healthy individuals in the group, but lack of data or uncertainty in the data prevent being able to specify with confidence the percentage of individuals covered by this intake.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Fats. Total fat accounts for 32 percent of calories at lunch. Saturated fat provides 10 percent of calories at lunch. The percentage of calories from total fat at lunch is within the recommended daily range, and the percentage of calories from saturated fat is marginally above the recommended amount.

The average fat and saturated fat of lunches offered at SFSP and SSO sites are comparable. Despite the difference in their caloric content, there are no significant differences in the average percentage of calories from fat at SFSP and SSO sites.

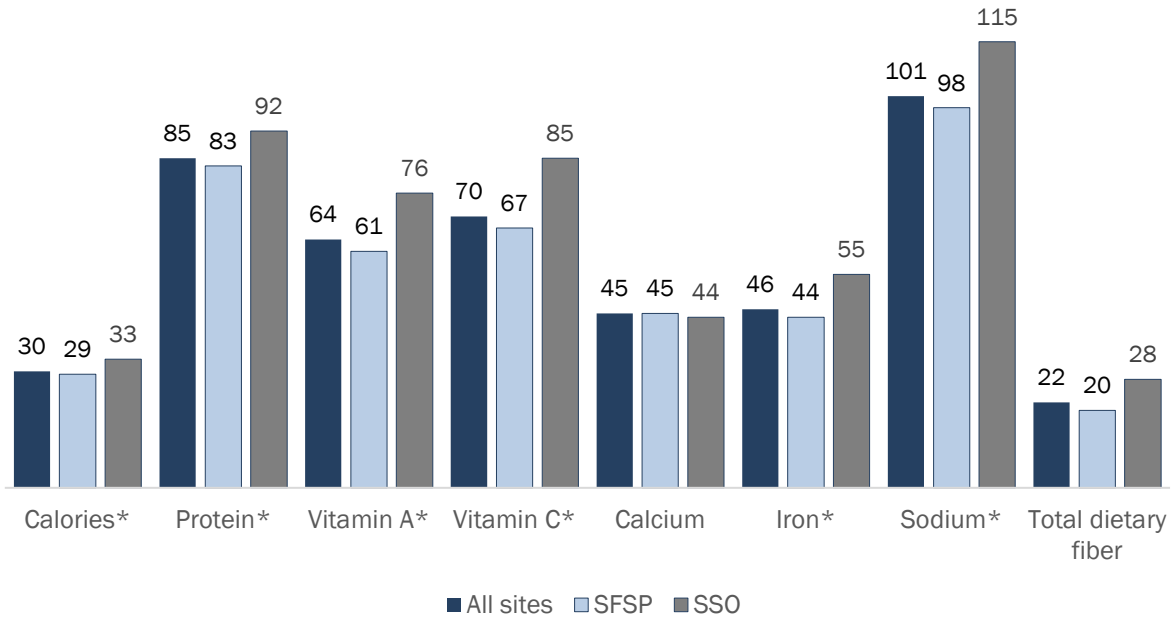
Vitamins A and C. On average, summer lunches provide 64 percent of the recommended daily amount of vitamin A, and 71 percent of the recommended daily amount of vitamin C for children 9 to 13 years. Compared with SFSP lunches, SSO lunches provide a slightly higher share of the recommended daily amount of vitamin A (76% compared with 62%) and vitamin C (85% compared with 68%) for children 9 to 13 years.

Calcium, Iron, and Sodium. On average, for children 9 to 13 years, summer lunches provide about 45 percent of the recommended daily amount for both calcium and iron, and 102 percent of the recommended daily amount for sodium. Lunches served at SSO sites provide slightly more iron than those provided at SFSP sites (56% of recommended daily amounts compared with 45%). Lunches offered by SSO sites also provide about 200 mg more sodium than those offered at SFSP sites, which exceeds the recommended daily amount for children 9 to 13 years of age (116% compared with 99%).

Fiber. Lunches provide an average of 7 grams of dietary fiber, which is 22 percent of the recommended daily amount for children 9 to 13 years. There is not a significant difference in the amount of fiber provided in lunches offered at SFSP and SSO sites.

Figure 5-1 presents a summary of the contributions of summer meal lunches to the recommended daily amounts of energy, vitamins, and minerals discussed above, as the percentage of the DRI value provided.

Figure 5-1. Percent of recommended daily calories and nutrients provided by summer meal lunches, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. All sites: unweighted n = 731; weighted n = 67,285; SFSP: unweighted n = 578; weighted n = 55,926; SSO: unweighted n = 153; weighted n = 11,359.
*** Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.**
SFSP = Summer Food Service Program SSO = Seamless Summer Option

5.2 Food Sources of Calories and Nutrients at Lunch

This section describes the relative contribution of foods and major food groups to the calorie and nutrient content at the average lunch offered at summer meal programs. Table 5-2 presents the findings for the eight major food groups. Table 5-3 lists the foods that contribute at least five percent of the calories and nutrients at lunch.

Calories. Food items from the combination entrées and the milk groups are the largest contributors to calories at lunch, contributing 39 percent and 20 percent, respectively, and are essentially the same for both SFSP and SSO. The top three food sources of calories at lunch for all sites and for SFSP sites include sandwiches with plain meat, poultry, or fish; unflavored low-fat milk; and flavored fat-free milk. The top three foods contributing to calories at lunch for SSO sites, which provide smaller percentages of the calories at lunch compared with the top three sources at SFSP sites, include flavored fat-free milk, unflavored low-fat milk, and salad dressing. However, note that none of these individual food sources of calories provide more than 16 percent of calories.

Table 5-2. Contribution of major food groups to calories and nutrients at lunch per day, overall and by summer meal program type

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Calories			
Combination entrées	39.4	39.9*	37.0
Milk	19.9	20.2*	18.3
Fruits/100% fruit juices[a]	12.2	12.4*	11.1
Accompaniments	7.9	7.6	9.4
Separate meats/meat alternates[a]	7.6	7.7	6.9
Vegetables[a]	5.9	5.0	10.7
Separate grains/breads[a]	5.2	5.2	5.3
Desserts and other menu items	1.9	2.0*	1.3
Protein			
Combination entrées	47.5	48.0	45.4
Milk	29.7	30.1*	27.4
Separate meats/meat alternates[a]	11.2	11.3	10.7
Vegetables[a]	4.6	3.7*	8.8
Separate grains/breads[a]	3.1	3.0	3.7
Fruits/100% fruit juices[a]	2.1	2.1	2.1
Accompaniments	1.1	1.1*	1.5
Desserts and other menu items	0.6	0.6	0.5
Total fat			
Combination entrées	50.6	50.9	49.4
Accompaniments	17.1	16.5	20.0
Separate meats/meat alternates[a]	12.6	13.1*	10.4
Milk	7.9	8.4*	5.4
Separate grains/breads[a]	4.6	4.6	4.2
Vegetables[a]	4.4	3.5*	8.6
Desserts and other menu items	1.7	1.8*	1.0
Fruits/100% fruit juices[a]	1.1	1.1*	0.9
Saturated fat			
Combination entrées	52.9	52.8	53.4
Milk	15.2	15.9*	11.7
Separate meats/meat alternates[a]	12.9	13.3*	10.7
Accompaniments	11.1	10.7	13.0
Separate grains/breads[a]	3.3	3.2	3.6
Vegetables[a]	3.0	2.3*	6.3

Table 5-2. Contribution of major food groups to calories and nutrients at lunch per day, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Desserts and other menu items	1.1	1.2*	0.7
Fruits/100% fruit juices[a]	0.5	0.5*	0.5
Vitamin A			
Milk	51.0	52.2*	45.4
Vegetables[a]	27.1	25.1*	37
Combination entrées	13.2	13.8*	10.2
Fruits/100% fruit juices[a]	3.4	3.3	3.5
Separate meats/meat alternates[a]	3.2	3.6*	1.7
Accompaniments	1.4	1.4	1.7
Separate grains/breads[a]	0.4	0.4	0.4
Desserts and other menu items	0.2	0.2	0.1
Vitamin C			
Fruits/100% fruit juices[a]	57.9	60.8*	43.8
Vegetables[a]	28.2	25.6*	40.8
Combination entrées	5.0	4.9	5.5
Milk	4.6	4.4*	5.5
Desserts and other menu items	1.6	1.7	1.1
Accompaniments	1.5	1.4*	2.3
Separate meats/meat alternates[a]	0.8	0.8	0.6
Separate grains/breads[a]	0.4	0.4	0.3
Calcium			
Milk	55.3	55.4	55.1
Combination entrées	29.3	29.8*	27.0
Separate meats/meat alternates[a]	5.4	5.8*	3.4
Vegetables[a]	3.6	3.1*	6.5
Fruits/100% fruit juices[a]	2.5	2.5	2.4
Separate grains/breads[a]	2.3	2.0*	3.7
Accompaniments	1.2	1.1*	1.5
Desserts and other menu items	0.4	0.4	0.3
Iron			
Combination entrées	52.9	54.0*	47.1
Vegetables[a]	10.2	8.8*	17.1
Fruits/100% fruit juices[a]	8.4	8.5*	7.7
Milk	8.2	8.3*	7.7
Separate grains/breads[a]	7.9	7.9	7.5
Separate meats/meat alternates[a]	7.6	7.4	8.5

Table 5-2. Contribution of major food groups to calories and nutrients at lunch per day, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Accompaniments	2.6	2.5	2.9
Desserts and other menu items	2.3	2.4*	1.4
Sodium			
Combination entrées	48.6	50.3*	40.2
Milk	14.5	14.6*	13.6
Accompaniments	12.6	11.7*	17.1
Separate meats/meat alternates[a]	9.1	9.3	8.2
Vegetables[a]	8.2	7.0*	14.5
Separate grains/breads[a]	5.3	5.3	5.4
Desserts and other menu items	1.2	1.3*	0.6
Fruits/100% fruit juices[a]	0.5	0.5*	0.4
Dietary fiber			
Combination entrées	32.5	33.5*	27.5
Fruits/100% fruit juices[a]	29.4	30.4*	24.3
Vegetables[a]	23.5	21.2*	34.9
Separate grains/breads[a]	5.5	5.6	4.6
Separate meats/meat alternates[a]	4.8	4.5	6.0
Accompaniments	2.1	2.1	2.0
Desserts and other menu items	1.4	1.6*	0.8
Milk	0.9	1.0*	<0.1
Number of sites (unweighted)	731	578	153
Number of sites (weighted)	67,285	55,926	11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.

[a] Excluding combination entrées.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table 5-3. Top food sources of calories and nutrients at lunch per day, overall and by summer meal program type

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Calories					
Sandwich with plain meat, poultry, or fish	13.7	Sandwich with plain meat, poultry, or fish	15.5	Fat-free milk, flavored	10.4
Low-fat milk, unflavored	8.8	Low-fat milk, unflavored	9.3	Low-fat milk, unflavored	6.5
Fat-free milk, flavored	8.3	Fat-free milk, flavored	7.9	Salad dressing	6.1
Protein					
Sandwich with plain meat, poultry, or fish	18.8	Sandwich with plain meat, poultry, or fish	21.0	Fat-free milk, flavored	12.4
Low-fat milk, unflavored	15.4	Low-fat milk, unflavored	16.1	Low-fat milk, unflavored	12.0
Fat-free milk, flavored	9.9	Fat-free milk, flavored	9.4	Sandwich with plain meat, poultry, or fish	7.5
				Cheeseburger, similar beef/ pork sandwiches	5.1
Total fat					
Sandwich with plain meat, poultry, or fish	16.4	Sandwich with plain meat, poultry, or fish	18.7	Salad dressing	15.0
Salad dressing	9.1	Condiments and toppings	8.4	Cheeseburger, similar beef/ pork sandwiches	5.4
Condiments and toppings	7.8	Salad dressing	7.9	Low-fat milk, unflavored	5.2
Low-fat milk, unflavored	6.5	Low-fat milk, unflavored	6.8	Sandwich with plain meat, poultry, or fish	5.2
Peanut butter sandwich	5.6	Peanut butter sandwich	5.8		

Table 5-3. Top food sources of calories and nutrients at lunch per day, overall and by summer meal program type (continued)

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Saturated fat					
Sandwich with plain meat, poultry, or fish	18.7	Sandwich with plain meat, poultry, or fish	21.1	Low-fat milk, unflavored	11.3
Low-fat milk, unflavored	13.0	Low-fat milk, unflavored	13.3	Salad dressing	9.3
Salad dressing	5.7	Cheese	6.0	Sandwich with plain meat, poultry, or fish	6.7
Cheese	5.5	Condiments and toppings	5.6	Cheeseburger, similar beef/ pork sandwiches	6.4
Condiments and toppings	5.3			Pizza without meat	5.4
				Hot dogs, corn dogs, similar sausage sandwiches	5.1
				Mexican-style entrées	5.1
Vitamin A					
Low-fat milk, unflavored	25.6	Low-fat milk, unflavored	26.9	Fat-free milk, flavored	21.1
Fat-free milk, flavored	17.9	Fat-free milk, flavored	17.3	Low-fat milk, unflavored	19.1
Red and orange vegetables, raw	17.1	Red and orange vegetables, raw	16.7	Red and orange vegetables, raw	18.9
Sandwich with plain meat, poultry, or fish	5.4	Sandwich with plain meat, poultry, or fish	6.2	Red and orange vegetables, cooked	6.9
Vitamin C					
Fresh fruits	26.1	Fresh fruits	26.4	Fresh fruits	24.2
100% fruit juices	19.4	100% fruit juice	22.5	Red and orange vegetables, raw	9.1

Table 5-3. Top food sources of calories and nutrients at lunch per day, overall and by summer meal program type (continued)

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Red and orange vegetables, raw	8.9	Red and orange vegetables, raw	8.9	Starchy vegetables, cooked	9.0
Canned fruits, unsweetened	6.2	Canned fruits, unsweetened	6.5	Canned fruits, sweetened	7.3
Canned fruits, sweetened	5.5	Canned fruits, sweetened	5.1	Dark green vegetables, cooked	7.3
Starchy vegetables, cooked	5.2			Fat-free milk, flavored	5.5
				Dark green vegetables, raw	5.0
Calcium					
Low-fat milk, unflavored	28.8	Low-fat milk, unflavored	29.7	Fat-free milk, flavored	25.0
Fat-free milk, flavored	18.7	Fat-free milk, flavored	17.4	Low-fat milk, unflavored	24.2
Sandwich with plain meat, poultry, or fish	12.8	Sandwich with plain meat, poultry, or fish	14.5	Fat-free milk, unflavored	5.6
Iron					
Sandwich with plain meat, poultry, or fish	19.5	Sandwich with plain meat, poultry, or fish	22.1	Sandwich with plain meat, poultry, or fish	6.8
Fat-free milk, flavored	5.8	Peanut butter sandwich	5.6	Fat-free milk, flavored	6.7
Peanut butter sandwich	5.4	Fat-free milk, flavored	5.6	Cheeseburger, similar beef/pork sandwiches	5.0
Sodium					
Sandwich with plain meat, poultry, or fish	21.2	Sandwich with plain meat, poultry, or fish	24.0	Salad dressing	9.0

Table 5-3. Top food sources of calories and nutrients at lunch per day, overall and by summer meal program type (continued)

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Fat-free milk, flavored	7.4	Fat-free milk, flavored	7.0	Fat-free milk, flavored	9.0
Condiments and toppings	6.6	Condiments and toppings	6.3	Condiments and toppings	8.0
Salad dressing	5.9	Low-fat milk, unflavored	5.7	Sandwich with plain meat, poultry, or fish	7.4
Low-fat milk, unflavored	5.4	Salad dressing	5.2		
Dietary fiber					
Fresh fruits	16.3	Fresh fruits	17.2	Fresh fruits	12.1
Sandwich with plain meat, poultry, or fish	10.6	Sandwich with plain meat, poultry, or fish	12.0	Starchy vegetables, cooked	7.5
Red and orange vegetables, raw	6.9	Red and orange vegetables, raw	7.0	Canned fruits, sweetened	7.1
Canned fruits, sweetened	6.5	Canned fruits, sweetened	6.3	Cooked beans and peas	6.7
				Red and orange vegetables, raw	6.4
Number of sites (unweighted)	731		578		153
Number of sites (weighted)	67,285		55,926		11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Protein. Food items from the combination entrées (48%) and the milk groups (30%) are also the largest contributors to protein at lunch; these are also the largest contributors to protein at lunch for both SFSP and SSO. Similar to calories, the top three food sources of protein at lunch include sandwiches with plain meat, poultry, or fish; unflavored low-fat milk; and flavored fat-free milk overall and for both SFSP and SSO sites.

Fats. Food items from the combination entrées group are the largest contributors to total fat (51%) and saturated fat (53%) at lunch. As with calories and protein, the largest contributors to total fat and saturated fat are the same for both SFSP and SSO. Accompaniments, such as salad dressing, are the second largest food group contributor to total fat at lunch; milk is the second largest food group contributor to saturated fat. The top food source of total fat and saturated fat at lunch is sandwiches with plain meat, poultry, or fish for all sites and for SFSP sites; salad dressing is the top food source of total fat for SSO sites, and unflavored low-fat milk is the top food source of saturated fat.

Vitamins A and C. Milk (51%) is the largest contributing food group source of vitamin A at lunch, followed by vegetables (27%); findings are similar for both SFSP and SSO. The top three foods contributing to vitamin A at lunch are unflavored low-fat milk, flavored fat-free milk, and raw red and orange vegetables, for all sites and also for SFSP and SSO sites.

Food items from the fruits/100% fruit juices (58%) and the vegetables (28%) food groups are the largest contributors of vitamin C at lunch, though fruits/100% fruit juices provide a larger amount of vitamin C at SFSP sites than SSO sites (61% compared with 44%), and vegetables provide a smaller amount (26% compared with 41%). The top three foods contributing to vitamin C are fresh fruits, 100% juices, and raw red and orange vegetables for all sites and for SFSP sites; the top three food sources of vitamin C at SSO lunches are fresh fruits, raw red and orange vegetables, and cooked starchy vegetables.

Calcium, Iron, and Sodium. Milk (55%) is the largest contributing food group of calcium at lunch, followed by combination entrées (29%); findings are similar for SFSP and SSO sites. The top three foods contributing to calcium at lunch are unflavored low-fat milk; flavored fat-free milk; and a sandwich with plain meat, poultry, or fish, for all sites and for SFSP sites; at SSO sites, the top three food sources are flavored fat-free milk, unflavored low-fat milk, and unflavored fat-free milk.

Food items from the combination entrées group (53%) are the largest contributors to iron at lunch, overall and for SFSP and SSO sites. The top three foods contributing to iron at lunch include sandwiches with plain meat, poultry, or fish; flavored fat-free milk; and peanut butter sandwiches, for all sites and for SFSP sites. The top three food sources of iron for SSO lunches include sandwiches with plain meat, poultry, or fish; flavored fat-free milk; and cheeseburger, similar beef/pork sandwiches.

Food items from the combination entrées group (49%) are also the largest contributors to sodium, overall and for both SFSP and SSO sites. The top three foods contributing to sodium at lunch include sandwiches with plain meat, poultry, or fish; flavored fat-free milk; and condiments and toppings, both overall and for SFSP sites. The top three food sources of sodium at lunch for SSO sites include salad dressing, flavored fat-free milk, and condiments and toppings.

Fiber. Food items from the combination entrées (33%) and the fruit groups (29%) are the largest contributors of fiber at lunch. Although combination entrées are the largest contributor of fiber at SFSP sites at lunch, vegetables are the largest contributor at SSO sites. The top three foods contributing to fiber at lunch are fresh fruits; sandwiches with plain meat, poultry, or fish; and raw red and orange vegetables.

In summary, combination entrees are the biggest source of calories, protein, total fat, saturated fat, iron and sodium, providing between 39 to 57 percent of each nutrient. Milk is the biggest source of vitamin A and calcium, providing 51 to 55 percent of each nutrient. Fruits/100% fruit juices/juices are the biggest source of vitamin C (52 percent). Other sources contribute to these nutrients, and about 40 to 60 percent of nutrients come from sources other than the biggest one. Vegetables are a more important source of vitamins and iron among SSO sites than among SFSP sites, with SSO sites providing significantly more vitamin A from vegetables (37% compared with 25%), vitamin C (41% compared with 26%), and iron (17% compared with 9%). Dietary fiber comes from a variety of sources, with combination entrees, fruits/juices, and vegetables collectively providing 85 percent. Compared to SFSP sites, among SSO sites vegetables contribute more dietary fiber (35% compared with 21%).

5.3 Calorie and Nutrient Content of Breakfast

Table 5-4 presents the calorie and nutrient content of breakfasts offered at summer meal programs, including the average content and the percent of recommended amount provided for children 9 to 13 years. Results are presented for all sites collectively, and also separately by summer meal program type (SFSP and SSO).

Calories. The average caloric content of breakfasts offered in summer meal programs is 433 calories. Breakfasts offered at summer meal programs provide 20 percent of the recommended

calorie amounts for children 9 to 13 years of age. On average, SSO breakfasts provide 95 more calories than SFSP breakfasts (509 kcal compared with 414 kcal), thereby providing a slightly higher share of daily recommended amount for children 9 to 13 years (23% compared with 19% of the recommended amount).

Table 5-4. Calorie and nutrient content of breakfast and percent of recommended daily intake met for 9 to 13 year old children, overall and by summer meal program type

Nutrient	All sites		SFSP		SSO	
	Mean	% DRI	Mean	% DRI	Mean	% DRI
Calories (kcal)[a]	433.0	19.7	414.1*	18.8	509.0	23.1
Macronutrients						
Protein, g[b]	14.6	42.9	14.3*	41.9	16.0	47.1
Total fat, g	9.5	ND	9.2*	ND	10.7	ND
Total fat, % kcal[c]	19.8	25-35%[d]	20.0	25-35%[d]	18.9	25-35%[d]
Saturated fat, g	3.3	ND	3.3	ND	3.3	ND
Saturated fat, % kcal	6.9	<10%[e]	7.2	<10%[e]	5.8	<10%[e]
Vitamins						
Vitamin A, µg (RAE)[b]	274.3	45.7	271.7	45.2	284.8	47.4
Vitamin C, mg[b]	30.6	68.0	27.4*	60.8	44.0	97.7
Minerals						
Calcium, mg[b]	441.1	33.9	436.1*	33.5	462.2	35.5
Iron, mg[b]	4.4	55.4	4.3*	53.3	5.1	64.1
Sodium, mg[f]	456.4	38.0	437.9*	36.4	533.3	44.4
Other dietary components						
Total dietary fiber, g[f]	3.8	12.1	3.5*	11.2	4.9	15.8
Number of sites (unweighted)	523		405		118	
Number of sites offering lunch (weighted)	43,795		35,321		8,475	

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.

[a] Recommended amount from the DGA 2015-2020; for calorie comparison, the highest estimated calorie needs within the age and sex range was selected.

[b] Recommended Dietary Allowance (RDA): average daily dietary intake level, sufficient to meet the nutrient requirements of nearly all (97-98 percent) healthy individuals in a group.

[c] Acceptable Macronutrient Distribution Range (AMDR): range of intake for a particular calorie source that is associated with reduced risk of chronic disease while providing intakes of essential nutrients. Percentage met value is the percentage of the high end of the range.

[d] The range shown is the AMDR for children ages 9-13 years.

[e] The Dietary Guidelines for Americans recommend consuming less than 10 percent of total calories from saturated fat per day.

[f] Adequate Intake (AI): amount believed to cover the needs of all healthy individuals in the group, but lack of data or uncertainty in the data prevent being able to specify with confidence the percentage of individuals covered by this intake.

*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Protein. Breakfasts provide an average of 43 percent of the recommended amount of protein for 9 to 13 year old children. SSO breakfasts offer more protein than SFSP breakfasts and provide a larger share of the recommended daily amount of protein for children 9 to 13 years (47% of the DRI, compared with 42% of the DRI).

Fats. Total fat provides 20 percent of calories at breakfast, and saturated fat provides 7 percent of calories at breakfast; these are within the ranges recommended by the DRI and DGA. The average percentage of calories from fat and saturated fat are comparable for SFSP and SSO breakfasts.

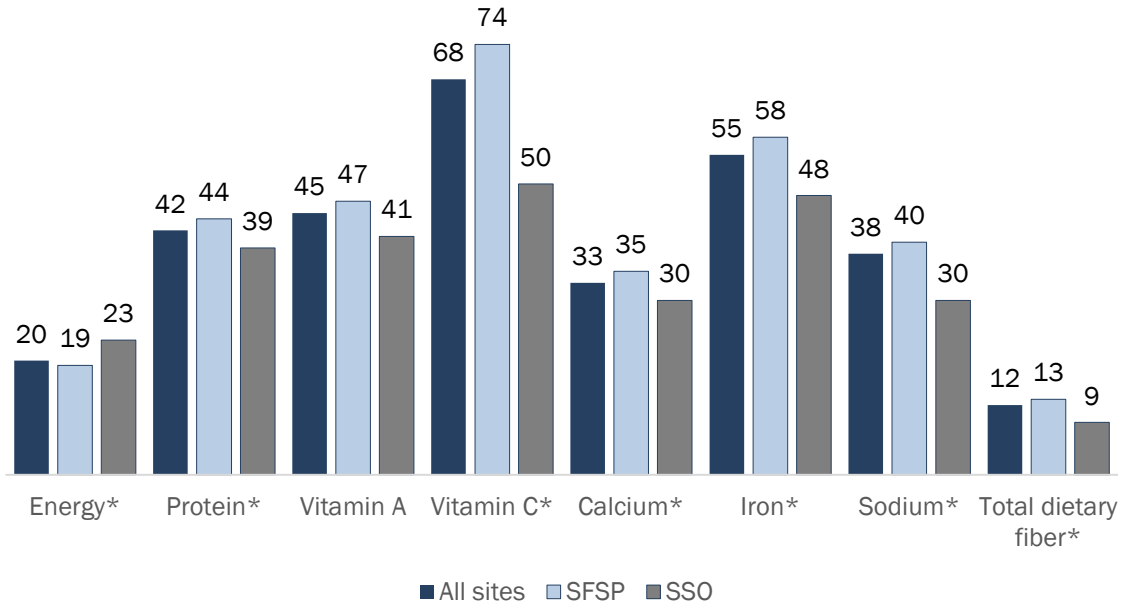
Vitamins A and C. On average, breakfasts provide 46 percent of the recommended amount of vitamin A, and 68 percent of the recommended amount of vitamin C for children 9 to 13 years. The vitamin A content of SFSP and SSO breakfasts are comparable. For vitamin C, SSO breakfasts contribute significantly more than SFSP breakfasts (98% compared with 61%) for children 9 to 13 years.

Calcium, Iron, and Sodium. On average, breakfasts provide 34 percent of the recommended amount of calcium, 55 percent of the recommended amount of iron, and 38 percent of the recommended amount of sodium for children 9 to 13 years. Compared with SFSP breakfasts, SSO breakfasts provide a larger share of the recommended amounts of calcium (36% compared with 34%), iron (64% compared with 53%), and sodium (44% compared with 36%) for children 9 to 13 years.

Fiber. Breakfasts provide an average of 12 percent of the recommended amount of dietary fiber for children 9 to 13 years. SSO breakfasts contain more fiber than SFSP breakfasts, and provide a slightly larger share of the recommended amount of fiber for children 9 to 13 years (16% compared with 11%).

Figure 5-2 presents a summary of the contributions of summer meal breakfasts to the recommended daily amounts of energy, vitamins, and minerals discussed above, as the percentage of the DRI value provided.

Figure 5-2. Percent of recommended daily calories and nutrients provided by summer meal breakfasts, overall and by summer meal program type



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. All sites: unweighted n = 523; weighted n = 43,795; SFSP: unweighted n = 405; weighted n = 35,321; SSO: unweighted n = 118; weighted n = 8,475.
*** Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.**
SFSP = Summer Food Service Program SSO = Seamless Summer Option

5.4 Food Sources of Calories and Nutrients at Breakfast

This section describes the relative contribution of foods and major food groups to the calorie and nutrient content at the average breakfast offered at summer meal programs. Table 5-5 presents the findings for the eight major food groups.

Table 5-6 lists the foods that contribute at least five percent of the calories and nutrients at breakfast.

Calories. Food items from the separate grains/breads (30%), milk (28%), and fruit groups (20%) are the top three contributors to calories at breakfast, overall and at both SFSP and SSO sites. Overall, the top three food sources of calories at breakfast are unflavored low-fat milk, flavored fat-free milk, and sweetened cold cereal. The top three foods contributing to calories at SFSP sites are unflavored low-fat milk, sweetened cold cereal, and 100% fruit juice, while the top three food

sources of calories at SSO sites are flavored fat-free milk, unflavored low-fat milk, and 100% fruit juice.

Protein. Food items from the milk (60%), separate grains/breads (18%), and separate meats/meat alternates groups (6%) are the largest contributors of protein at breakfast; milk contributes slightly more protein at lunch at SFSP sites than SSO sites. The top three food sources of protein at breakfast are all milk: unflavored low-fat milk, flavored fat-free milk, and unflavored fat-free milk at all sites, as well as at both SFSP and SSO sites.

Fats. Food items from the separate grains/breads (36%), milk (25%), and desserts/other menu items (16%) groups are the largest contributors to total fat at breakfast; although the top contributors are similar for SFSP and SSO sites, milk contributes more total fat at SFSP sites compared with SSO sites (27% compared with 15%). These are also the largest contributors to saturated fat, though with different contributions: milk (41%), separate grains/breads (25%), and desserts/other menu items (12%); milk is a larger contributor to saturated fat at SFSP sites compared to SSO sites (44% compared with 30%). The top food source of total fat and saturated fat is unflavored low-fat milk at all sites, SFSP sites, and SSO sites.

Vitamins A and C. Similar to lunch, milk (60%) is the largest contributing food group source of vitamin A at breakfast, followed by the grains/bread (28%) and desserts/other menu items groups (3%); findings are similar for SFSP and SSO sites. The top three foods contributing to vitamin A at breakfast include unflavored low-fat milk, flavored fat-free milk, and unsweetened cold cereal overall as well as at SFSP and SSO sites.

Food items from the fruits/100% fruit juices (80%), separate grains/breads (14%), and milk food groups (3%) are the largest contributing sources of vitamin C at breakfast, with similar findings among SFSP and SSO sites. The top three food sources of fiber at breakfast are fresh fruits, sweetened cold cereal, and sweetened canned fruits. The top three foods contributing to fiber at breakfast are fresh fruits, sweetened cold cereal, and sweetened canned fruits. One hundred percent fruit juices and fresh fruits are the top two food contributors to vitamin C at breakfast overall as well as at SFSP and SSO sites.

Table 5-5. Contribution of major food groups to calories and nutrients at breakfast per day, overall and by summer meal program type

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Calories			
Separate grains/breads[a]	29.7	30.7*	25.5
Milk	28.4	29.3*	24.5
Fruits/100% fruit juices[a]	19.9	18.9*	24.0
Desserts and other menu items	10.7	10.3	12.1
Combination entrées	5.0	4.4*	7.2
Separate meats/meat alternates[a]	3.8	3.6	4.5
Accompaniments	2.5	2.6	2.2
Vegetables[a]	0.1	0.2	<0.1
Protein			
Milk	59.9	61.4*	53.8
Separate grains/breads[a]	18.1	18.1	18.3
Separate meats/meat alternates[a]	6.1	5.9	7.2
Combination entrées	5.4	4.7*	8.6
Desserts and other menu items	5.4	5.2*	6.2
Fruits/100% fruit juices[a]	4.6	4.3*	5.7
Accompaniments	0.4	0.4*	0.2
Vegetables[a]	<0.1	0.1	<0.1
Total fat			
Separate grains/breads[a]	36.3	36.5	35.5
Milk	24.6	27.0*	14.5
Desserts and other menu items	16.0	15.1*	19.6
Combination entrées	8.8	7.5*	14.1
Separate meats/meat alternates[a]	8.1	7.4	11.2
Fruits/100% fruit juices[a]	3.2	3.1	3.5
Accompaniments	2.9	3.3*	1.6
Vegetables[a]	0.2	0.2	0.1
Saturated fat			
Milk	41.4	44.1*	30.0
Separate grains/breads[a]	24.7	24.3	26.4
Desserts and other menu items	11.9	11.1*	15.2
Separate meats/meat alternates[a]	8.7	8.2	10.9

Table 5-5. Contribution of major food groups to calories and nutrients at breakfast per day, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Combination entrées	8.4	7.1*	13.9
Accompaniments	3.1	3.5*	1.6
Fruits/100% fruit juices[a]	1.6	1.5	1.9
Vegetables[a]	0.1	0.2	0.1
Vitamin A			
Milk	59.7	60.4	56.9
Separate grains/breads[a]	28.3	28.3	28.7
Desserts and other menu items	3.2	2.8	4.6
Fruits/100% fruit juices[a]	2.6	2.5*	3.3
Combination entrées	2.5	2.1*	4.1
Separate meats/meat alternates[a]	2.4	2.5	1.8
Accompaniments	1.2	1.4*	0.6
Vegetables[a]	0.1	0.1	0.0
Vitamin C			
Fruits/100% fruit juices[a]	79.9	79.2	82.9
Separate grains/breads[a]	13.7	14.4	10.9
Milk	3.1	3.2	2.7
Desserts and other menu items	1.5	1.6	1.2
Separate meats/meat alternates[a]	0.7	0.8*	0.2
Combination entrées	0.7	0.4	1.9
Vegetables[a]	0.3	0.3	<0.1
Accompaniments	0.1	0.1	0.1
Calcium			
Milk	72.0	72.8*	68.3
Separate grains/breads[a]	14.9	15.0	14.8
Fruits/100% fruit juices[a]	4.0	3.6*	5.9
Separate meats/meat alternates[a]	3.9	4.0	3.5
Combination entrées	2.9	2.4*	4.8
Desserts and other menu items	2.0	1.9*	2.5
Accompaniments	0.3	0.3	0.2
Vegetables[a]	<0.1	<0.1	<0.1
Iron			
Separate grains/breads[a]	63.9	65.3*	57.9
Desserts and other menu items	11.8	11.9	11.5
Fruits/100% fruit juices[a]	9.0	8.3*	11.8
Milk	6.9	6.7	7.9

Table 5-5. Contribution of major food groups to calories and nutrients at breakfast per day, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Combination entrées	6.1	5.6	8.3
Separate meats/meat alternates[a]	2.0	1.9	2.4
Accompaniments	0.3	0.2	0.3
Vegetables[a]	0.1	0.1	<0.1
Sodium			
Separate grains/breads[a]	38.9	40.0*	34.5
Milk	34.5	34.9	33.0
Desserts and other menu items	11.2	10.9	12.5
Combination entrées	7.4	6.4*	11.5
Separate meats/meat alternates[a]	5.4	5.3	5.8
Accompaniments	1.3	1.4	1.2
Fruits/100% fruit juices[a]	1.2	1.1*	1.4
Vegetables[a]	0.1	0.1	<0.1
Dietary fiber			
Fruits/100% fruit juices[a]	41.3	39.8*	47.6
Separate grains/breads[a]	41.0	43.0*	32.7
Desserts and other menu items	10.3	10.7	8.7
Combination entrées	5.5	5.0	7.5
Separate meats/meat alternates[a]	1.0	0.7*	2.7
Accompaniments	0.4	0.4	0.6
Milk	0.2	0.2	0.1
Vegetables[a]	0.2	0.2	0.1
Number of sites (unweighted)	523	405	118
Number of sites (weighted)	43,795	35,321	8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.
[a] Excluding combination entrées.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table 5-6. Top food sources of calories and nutrients at breakfast per day, overall and by summer meal program type

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Calories					
Low-fat milk, unflavored	16.3	Low-fat milk, unflavored	17.7	Fat-free milk, flavored	11.7
Fat-free milk, flavored	8.3	Cold cereal, sweetened[a]	8.6	Low-fat milk, unflavored	10.4
Cold cereal, sweetened[a]	8.2	100% fruit juice	7.6	100% fruit juice	9.3
100% fruit juices	8.0	Fat-free milk, flavored	7.4	Cold cereal, sweetened[a]	6.6
Muffins (excluding English muffins), sweet/quick breads	6.8	Muffins (excluding English muffins), sweet/quick breads	7.0	Fresh fruits	6.0
Fresh fruits	6.0	Fresh fruits	6.1	Muffins (excluding English muffins), sweet/quick breads	5.9
				Cakes	5.7
Protein					
Low-fat milk, unflavored	37.5	Low-fat milk, unflavored	40.0	Low-fat milk, unflavored	26.9
Fat-free milk, flavored	13.3	Fat-free milk, flavored	11.6	Fat-free milk, flavored	20.4
Fat-free milk, unflavored	6.8	Fat-free milk, unflavored	6.9	Fat-free milk, unflavored	6.1
Total fat					
Low-fat milk, unflavored	22.0	Low-fat milk, unflavored	23.9	Low-fat milk, unflavored	14.0
Muffins (excluding English muffins), sweet/quick breads	10.8	Muffins (excluding English muffins), sweet/quick breads	10.6	Muffins (excluding English muffins), sweet/quick breads	11.5
Cold cereal, sweetened[a]	7.6	Cold cereal, sweetened[a]	8.0	Cakes	11.3

Table 5-6. Top food sources of calories and nutrients at breakfast per day, overall and by summer meal program type (continued)

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Cakes	6.6	Cookies	6.5	Pancakes, waffles, French toast	8.0
Cookies	6.3	Cakes	5.4	Cold cereal, sweetened[a]	6.2
Pancakes, waffles, French toast	5.9	Pancakes, waffles, French toast	5.4	Breakfast sandwich	5.3
				Cookies	5.1
Saturated fat					
Low-fat milk, unflavored	37.6	Low-fat milk, unflavored	39.7	Low-fat milk, unflavored	29.1
Muffins (excluding English muffins), sweet/quick breads	7.8	Muffins (excluding English muffins), sweet/quick breads	7.5	Cakes	9.7
Cakes	5.9	Cakes	5.0	Muffins (excluding English muffins), sweet/quick breads	8.8
Pancakes, waffles, French toast	4.7			Pancakes, waffles, French toast	6.5
Cold cereal, sweetened[a]	4.0			Breakfast sandwich	5.2
Vitamin A					
Low-fat milk, unflavored	35.3	Low-fat milk, unflavored	37.3	Low-fat milk, unflavored	26.6
Fat-free milk, flavored	15.1	Cold cereal, sweetened[a]	14.4	Fat-free milk, flavored	22.2
Cold cereal, sweetened[a]	14.4	Fat-free milk, flavored	13.4	Cold cereal, sweetened[a]	14.6
Cold cereal, unsweetened	7.2	Fat-free milk, unflavored	6.9	Cold cereal, unsweetened	8.2
Fat-free milk, unflavored	7.1	Cold cereal, unsweetened	6.9	Fat-free milk, unflavored	7.8

Table 5-6. Top food sources of calories and nutrients at breakfast per day, overall and by summer meal program type (continued)

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Vitamin C					
100% fruit juices	44.6	100% fruit juice	42.4	100% fruit juice	54.1
Fresh fruits	23.7	Fresh fruits	24.8	Fresh fruits	19.2
Cold cereal, sweetened[a]	7.6	Cold cereal, sweetened[a]	7.9	Cold cereal, sweetened[a]	6.7
Canned fruits, unsweetened	6.3	Canned fruits, unsweetened	7.2		
Canned fruits, sweetened	6.2	Canned fruits, sweetened	6.5		
Calcium					
Low-fat milk, unflavored	44.2	Low-fat milk, unflavored	46.7	Low-fat milk, unflavored	34.0
Fat-free milk, flavored	16.4	Fat-free milk, flavored	14.3	Fat-free milk, flavored	25.4
Fat-free milk, unflavored	8.2	Fat-free milk, unflavored	8.2	Fat-free milk, unflavored	8.4
				Cold cereal, sweetened[a]	5.1
Iron					
Cold cereal, sweetened[a]	24.3	Cold cereal, sweetened[a]	24.4	Cold cereal, sweetened[a]	24.2
Cold cereal, unsweetened	13.8	Cold cereal, unsweetened	13.4	Cold cereal, unsweetened	15.4
Muffins (excluding English muffins), sweet/quick breads	7.6	Muffins (excluding English muffins), sweet/quick breads	8.3	Fat-free milk, flavored	6.5
Breads, rolls, bagels, and other plain breads	5.9	Breads, rolls, bagels, and other plain breads	6.2	Pancakes, waffles, French toast	5.4
Pancakes, waffles, French toast	5.0	Granola and breakfast bars	5.6	Cakes	5.0

Table 5-6. Top food sources of calories and nutrients at breakfast per day, overall and by summer meal program type (continued)

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Sodium					
Low-fat milk, unflavored	17.9	Low-fat milk, unflavored	19.5	Fat-free milk, flavored	19.3
Fat-free milk, flavored	12.4	Cold cereal, sweetened[a]	12.2	Low-fat milk, unflavored	11.0
Cold cereal, sweetened[a]	11.5	Fat-free milk, flavored	10.7	Cold cereal, sweetened[a]	8.5
Muffins (excluding English muffins), sweet/quick breads	6.9	Muffins (excluding English muffins), sweet/quick breads	7.1	Muffins (excluding English muffins), sweet/quick breads	6.2
Pancakes, waffles, French toast	5.0			Pancakes, waffles, French toast	5.9
				Cakes	5.7
				Breads, rolls, bagels, and other plain breads	5.2
				Cold cereal, unsweetened	5.1
Dietary fiber					
Fresh fruits	20.4	Fresh fruits	20.0	Fresh fruits	22.1
Cold cereal, sweetened[a]	15.1	Cold cereal, sweetened[a]	15.9	Cold cereal, sweetened[a]	11.7
Canned fruits, sweetened	8.2	Canned fruits, sweetened	7.4	Canned fruits, sweetened	11.6
100% fruit juices	6.8	100% fruit juice	7.2	Canned fruits, unsweetened	5.5
Cold cereal, unsweetened	6.2	Cold cereal, unsweetened	6.4	Cold cereal, unsweetened	5.4
Canned fruits, unsweetened	5.9	Canned fruits, unsweetened	5.9	Breads, rolls, bagels, and other plain breads	5.0

Table 5-6. Top food sources of calories and nutrients at breakfast per day, overall and by summer meal program type (continued)

All sites		Program type			
		SFSP		SSO	
Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient	Food items	Mean percent contribution to nutrient
Muffins (excluding English muffins), sweet/quick breads	5.3	Muffins (excluding English muffins), sweet/quick breads	5.7	100% fruit juice	5.0
Breads, rolls, bagels, and other plain breads	5.2	Breads, rolls, bagels, and other plain breads	5.3		
Number of sites (unweighted)	523		405		118
Number of sites (weighted)	43,795		35,321		8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.
[a] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Calcium, Iron, and Sodium. Food items from the milk (72%) and separate grains/breads (15%) groups are the largest contributing food groups for calcium at breakfast; milk again contributes more to calcium at SFSP breakfasts compared with SSO (73% compared with 68%, see Table 5-5). The top three food sources of calcium at breakfast are all from the milk food group and include unflavored low-fat milk, flavored fat-free milk, and unflavored fat-free milk, overall and at SFSP and SSO sites (see Table 5-6).

Food items from the separate grains/breads (64%), desserts/other menu items (12%), and fruits/100% fruit juices (9%) are the largest contributors to iron at breakfast, with separate grains/breads contributing a larger amount to iron at SFSP breakfasts compared to SSO (65% compared to 58%, see Table 5-5). The top three sources of iron at breakfast are from the grain/breads group and include sweetened cold cereal, unsweetened cold cereal, and muffins (excluding English muffins) and sweet/quick breads, for all sites and for SFSP sites, while the top

three sources of iron at SSO sites include flavored fat-free milk instead of muffins (excluding English muffins) and sweet/quick breads (see Table 5-6).

Food items from the separate grains/breads (39%), milk (35%), and desserts/other menu items (11%) groups are the largest contributors to sodium at breakfast; findings are similar for SFSP and SSO breakfasts (see Table 5-5). The top three food sources of sodium at breakfast are unflavored low-fat milk, flavored fat-free milk, and sweetened cold cereal, overall and for SFSP and SSO sites (see Table 5-6).

Fiber. Fruits/100% fruit juices (41%) is the largest contributing food group for fiber at breakfast, followed by separate grains/breads (41%) and desserts and other menu items (10%). Fruits/100% fruit juices contribute larger amounts of fiber to SSO breakfasts compared with SFSP (48% compared with 40%), while separate grains/breads contribute less at SSO breakfasts compared with SFSP (33% compared with 43%, see Table 5-5).The top three food sources of fiber at breakfast are fresh fruits, sweetened cold cereal, and sweetened canned fruits, overall and for SFSP and SSO sites (see Table 5-6).

In summary, separate grains/breads are the biggest source of calories, total fat, iron, and sodium at breakfast, providing between 30 to 64 percent of each nutrient. Milk is the leading source of protein, saturated fat, vitamin A, and calcium at breakfast, providing 41 to 72 percent of each nutrient. Separate grains/breads and milk together provide 58 to 97 percent of seven of the ten nutrients examined (calories, protein, total and saturated fat, vitamin A, calcium and sodium). Fruits/100% fruit juices are the biggest source of vitamin C (80%) and dietary fiber (41%). Other sources contribute to these nutrients, and although approximately 40 percent of the calories and total fat at breakfast come from sources other than separate grains/breads and milk, other sources contribute only 6 to 30 percent of the other nutrients. Compared to SSO sites, milk at SFSP sites is a more important source of calories (29% compared with 24%), protein (61% compared with 54%), and calcium (73% compared with 68%). Separate grains/breads at SFSP sites provide more calories (31% compared with 26%), iron (65% compared with 58%), and sodium (40% compared with 35%) than at SSO sites. Dietary fiber comes equally from fruits/100% fruit juices and separate grains/breads, each providing about 40 percent; fruits/100% fruit juices are a bigger source of dietary fiber for SSO sites (48%) compared with SFSP sites (40%), while separate grains/breads are a bigger source of fiber for SFSP sites (43% compared with 33% at SSO sites).

5.5 Calorie and Nutrient Content of Snack

Table 5-7 presents the calorie and nutrient content of snacks offered at summer meal programs, including the average content and the percent of recommended amount provided for children 9 to 13 years. Results are presented for all sites collectively. Results are not displayed by program type due to an insufficient sample size of SSO sites.

Calories. The average calorie content of snacks offered at summer meal programs is 242 calories. Snacks offered at summer meal programs provide 11 percent of the recommended amount of calories for children 9 to 13 years of age.

Protein. Snacks provide an average of 13 percent of the recommended amount of protein for children 9 to 13 years.

Fats. Total fats provide 21 percent of calories and saturated fat provides less than six percent of the calories at snacks; these are within the recommended ranges.

Vitamins A and C. On average, snacks provide eight percent of the recommended amount of vitamin A and 82 percent of the recommended amount of vitamin C for children 9 to 13 years.

Calcium, Iron, and Sodium. On average, snacks provide eight percent of the recommended amount of calcium, 19 percent of the recommended amount of iron, and 19 percent of the recommended amount of sodium for children 9 to 13 years.

Fiber. Snacks provide an average of two grams of dietary fiber, which is six percent of the recommended amount for children 9 to 13 years.

Figure 5-3 presents a summary of the contributions of summer meal snacks to the recommended daily amounts of energy, vitamins, and minerals discussed above, as the percentage of the DRI value provided.

Table 5-7. Calorie and nutrient content of snack and percent of recommended daily intake met for 9 to 13 year old children

Nutrient	All sites	
	Mean	% DRI
Calories (kcal)[a]	242.0	11.0
Macronutrients		
Protein, g[b]	4.5	13.3
Total fat, g	5.7	ND
Total fat, % kcal[c]	21.2	25-35%[d]
Saturated fat, g	1.5	ND
Saturated fat, % kcal[e]	5.6	<10%[e]
Vitamins		
Vitamin A, µg (RAE)[b]	50.2	8.3
Vitamin C, mg[b]	37.0	82.2
Minerals		
Calcium, mg[b]	109.2	8.3
Iron, mg[b]	1.5	18.9
Sodium, mg[f]	230.3	19.1
Other dietary components		
Total dietary fiber, g[f]	1.8	5.6
Number of sites (unweighted)	132	
Number of sites offering lunch (weighted)	11,212	

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs

[a] Recommended amount from the DGA 2015-2020; for calorie comparison, the highest estimated calorie needs within the age and sex range was selected.

[b] Recommended Dietary Allowance (RDA): average daily dietary intake level, sufficient to meet the nutrient requirements of nearly all (97-98 percent) healthy individuals in a group.

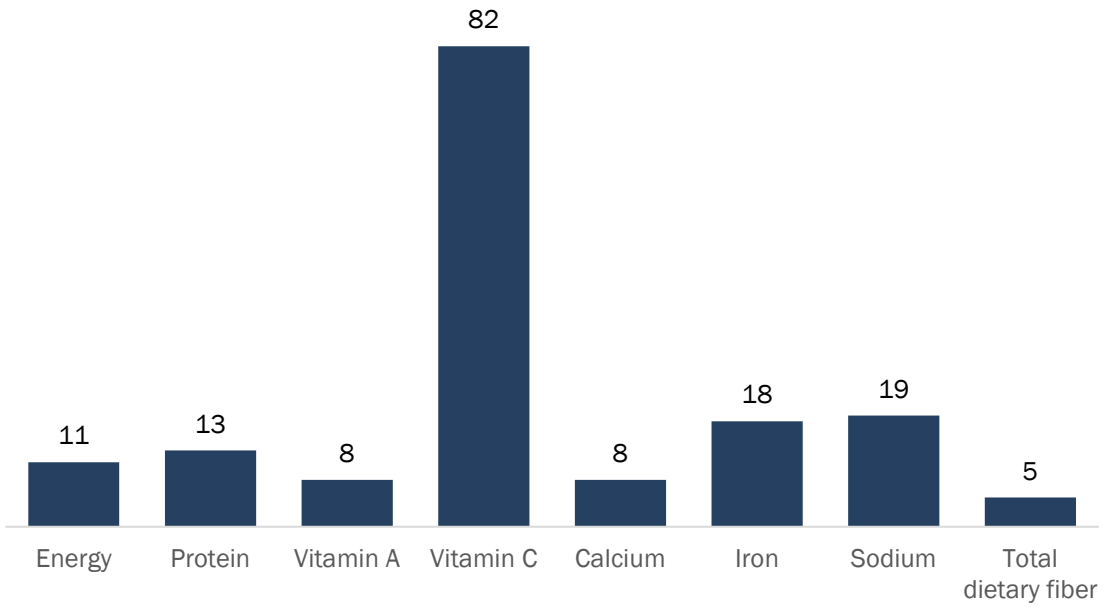
[c] Acceptable Macronutrient Distribution Range (AMDR): range of intake for a particular calorie source that is associated with reduced risk of chronic disease while providing intakes of essential nutrients. Percentage met value is the percentage of the high end of the range.

[d] The range shown is the AMDR for children ages 9-13 years.

[e] The Dietary Guidelines for Americans recommend consuming less than 10 percent of total calories from saturated fat per day.

[f] Adequate Intake (AI): amount believed to cover the needs of all healthy individuals in the group, but lack of data or uncertainty in the data prevent being able to specify with confidence the percentage of individuals covered by this intake.

Figure 5-3. Percent of recommended daily calories and nutrients provided by summer meal snacks



Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Unweighted n = 132; weighted n = 11,212.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

5.6 Food Sources of Calories and Nutrients at Snack

This section describes the relative contribution of foods and major food groups to the calorie and nutrient content at the average snack offered at summer meal programs. Table 5-8 presents the findings for the eight major food groups. Table 5-9 lists the foods that contribute at least five percent of the calories and nutrients in snacks. Results are not displayed by program type due to an insufficient sample size of SSO sites.

Calories. Food items from the fruits/100% fruit juices (35%), desserts/other menu items (27%), and separate grains/breads (26%) food groups are the top three contributors to calories at snacks. The top three food sources of calories at snacks are 100% fruit juices; cookies; and crackers, croutons, or pretzels.

Protein. Food items in the desserts/other menu items (34%), separate grains/breads (33%), and fruits/100% fruit juices (13%) food groups are the top three contributor to protein at snacks. The

top three food sources of protein at snacks are cookies; crackers, croutons, or pretzels; and 100% fruit juices.

Fats. Food items from the desserts/other menu items (40%), separate grains/breads (37%), and separate meats/meat alternates (11%) groups are the top contributors to total fat and to saturated fat at snack. The top three food sources of both total fat and saturated fat at snack are cookies; crackers, croutons, or pretzels; and cheese.

Table 5-8. Contribution of major food groups to calories and nutrients at snack per day

Major food group	Mean percent contribution to nutrient All sites
Calories	
Fruits/100% fruit juices[a]	34.8
Desserts and other menu items	27.1
Separate grains/breads[a]	25.5
Separate meats/meat alternates[a]	6.3
Milk	4.5
Accompaniments	1.1
Combination entrées	0.4
Vegetables[a]	0.3
Protein	
Desserts and other menu items	34.0
Separate grains/breads[a]	32.6
Fruits/100% fruit juices[a]	13.1
Separate meats/meat alternates[a]	11.4
Milk	7.8
Vegetables[a]	0.5
Combination entrées	0.4
Accompaniments	0.3
Total fat	
Desserts and other menu items	40.1
Separate grains/breads[a]	36.8
Separate meats/meat alternates[a]	10.5
Fruits/100% fruit juices[a]	6.1
Milk	3.8
Accompaniments	2.1
Combination entrées	0.5
Vegetables[a]	0.1

Table 5-8. Contribution of major food groups to calories and nutrients at snack per day (continued)

Major food group	Mean percent contribution to nutrient All sites
Saturated fat	
Desserts and other menu items	36.4
Separate grains/breads[a]	34.9
Separate meats/meat alternates[a]	12.3
Fruits/100% fruit juices[a]	8.0
Milk	5.8
Accompaniments	2.1
Combination entrées	0.5
Vegetables[a]	0.1
Vitamin A	
Separate grains/breads[a]	33.1
Fruits/100% fruit juices[a]	28.5
Separate meats/meat alternates[a]	16.3
Milk	11.7
Desserts and other menu items	6.4
Vegetables[a]	3.1
Accompaniments	0.7
Combination entrées	0.2
Vitamin C	
Fruits/100% fruit juices[a]	86.7
Separate grains/breads[a]	6.2
Vegetables[a]	2.4
Milk	1.9
Separate meats/meat alternates[a]	1.5
Desserts and other menu items	1.0
Accompaniments	0.3
Combination entrées	0.0
Calcium	
Fruits/100% fruit juices[a]	31.1
Separate grains/breads[a]	24.2
Desserts and other menu items	22.4
Separate meats/meat alternates[a]	11.5
Milk	9.1
Vegetables[a]	1.1
Accompaniments	0.4
Combination entrées	0.3

Table 5-8. Contribution of major food groups to calories and nutrients at snack per day (continued)

Major food group	Mean percent contribution to nutrient All sites
Iron	
Separate grains/breads[a]	36.9
Desserts and other menu items	36.8
Fruits/100% fruit juices[a]	20.4
Separate meats/meat alternates[a]	3.1
Milk	1.5
Vegetables[a]	0.6
Combination entrées	0.4
Accompaniments	0.2
Sodium	
Desserts and other menu items	39.9
Separate grains/breads[a]	38.9
Separate meats/meat alternates[a]	9.7
Milk	5.0
Fruits/100% fruit juices[a]	4.6
Accompaniments	1.3
Vegetables[a]	0.4
Combination entrées	0.3
Dietary fiber	
Fruits/100% fruit juices[a]	34.8
Desserts and other menu items	31.1
Separate grains/breads[a]	30.3
Vegetables[a]	1.8
Separate meats/meat alternates[a]	1.3
Combination entrées	0.5
Accompaniments	0.2
Milk	0.0
Number of sites (unweighted)	132
Number of sites (weighted)	11,212

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.

[a] Excluding combination entrées.

Table 5-9. Top food sources of calories and nutrients at snack per day

Food item	Mean percent contribution to nutrient All sites
Calories	
100% fruit juices	30.0
Cookies	24.5
Crackers, croutons, or pretzels	15.4
Protein	
Cookies	31.3
Crackers, croutons, or pretzels	20.5
100% fruit juices	10.9
Cheese	6.7
Low-fat milk, unflavored	5.6
Total fat	
Cookies	36.7
Crackers, croutons, or pretzels	22.2
Cheese	6.3
100% fruit juices	5.2
Granola and breakfast bars	4.7
Saturated fat	
Cookies	33.2
Crackers, croutons, or pretzels	21.2
Cheese	7.5
100% fruit juices	7.2
Low-fat milk, unflavored	5.7
Vitamin A	
100% fruit juices	20.9
Crackers, croutons, or pretzels	15.8
Cheese	11.3
Low-fat milk, unflavored	8.3
Granola and breakfast bars	5.9
Fresh fruits	5.2
Vitamin C	
100% fruit juices	74.4
Fresh fruits	8.0
Calcium	
100% fruit juices	28.3
Cookies	20.7
Crackers, croutons, or pretzels	13.5

Table 5-9. Top food sources of calories and nutrients at snack per day (continued)

Food item	Mean percent contribution to nutrient All sites
Cheese	7.6
Low-fat milk, unflavored	6.4
Iron	
Cookies	33.8
Crackers, croutons, or pretzels	22.7
100% fruit juices	16.4
Sodium	
Cookies	36.2
Crackers, croutons, or pretzels	24.4
Cheese	5.7
Dietary fiber	
Cookies	28.8
100% fruit juices	24.7
Crackers, croutons, or pretzels	18.7
Fresh fruits	7.0
Number of sites (unweighted)	132
Number of sites (weighted)	11,212

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs.

Vitamins A and C. Food items from the separate grains/breads (33%), fruits/100% fruit juices (29%), and meat/meat alternates (16%) groups are the largest contributors to vitamin A at snack. The top three sources of vitamin A at snacks are 100% fruit juices; crackers, croutons, or pretzels; and cheese.

Food items from the fruits/100% fruit juices (87%) food group are the largest contributors of vitamin C at snacks. The top two sources of vitamin C at snacks are 100% fruit juices and fresh fruits, with 100% fruit juices contributing 74% of vitamin C and fresh fruits 8%.

Calcium, Iron, and Sodium. Food items from the fruits/100% fruit juices (31%), separate grains/breads (24%), and desserts/other menu items (22%) groups are the largest contributors of calcium at snacks. The top three food sources of calcium at snacks are 100% fruit juices; cookies; and crackers, croutons, or pretzels.

Food items in the grains/bread (37%), desserts/other menu items (37%), and fruits/100% fruit juices (20%) groups are also the largest contributors to iron at snacks. The top three food sources of iron at snacks are cookies; crackers, croutons, or pretzels; and 100% fruit juices.

Food items from desserts/other menu items (40%), separate grains/breads (39%), and separate meats/meat alternates (10%) groups are the largest contributors to sodium at snacks. The top three food sources of sodium at snacks are cookies; crackers, croutons, or pretzels; and cheese.

Fiber. Food items from the fruits/100% fruit juices (35%), desserts/other menu items (31%), and separate grains/breads (30%) groups make an almost equal contribution to the fiber at snacks. The top three food sources of fiber at snacks are cookies; 100% fruit juices; and crackers, croutons, or pretzels.

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Appendix A

Supplemental Tables

Appendix A
Supplemental Tables

The supplemental tables in this Appendix provide all the descriptive characteristics presented in the report for all sites and compare sites by summer meal program type (SFSP and SSO). These comparisons are made to address the study objectives. **Note:** Table footnotes are standardized across all tables, meaning that a certain footnote is always assigned the same letter. This means that footnote letters may not be used in every table, and the letters assigned to footnotes within a given table may skip letters.

Table A-1. Most frequently offered foods at breakfast, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Milk	**100**	**100**	**100**
2%	2.9	3.5*	0
Unflavored	2.9	3.5*	0
Flavored	0.1	0.1	0
Low-fat	93.2	92.2*	97.1
Unflavored	93.2	92.2*	97.1
Flavored	2.6	3.0	0.9
Fat-free	61.9	55.2*	89.8
Unflavored	26.2	25.1	30.9
Flavored	48.5	41.9*	76.1
Other milk beverages	1.5	1.7	0.6
Vegetables[e]	**0.7**	**0.9**	**0.2**
Vegetable subgroups			
Dark green vegetables	0	0	0
Red and orange vegetables	0.1	0.1	0
Beans and peas	0	0	0
Starchy vegetables	0.6	0.7	0.2
Vegetable mixtures	0	0	0
Other vegetables	0	0	0
100% vegetable juice	0	0	0
Raw vegetables	0	0	0
Cooked vegetables	0.7	0.9	0.2

Table A-1. Most frequently offered foods at breakfast, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Fruits/100% fruit juices[e]	**99.4**	**99.3**	**99.8**
Fruits, excluding 100% juice	71.4	65.2*	97.3
Fresh	43.7	41.8	51.8
Canned, sweetened	28.8	26.3*	39.3
Canned, unsweetened	10.9	9.5*	16.8
Frozen	2.7	2.4	3.9
Dried	6.5	4.6*	14.5
100% fruit juice	60.2	54.4*	84.1
Combination entrees	**13.4**	**11.0***	**23.3**
Breakfast sandwich	4.7	3.8*	8.7
Pizza with meat	2.3	2.2	2.8
Hot dogs, corn dogs, similar sausage sandwiches	1.9	1.6	3.2
Mexican-style entrées	1.5	1.2	2.8
Breakfast burritos	1.2	0.7*	3.6
Parfaits	0.8	0.5	2.1
Pizza pockets, pizza sticks, and calzones	0.5	0.4	0.8
Peanut butter sandwich	0.4	0.5	0
Mixtures with grain, meat/meat alternate, and/or vegetables	0.2	0.1	0.3
Other mixtures with meat, meat alternate and/or vegetables	0.1	0.2	0
Sandwich with breaded/fried meat, poultry, or fish	0.1	0.1	0
Sandwich with cheese only	0.1	0.1	0
Sandwich with plain meat, poultry, or fish	0.1	0.1	0
Pizza without meat	<0.1	<0.1	0.1
Separate grains and breads[a,e]	**82.1**	**82.4**	**81.1**
Cold cereal, sweetened[b]	44.8	43.1	52.0
Cold cereal, unsweetened	24.5	21.4*	37.6
Muffins (excluding English muffins), sweet/quick breads	16.7	16.2	18.7
Breads, rolls, bagels, and other plain breads	14.3	13.4	18.2
Pancakes, waffles, French toast	11.1	10.2	14.6
Granola and breakfast bars	8.8	10.0*	3.7
Biscuits, croissants, seasoned breadsticks, cornbread, and stuffing	3.2	3.5	2.3
Crackers, croutons, pretzels	3.2	2.0	8.4
Bread or bread alternates with added fat	1.1	1.2	0.6

Table A-1. Most frequently offered foods at breakfast, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Hot cereal	0.8	0.9	0.5
Rice	0.2	<0.1*	1.1
Corn/tortilla chips	<0.1	<0.1	0
Separate meat and meat alternates[e]	**20.0**	**19.0**	**24.3**
Cheese	6.5	6.5	6.4
Yogurt	6.3	6.9	3.7
Nuts, nut butters and seeds	3.3	2.8	5.3
Eggs	3.1	3.4	2.2
Sausage, frankfurters and cold cuts	3.0	2.1*	6.7
Meat substitutes, hummus, legumes	0.4	0*	1.8
Chicken and turkey, breaded or fried	0.2	0.1	0.6
Meat, plain	0.1	0	0.6
Chicken and turkey, plain	0.1	0.1	0
Desserts and other menu items	**31.5**	**28.9***	**42.4**
Cookies	15.4	15.3	15.9
Cakes	9.6	8.1*	16.1
Fruit cobblers and crisps	7.3	5.5	14.7
Bottled water	1.7	1.6	2.5
Bacon	0.1	0.2*	0
Desserts containing fruit or fruit juice	0.1	0.1	0
Other items	0.9	0.9	0.8
Accompaniments	**18.1**	**16.6**	**24.7**
Condiments and toppings	18.1	16.6	24.7
Number of sites (unweighted)	523	405	118
Number of sites (weighted)	43,795	35,321	8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Excluding grain-based desserts.

[b] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

[e] Excluding combination entrees.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-2. Most frequently offered fruits and vegetables at breakfast, overall and by summer meal program type

All sites		SFSP		SSO	
Menu items	Percentage of sites	Menu items	Percentage of sites	Menu items	Percentage of sites
Vegetables[e]	0.7	**Vegetables[e]**	0.9	**Vegetables[e]**	0.2
White potato	0.4	White potato	0.5	French fries, other fried potatoes	0.2
French fries, other fried potatoes	0.2	French fries, other fried potatoes	0.2		
Sweet potatoes	0.1	Sweet potatoes	0.1		
Vegetable subgroups					
Dark green vegetables	**0**	**Dark green vegetables**	**0**	**Dark green vegetables**	**0**
Red and orange vegetables	**0.1**	**Red and orange vegetables**	**0.1**	**Red and orange vegetables**	**0**
Sweet potatoes	0.1	Sweet potatoes	0.1		
Beans and peas	**0**	**Beans and peas**	**0**	**Beans and peas**	**0**
Starchy vegetables	**0.6**	**Starchy vegetables**	**0.7**	**Starchy vegetables**	**0.2**
White potato	0.4	White potato	0.5	French fries, other fried potatoes	0.2
French fries, other fried potatoes	0.2	French fries, other fried potatoes	0.2		
Vegetable mixtures	0				
Other vegetables	0				
Fruits/100% fruit juices[e]	**99.4**	**Fruits/100% fruit juices[e]**	**99.3**	**Fruits/100% fruit juices[e]**	**99.8**
Fruits, excluding 100% juice	**71.4**		**65.2**		**97.3**
Apple	23.4	Apple	23.0	Apple	24.7
Banana	19.3	Banana	20.5	Applesauce	23.8
Applesauce	18.5	Orange	17.4	Orange	22.8
Orange	18.5	Applesauce	17.2	Peach	20.4
Peach	17.2	Peach	16.4	Banana	14.6
100% fruit juice	**60.2**		**65.2**		**97.3**
Orange juice	29.0	Apple juice	26.6	Orange juice	39.7
Apple juice	28.8	Orange juice	26.4	Apple juice	38.3
Fruit juice blend	25.3	Fruit juice blend	22.3	Fruit juice blend	37.5

Table A-2. Most frequently offered fruits and vegetables at breakfast, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Menu items	Percentage of sites	Menu items	Percentage of sites	Menu items	Percentage of sites
Number of sites (unweighted)	523		405		118
Number of sites (weighted)	43,795		35,321		8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[e] Excluding combination entrees.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-3. Most frequently offered foods at lunch, overall and by summer meal program type

Menu items	Percentage of sites		
	All sites	Program type	
		SFSP	SSO
Milk	**100.0**	**100**	**100**
2%	1.0	1.2*	0
Unflavored	1.0	1.2*	0
Flavored	2.1	2.5*	0
Low-fat	86.0	83.5*	97.9
Unflavored	86.0	83.5*	97.9
Flavored	4.4	5.1*	0.7
Fat-free	69.0	62.9*	98.8
Unflavored	22.1	20.5	30.1
Flavored	64.5	58.3*	94.9
Other milk beverages	1.3	1.5	0.6
Vegetables[e]	**79.3**	**75.7***	**97.2**
Vegetable subgroups			
Dark green vegetables[f]	17.0	14.9*	27.2
Red and orange vegetables[g]	42.0	39.9*	52.5
Beans and peas[h]	7.3	4.8*	19.5
Starchy vegetables[i]	21.6	17.8*	40.3
Vegetable mixtures	11.2	8.9*	22.5
Other vegetables[j]	26.9	26.4	29.6
100% vegetable juice	0.4	0.3	0.7
Raw vegetables	56.0	55.3	59.3
Cooked vegetables	40.8	33.8*	75.7
Fruits/100% fruit juices[e]	**97.5**	**97.4**	**98.3**
Fruits, excluding 100% juice	91.1	89.9*	97.1
Fresh	55.1	54.6	57.2
Canned, sweetened	33.8	31.1*	46.8
Canned, unsweetened	13.3	12.8	15.7
Frozen	4.6	3.9*	8.0
Dried	8.4	7.4*	13.3
100% fruit juice	27.1	30.9*	8.2
Both a fruit and a vegetable	**74.4**	**70.0***	**95.9**
Combination entrees	**85.1**	**84.5**	**88.1**
Baked beans	3.1	2.4*	6.6
Sandwich with plain meat, poultry, or fish	36.3	40.1*	17.8
Peanut butter sandwich	15.7	15.5	16.7
Pinto calico or red Mexican beans	0.9	0.8	1.7

Table A-3. Most frequently offered foods at lunch, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Mexican-style entrées	7.4	7.1	8.9
Hot dogs, corn dogs, similar sausage sandwiches	7.2	6.8	9.3
Pizza without meat	6.9	6.0*	11.2
Hamburger, similar beef/pork sandwiches	6.1	4.9*	11.9
Sandwich with breaded/fried meat, poultry, or fish	5.7	5.2*	8.2
Mixtures with grain, meat/meat alternate, and/or vegetables	5.5	4.5*	10.6
Cheeseburger, similar beef/pork sandwiches	5.5	4.3*	11.3
Pizza with meat	4.2	3.6*	7.6
Entrée salads	3.2	3.4	2.0
Pizza pockets, pizza sticks, and calzones	2.5	2.7*	1.4
Sandwich with mayonnaise-based poultry, tuna, or egg salad	2.1	1.7*	4.1
Sandwich with cheese only	2.1	2.3	1.2
Other mixtures with meat, meat alternate and/or vegetables	1.2	1.0	2.2
Entrée food bar	0.4	0.1	1.9
Parfaits	0.3	0.3	0.3
Sandwich with meat substitute	0.3	0.1*	1.2
Breakfast sandwich	0.1	0.1	0
Separate grains and breads[a,e]	**29.3**	**28.3**	**34.1**
Crackers, croutons, pretzels	10.8	11.3	8.3
Breads, rolls, bagels, and other plain breads	10.3	8.7	18.3
Corn/tortilla chips	4.3	3.9	6.3
Biscuits, croissants, seasoned breadsticks, cornbread, and stuffing	3.1	3.1	3.0
Rice	1.8	1.7	2.4
Cold cereal, sweetened[b]	0.9	1.0	0.1
Granola and breakfast bars	0.8	0.9	0.4
Muffins (excluding English muffins), sweet/quick breads	0.4	0.4	0.3
Pasta	0.4	0.4	0.1
Bread or bread alternates with added fat	0.4	0.4	0.2
Pancakes, waffles, French toast	0.4	0.4	0.3
Other grains/breads	0.1	0.1	0.1
Cold cereal, unsweetened	<0.1	<0.1	0

Table A-3. Most frequently offered foods at lunch, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Separate meat and meat alternates[e]	34.4	33.6	38.0
Cheese	15.3	16.1	11.4
Chicken and turkey, breaded or fried	8.2	7.5*	11.4
Chicken and turkey, plain	4.6	4.5	5.1
Nuts, nut butters and seeds	4.1	4.6*	1.3
Yogurt	3.4	3.9*	1.2
Meat substitutes, hummus, legumes	3.3	2.3*	8.3
Sausage, frankfurters and cold cuts	2.7	1.9*	6.8
Chicken and turkey, with sauce, gravy or mayonnaise	0.8	0.9*	0.1
Meat, plain	0.7	0.8	0.4
Meat with sauce, gravy or mayonnaise	0.7	0.7	0.6
Meat, breaded or fried	0.6	0.3*	1.7
Eggs	0.4	0.5*	0
Fish and shellfish, breaded or fried	0.4	0.2	1.3
Fish and shellfish, with sauce, gravy or mayonnaise	0.1	0.2*	0
Fish and shellfish, plain	0.1	0.1	0
Desserts and other menu items	**12.3**	**12.5**	**11.5**
Cookies	5.9	6.0	5.6
Snacks	3.0	3.3	1.9
Desserts containing fruit or fruit juice	2.3	2.3	2.5
Bottled water	1.0	0.9	1.8
Dairy based desserts	0.1	0.1	0.1
Fruit cobblers and crisps	0.1	0.1	0.1
Cakes	0.1	0.1	0.1
Brownies	0.1	0.1	0.1
Other items	0.5	0.6*	0.1

Table A-3. Most frequently offered foods at lunch, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Accompaniments	**60.3**	**57.3***	**75.0**
Condiments and toppings	46.5	44.5*	56.1
Salad dressing	31.5	27.7*	50.1
Number of sites (unweighted)	731	578	153
Number of sites (weighted)	67,285	55,926	11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Excluding grain-based desserts.

[b] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

[e] Excluding combination entrees.

[f] Fewer than 2.7% of daily menus included spinach, kale, spinach salad with bacon, greens, and collards.

[g] Fewer than 1.4% of daily menus included red peppers, sweet potatoes, tomato juice, winter squash, and tomato soup.

[h] Fewer than 0.9% of daily menus included edamame, chickpeas, pork and beans, chili beans, red kidney beans, white beans, and black bean salad.

[i] Fewer than 2.7% of daily menus included peas, white potato, jicama, fresh cowpeas, and Lima beans immature.

[j] Fewer than 6.0% of daily menus included lettuce, cauliflower, coleslaw, peppers, summer squash, snowpeas, cabbage, mixed vegetables, onions, olives, vegetable soup, beans and tomatoes, and unknown vegetables.

*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-4. Most frequently offered fruits and vegetables at lunch, overall and by summer meal program type

All sites		SFSP		SSO	
Menu items	Percentage of sites	Menu items	Percentage of sites	Menu items	Percentage of sites
Vegetables[e]	**79.3**	**Vegetables[e]**	**75.7**	**Vegetables[e]**	**97.2**
Carrots	30.4	Carrots	28.8	Carrots	37.8
Tomatoes	12.6	Tomatoes	11.7	Broccoli	21.1
Broccoli	10.4	Cucumber	8.5	French fries, other fried potatoes	18.5
French fries, other fried potatoes	8.7	Broccoli	8.2	Tomatoes	17.0
Corn	8.5	Celery	7.6	Corn	15.8
Vegetable subgroups					
Dark green vegetables[f]	**17.0**	**Dark green vegetables**	**14.9**	**Dark green vegetables**	**27.2**
Broccoli	10.4	Broccoli	8.2	Broccoli	21.1
Salad greens	3.0	Salad greens	3.6	Romaine	5.0
Romaine	2.7	Romaine	2.2	Spinach	2.7
Red and orange vegetables[g]	**42.0**	**Red and orange vegetables**	**39.9**	**Red and orange vegetables**	**52.5**
Carrots	30.4	Carrots	28.8	Carrots	37.8
Tomatoes	12.6	Tomatoes	11.7	Tomatoes	17.0
Fried sweet potatoes	1.4	Fried sweet potatoes	1.2	Sweet potatoes	2.2
Beans and peas[h]	**7.3**	**Beans and peas**	**4.8**	**Beans and peas**	**19.5**
Baked beans	3.1	Baked beans	2.4	Black, brown or bayo beans	8.4
Black, brown or bayo beans	1.9	Pinto calico or red Mexican beans	0.8	Baked beans	6.6
Pinto calico or red Mexican beans	0.9	Black, brown or bayo beans	0.5	Pinto calico or red Mexican beans	1.7
Starchy vegetables[i]	**21.6**	**Starchy vegetables**	**17.8**	**Starchy vegetables**	**40.3**
French fries, other fried potatoes	8.7	Corn	7.1	French fries, other fried potatoes	18.5
Corn	8.5	French fries, other fried potatoes	6.7	Corn	15.8
Mashed potatoes	2.7	Mashed potatoes	2.3	Mashed potatoes	4.9

Table A-4. Most frequently offered fruits and vegetables at lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Menu items	Percentage of sites	Menu items	Percentage of sites	Menu items	Percentage of sites
Vegetable mixtures	**11.2**	**Vegetable mixtures**	**8.9**	**Vegetable mixtures**	**22.5**
Lettuce-based salad	7.2	Lettuce-based salad	6.4	Lettuce-based salad	11.6
Mixed vegetables	4.2	Mixed vegetables	2.8	Mixed vegetables	11.1
Other vegetables[j]	**26.9**	**Other vegetables**	**26.4**	**Other vegetables**	**29.6**
Cucumber	8.4	Cucumber	8.5	Celery	9.9
Celery	7.9	Celery	7.6	Green beans	8.8
Green beans	6.0	Green beans	5.5	Cucumber	8.4
Fruits/100% fruit juices[e]	**97.5**	**Fruits/100% fruit juices[e]**	**97.4**	**Fruits/100% fruit juices[e]**	**98.3**
Fruits, excluding 100% juice	**91.1**	**Fruits, excluding 100% juice**	**89.9**	**Fruits, excluding 100% juice**	**97.1**
Apple	29.9	Apple	29.5	Apple	31.8
Orange	21.4	Orange	20.5	Peach	28.3
Peach	20.6	Peach	19.0	Orange	25.9
Banana	17.2	Banana	17.9	Applesauce	20.3
Applesauce	16.6	Applesauce	15.9	Mixed fruit	15.7
100% fruit juice	**27.1**	**100% fruit juice**	**30.9***	**100% fruit juice**	**8.2**
Fruit juice blend	12.4	Fruit juice blend	14.1	Fruit juice blend	4.5
Apple juice	9.1	Apple juice	10.2	Apple juice	3.6
Orange juice	6.1	Orange juice	6.9	Orange juice	2.3
Number of sites (unweighted)	731		578		153
Number of sites (weighted)	67,285		55,926		11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[c] Includes beans and peas credited as meat alternates in the site menu analysis.

[e] Excluding combination entrees.

[f] Fewer than 2.7% of daily menus included spinach, kale, spinach salad with bacon, greens, and collards.

[g] Fewer than 1.4% of daily menus included red peppers, sweet potatoes, tomato juice, winter squash, and tomato soup.

[h] Fewer than 0.9% of daily menus included edamame, chickpeas, pork and beans, chili beans, red kidney beans, white beans, and black bean salad.

[i] Fewer than 2.7% of daily menus included peas, white potato, jicama, fresh cowpeas, and Lima beans immature.

[j] Fewer than 6.0% of daily menus included lettuce, cauliflower, coleslaw, peppers, summer squash, snowpeas, cabbage, mixed vegetables, onions, olives, vegetable soup, beans and tomatoes, and unknown vegetables.

*Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-5. Most frequently offered foods at snack

Menu items	Percentage of sites
	All sites
Milk	**10.1**
2%	0
Unflavored	0
Flavored	0
Low-fat	9.4
Unflavored	9.4
Flavored	0
Fat-free	5.3
Unflavored	2.2
Flavored	3.1
Other milk beverages	0
Vegetables[e]	**2.8**
Celery	0.5
Broccoli	0.3
Carrots	2.1
Vegetable subgroups	
Dark green vegetables	0.3
Broccoli	0.3
Red and orange vegetables	2.1
Carrots	2.1
Beans and peas	0
Starchy vegetables	0
Vegetable mixtures	0
Other vegetables	0.5
Celery	0.5
100% vegetable juice	0
Raw vegetables	2.7
Cooked vegetables	0.1
Fruits/100% fruit juices[e]	**84.2**
Fruits, excluding 100% juice	13.3
Apples	5.4
Oranges	2.7
Applesauce	2.0
Bananas	1.5
Peaches	1.3
Fresh	8.3
Canned, sweetened	3.6

Table A-5. Most frequently offered foods at snack (continued)

Menu items	Percentage of sites
	All sites
Canned, unsweetened	1.2
Frozen	0.1
Dried	0.7
100% fruit juice	**71.3**
Apple juice	39.4
Fruit juice blend	39.0
Grape juice	17.7
Both a fruit and a vegetable	**0.2**
Combination entrees	**0.6**
Mexican-style entrées	0.6
Separate grains and breads[a,e]	**47.0**
Crackers, croutons, or pretzels[d]	29.0
Granola and breakfast bars	5.4
Muffins (excluding English muffins), sweet/quick breads	4.9
Corn/tortilla chips	3.2
Pancakes, Waffles, French toast	2.3
Cold cereal, sweetened[b]	1.4
Breads, rolls, bagels, and other plain breads	1.2
Cold cereal, unsweetened	0.6
Hot cereal	0.2
Biscuits, croissants, seasoned breadsticks, cornbread, and stuffing	0.1
Meat and meat alternates[e]	**14.5**
Cheese	8.8
Yogurt	3.7
Nuts, nut butters and seeds	1.2
Chicken and turkey, plain	0.6
Eggs	0.1
Meat, plain	0.1
Desserts and other menu items	47.5
Cookies	42.4
Snacks	1.7
Fruit cobblers and crisps	1.5
Cakes	0.6
Bottled water	0.3
Other items	1.1

Table A-5. Most frequently offered foods at snack (continued)

Menu items	Percentage of sites
	All sites
Accompaniments	**3.5**
Salad dressing	2.1
Condiments and toppings	1.4
Number of sites (unweighted)	132
Number of sites (weighted)	11,212

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Excluding grain-based desserts.

[b] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

[e] Excluding combination entrees.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-6. Number of choices offered at breakfast per day, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of milks			
None	0	0	0
1	38.2	46.3*	4.5
2	45.7	38.1*	77.0
3	10.2	8.9	15.4
4 or more	5.9	6.6	3.0
Mean	1.8	1.8*	2.2
Median	1.3	1.1	1.6
Number of fruits/100% juices[a]			
None	0.3	0.4	0.2
1	46.6	55.4*	9.9
2	26.2	18.0*	60.1
3	5.5	5.1	6.8
4	3.1	2.8	4.2
5 or more	18.4	18.3	18.8
Mean	2.6	2.4	3.1
Median	1.1	0.9	1.7
Number of whole fruits[a]			
None	28.4	34.5*	2.7
1	46.9	40.6*	73.0
2	11.0	10.4	13.6
3	2.1	2.4	0.8
4	1.4	1.5	1.1
5 or more	10.2	10.6	8.7
Mean	1.5	1.5	1.6
Median	0.5	0.4	0.6
Number of 100% juices[a]			
None	39.8	45.6*	15.9
1	41.8	37.6*	59.1
2	6.8	6.5	8.2
3	3.5	2.4*	8.1
4	0.6	0.7*	0
5 or more	7.5	7.2	8.8
Mean	1.1	1.0*	1.4
Median	0.2	0.1	0.6

Table A-6. Number of choices offered at breakfast per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of combination entrées			
None	86.6	89.0*	76.7
1	12.8	10.5*	22.3
2	0.6	0.5	1.1
3	0	0	0
4 or more	0	0	0
Mean	0.1	0.1*	0.2
Median	0	0	0
Number of separate grains/breads[b,d]			
None	17.9	17.6	18.9
1	60.8	65.3*	42.3
2	16.0	12.3*	31.5
3	3.4	2.8	5.8
4	0.3	0.2	0.5
5 or more	1.6	1.8	0.9
Mean	1.1	1.1	1.3
Median	0.5	0.5	0.7
Number of separate meat/meat alternates			
None	80.0	81.0	75.7
1	18.2	17.4	21.8
2	0.7	0.3	2.1
3 or more	1.1	1.3	0.5
Mean	0.2	0.2	0.3
Median	0	0	0
Number of desserts and other menu items[c]			
None	68.5	71.1*	57.6
1	27.3	25.6	34.5
2 or more	4.2	3.4	7.9
Mean	0.4	0.3*	0.5
Median	0	0	0
Number of accompaniments			
None	81.9	83.4	75.3
1	12.8	11.0*	20.0
2	4.5	4.6	4.3
3	0.9	0.9	0.5
4	0	0	0

Table A-6. Number of choices offered at breakfast per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
5 or more	0	0	0
Mean	0.2	0.2	0.3
Median	0	0	0
Number of sites (unweighted)	523	405	118
Number of sites (weighted)	43,795	35,321	8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Including vegetable and vegetable juice offered at breakfast.

[b] Excluding combination entrées.

[c] Excluding condiments.

[d] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-7. Number of choices offered at lunch per day, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of milks			
None	<0.1	<0.1	0
1	35.9	43.2*	0.6
2	42.9	38.8*	63.0
3	16.1	12.4*	34.2
4 or more	5.0	5.5	2.3
Mean	1.9	1.8*	2.4
Median	1.3	1.2	1.8
Number of fruits/100% juices			
None	2.3	2.5	1.7
1	52.5	53.1	49.6
2	23.5	23.6	23.0
3	4.6	3.3*	11.1
4	5.3	5.8*	2.7
5 or more	11.7	11.7	11.9
Mean	2.2	2.2	2.2
Median	0.9	0.9	1.0
Number of whole fruits			
None	8.7	9.9*	2.9
1	62.0	63.9*	52.7
2	10.7	8.5*	21.4
3	3.2	1.9*	9.4
4	5.3	5.8*	2.8
5 or more	10.1	10.0	10.8
Mean	1.8	1.8	2.1
Median	0.7	0.6	0.9
Number of 100% juices			
None	72.9	69.0*	91.8
1	22.7	26.2*	5.7
2	1.3	1.3	1.2
3	1.1	1.2	0.5
4	0.1	0.1	0
5 or more	2.0	2.2	0.8
Mean	0.4	0.4*	0.1
Median	0	0	0

Table A-7. Number of choices offered at lunch per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of vegetables/100% juices			
None	20.5	24.1*	2.8
1	44.3	47.9*	26.7
2	21.8	17.8*	41.6
3	5.9	4.0*	15.5
4	5.2	4.4	9.6
5 or more	2.2	1.9	3.8
Mean	1.4	1.2*	2.1
Median	0.7	0.5	1.5
Number of combination entrées			
None	14.8	15.4	11.9
1	63.7	64.7*	58.9
2	13.9	13.4	16.4
3	5.2	4.7	7.7
4 or more	2.4	1.8	5.1
Mean	1.2	1.1*	1.4
Median	0.6	0.5	0.6
Number of separate grains/breads[b,d]			
None	70.7	71.6	65.9
1	25.2	24.7	27.8
2	3.1	2.5	6.0
3	0.7	0.7	0.3
4	0.4	0.4	0
5 or more	0	0	0
Mean	0.3	0.3	0.4
Median	0	0	0
Number of separate meat/meat alternates			
None	61.1	63.1*	51.5
1	26.8	25.3*	34.0
2	9.6	9.7	8.7
3 or more	2.5	1.8*	5.8
Mean	0.5	0.5	0.7
Median	0	0	0

Table A-7. Number of choices offered at lunch per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of desserts and other menu items[c]			
None	87.7	87.5	88.5
1	11.4	11.5	10.8
2 or more	0.9	1.0	0.7
Mean	0.1	0.1	0.1
Median	0	0	0
Number of accompaniments			
None	39.6	42.6*	25.0
1	25.9	25.3	29.0
2	16.9	16.5	18.9
3	10.3	9.6*	13.4
4	3.4	2.8*	6.6
5 or more	3.9	3.2*	7.2
Mean	1.3	1.2*	1.8
Median	0.4	0.3	0.9
Number of sites (unweighted)	731	578	153
Number of sites (weighted)	67,285	55,926	11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[b] Excluding combination entrées.

[c] Excluding condiments.

[d] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-8. Number of choices offered at snack per day, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of milks			
None	89.9	90.0	84.3
1	5.5	5.5	7.4
2	4.5	4.4	8.3
3	0	0	0
4 or more	0.2	0.2	0
Mean	0.2	0.1	0.2
Median	0	0	0
Number of fruits/100% juices			
None	15.6	15.7	15.0
1	58.5	58.2	73.5
2	10.7	10.9*	0
3	2.8	2.8	0
4	0	0	0
5 or more	12.4	12.4	11.5
Mean	1.5	1.5	1.3
Median	0.6	0.6	0.5
Number of whole fruits			
None	86.7	86.6	90.9
1	12.6	12.7	9.1
2	0.2	0.2	0
3	0	0	0
4	0	0	0
5 or more	0.6	0.6	0
Mean	0.2	0.2	0.1
Median	0	0	0
Number of 100% juices			
None	28.5	28.7	21.6
1	46.7	46.3	66.9
2	10.1	10.3*	0
3	2.8	2.8	0
4	0	0	0
5 or more	11.9	11.9	11.5
Mean	1.3	1.3	1.2
Median	0.5	0.5	0.4

Table A-8. Number of choices offered at snack per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of vegetables/100% juices			
None	97.2	97.1*	100
1	2.8	2.9*	0
2	0	0	0
3	0	0	0
4	0	0	0
5 or more	0	0	0
Mean	<0.1	<0.1*	0
Median	0	0	0
Number of combination entrées			
None	99.4	99.4	100
1	0.6	0.6	0
2	0	0	0
3	0	0	0
4 or more	0	0	0
Mean	<0.1	<0.1	0
Median	0	0	0
Number of separate grains/breads[b,d]			
None	52.9	53.4	27.5
1	44.5	43.9	70.0
2	2.6	2.6	2.5
3	0	0	0
4	0	0	0
5 or more	0	0	0
Mean	0.5	0.5	0.7
Median	0	0	0.3
Number of separate meat/meat alternates			
None	85.4	85.5	84.3
1	14.6	14.5	15.7
2	0	0	0
3 or more	0	0	0
Mean	0.1	0.1	0.2
Median	0	0	0

Table A-8. Number of choices offered at snack per day, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of desserts and other menu items[c]			
None	52.4	52.1	71.7
1	47.3	47.7	25.8
2 or more	0.3	0.2	2.5
Mean	0.5	0.5	0.3
Median	0	0	0
Number of accompaniments			
None	96.5	96.4*	100
1	3.5	3.6*	0
2	0	0	0
3	0	0	0
4	0	0	0
5 or more	0	0	0
Mean	<0.1	<0.1*	0
Median	0	0	0
Number of sites (unweighted)	132	128	4
Number of sites (weighted)	11,212	10,968	244

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Including vegetable and vegetable juice offered at breakfast.

[b] Excluding combination entrées.

[c] Excluding condiments.

[d] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-9. Average number of items offered in the major food groups at breakfast per week, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of milks			
None	0	0	0
1	36.0	44.2*	1.7
2	46.9	40.0*	75.8
3	11.1	9.0	19.4
4 or more	6.0	6.7	3.1
Mean	1.9	1.8*	2.2
Median	1.3	1.1	1.6
Number of fruits/100% juices[a]			
None	0.2	0.3	0
1	6.5	8.1*	0
2	6.0	6.8*	2.4
3	8.1	8.6	6.1
4	15.2	16.8*	8.7
5 or more	63.9	59.4*	82.7
Mean	5.7	5.4*	6.9
Median	4.7	4.4	6.1
Number of whole fruits[a]			
None	14.6	17.9*	0.8
1	8.1	9.7*	1.4
2	16.9	17.6	13.6
3	12.9	12.6	14.0
4	15.3	10.9*	33.7
5 or more	32.3	31.3	36.6
Mean	3.7	3.6*	4.3
Median	2.8	2.4	3.6
Number of 100% juices[a]			
None	22.3	26.3*	5.7
1	22.4	22.5	22.1
2	23.1	20.2*	34.9
3	13.4	14.1	10.6
4	6.0	4.1	13.9
5 or more	12.7	12.7	12.7
Mean	2.0	1.9*	2.6
Median	1.2	1.1	1.6

Table A-9. Average number of items offered in the major food groups at breakfast per week, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of combination entrées			
None	64.5	68.1*	50.0
1	18.2	19.0	14.7
2	11.1	8.2*	22.8
3	4.6	3.5	9.4
4 or more	1.6	1.2	3.1
Mean	0.6	0.5*	1.0
Median	<0.1	0	<0.1
Number of separate grains/breads[b,d]			
None	0.9	0.6	1.9
1	5.0	5.1	4.6
2	16.4	15.7	19.1
3	20.5	18.1*	30.6
4	29.8	32.2	20.0
5 or more	27.4	28.3	23.9
Mean	3.8	3.8	3.5
Median	3.2	3.3	2.8
Number of separate meat/meat alternates			
None	58.5	61.4	46.5
1	25.8	25.6	26.7
2	9.5	6.6*	21.8
3 or more	6.1	6.4	5.0
Mean	0.6	0.6	0.9
Median	<0.1	0	0.1
Number of desserts and other menu items[c]			
None	27.5	30.4*	15.2
1	45.4	44.2	50.3
2 or more	27.1	25.4	34.5
Mean	1.1	1.0	1.3
Median	0.5	0.4	0.7
Number of accompaniments			
None	58.4	60.3	50.5
1	22.7	21.7	27.3
2	10.7	10.3	12.3
3	7.4	6.9	9.2

Table A-9. Average number of items offered in the major food groups at breakfast per week, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
4	0.6	0.5	0.8
5 or more	0.3	0.4	0
Mean	0.7	0.7	0.8
Median	<0.1	0	0
Number of sites (unweighted)	523	405	118
Number of sites (weighted)	43,795	35,321	8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Including vegetable and vegetable juice offered at breakfast.

[b] Excluding combination entrées.

[c] Excluding condiments.

[d] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-10. Average number of items offered in the major food groups at lunch per week, overall and by summer meal program type

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of milks			
None	<0.1	<0.1	0
1	25.6	30.7	0.2
2	51.5	49.9	59.3
3	17.9	13.7*	38.1
4 or more	5.0	5.6	2.3
Mean	2.0	1.9*	2.4
Median	1.5	1.4	1.8
Number of fruits/100% juices			
None	0	0	0
1	1.4	1.6	0.4
2	2.7	3.1*	0.5
3	9.1	9.2	8.6
4	21.2	23.4*	10.3
5 or more	65.6	62.7*	80.2
Mean	5.9	5.8	6.2
Median	4.7	4.6	5.1
Number of whole fruits			
None	0	0	0
1	2.4	2.8*	0.4
2	10.2	12.0*	1.4
3	14.9	15.7	10.5
4	24.9	26.7*	16.0
5 or more	47.7	42.8*	71.7
Mean	4.9	4.6*	5.9
Median	3.9	3.7	4.7
Number of 100% juices			
None	58.3	54.7*	76.2
1	15.0	14.1	19.7
2	8.6	9.9*	2.4
3	7.6	9.1*	0.3
4	6.5	7.8*	0
5 or more	3.9	4.4*	1.3
Mean	1.0	1.2*	0.3
Median	<0.1	0	0

Table A-10. Average number of items offered in the major food groups at lunch per week, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of vegetables/100% juices			
None	4.3	5.1*	0
1	10.4	12.5*	0
2	9.1	10.9*	0
3	13.9	16.5*	1.3
4	15.1	16.0	10.7
5 or more	47.2	39.0*	88.0
Mean	4.1	3.8*	5.4
Median	3.2	3.1	3.9
Number of combination entrées			
None	2.6	3.1*	0
1	5.9	7.0*	0.4
2	16.3	18.7*	4.2
3	19.7	19.1	22.5
4 or more	55.5	52.0*	73.0
Mean	4.1	3.8*	5.4
Median	3.2	3.1	3.9
Number of separate grains/breads[b,d]			
None	30.8	32.7*	21.2
1	39.6	39.9	38.2
2	19.0	15.5*	36.0
3	6.9	7.5*	3.8
4	2.3	2.6	0.8
5 or more	1.4	1.7	0
Mean	1.1	1.1	1.2
Median	0.5	0.4	0.8
Number of separate meat/meat alternates			
None	17.7	20.2*	5.0
1	27.6	29.2	19.6
2	27.3	25.0*	38.5
3 or more	27.5	25.6	36.9
Mean	1.9	1.8*	2.4
Median	1.2	1.0	1.7

Table A-10. Average number of items offered in the major food groups at lunch per week, overall and by summer meal program type (continued)

Menu items	Percentage of sites		
		Program type	
	All sites	SFSP	SSO
Number of desserts and other menu items[c]			
None	66.4	67.0	63.4
1	24.4	23.1	30.4
2 or more	9.3	9.9	6.2
Mean	0.5	0.5	0.4
Median	<0.1	0	0
Number of accompaniments			
None	18.7	22.0*	2.4
1	11.7	10.8	16.2
2	16.9	17.8	12.6
3	17.0	18.5*	10.1
4	12.3	11.4	17.0
5 or more	23.3	19.6*	41.8
Mean	2.9	2.7*	4.1
Median	2.2	2.0	3.5
Number of sites (unweighted)	731	578	153
Number of sites (weighted)	67,285	55,926	11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[b] Excluding combination entrées.

[c] Excluding condiments.

[d] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-11. Average number of items offered in the major food groups at snack per week

Menu items	Percentage of sites
	All sites
Number of milks	
None	76.2
1	14.2
2	8.8
3	0
4 or more	0.8
Mean	0.3
Median	<0.1
Number of fruits/100% juices	
None	2.6
1	14.8
2	24.4
3	28.3
4	14.2
5 or more	15.7
Mean	2.9
Median	2.3
Number of whole fruits	
None	66.6
1	17.9
2	7.7
3	4.4
4	1.7
5 or more	1.7
Mean	0.6
Median	<0.1
Number of 100% juices	
None	12.6
1	25.1
2	24.6
3	14.5
4	9.1
5 or more	14.0
Mean	2.2
Median	1.5

Table A-11. Average number of items offered in the major food groups at snack per week (continued)

Menu items	Percentage of sites
	All sites
Number of vegetables/100% juices	
None	88.4
1	10.4
2	1.3
3	0
4	0
5 or more	0
Mean	0.1
Median	0.0
Number of combination entrées	
None	97.5
1	2.5
2	0
3	0
4 or more	0
Mean	<0.1
Median	<0.1
Number of separate grains/breads[b,d]	
None	4.5
1	27.4
2	33.7
3	27.8
4	4.5
5 or more	2.2
Mean	2.1
Median	1.5
Number of separate meat/meat alternates	
None	55.5
1	36.3
2	7.4
3 or more	0.8
Mean	0.5
Median	<0.1

Table A-11. Average number of items offered in the major food groups at snack per week (continued)

Menu items	Percentage of sites
	All sites
Number of desserts and other menu items[c]	
None	4.7
1	37.7
2 or more	57.6
Mean	1.7
Median	1.2
Number of accompaniments	
None	87.0
1	10.1
2	2.9
3	0
4	0
5 or more	0
Mean	0.2
Median	<0.1
Number of sites (unweighted)	132
Number of sites (weighted)	11,212

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[b] Excluding combination entrées.

[c] Excluding condiments.

[d] All varieties of cold cereal, including sweetened and unsweetened cereals, were counted as one grain/bread choice.

Table A-12. Contribution of major food groups to calories and nutrients at breakfast, overall and by summer meal program type

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Calories			
Separate grains and breads[e]	29.7	30.7*	25.5
Milk	28.4	29.3*	24.5
Fruits/100% fruit juices[e]	19.9	18.9*	24
Desserts and other menu items	10.7	10.3	12.1
Combination entrees	5	4.4*	7.2
Separate meats and meat alternates[e]	3.8	3.6	4.5
Accompaniments	2.5	2.6	2.2
Vegetables[e]	0.1	0.2	<0.1
Protein			
Milk	59.9	61.4*	53.8
Separate grains and breads[e]	18.1	18.1	18.3
Separate meats and meat alternates[e]	6.1	5.9	7.2
Combination entrees	5.4	4.7*	8.6
Desserts and other menu items	5.4	5.2*	6.2
Fruits/100% fruit juices[e]	4.6	4.3*	5.7
Accompaniments	0.4	0.4*	0.2
Vegetables[e]	<0.1	0.1	<0.1
Vitamin A			
Milk	59.7	60.4	56.9
Separate grains and breads[e]	28.3	28.3	28.7
Desserts and other menu items	3.2	2.8	4.6
Fruits/100% fruit juices[e]	2.6	2.5*	3.3
Combination entrees	2.5	2.1*	4.1
Separate meats and meat alternates[e]	2.4	2.5	1.8
Accompaniments	1.2	1.4*	0.6
Vegetables[e]	0.1	0.1	0
Vitamin C			
Fruits/100% fruit juices[e]	79.9	79.2	82.9
Separate grains and breads[e]	13.7	14.4	10.9
Milk	3.1	3.2	2.7
Desserts and other menu items	1.5	1.6	1.2
Separate meats and meat alternates[e]	0.7	0.8*	0.2
Combination entrees	0.7	0.4	1.9

Table A-12. Contribution of major food groups to calories and nutrients at breakfast, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Vegetables[e]	0.3	0.3	<0.1
Accompaniments	0.1	0.1	0.1
Calcium			
Milk	72	72.8*	68.3
Separate grains and breads[e]	14.9	15	14.8
Fruits/100% fruit juices[e]	4	3.6*	5.9
Separate meats and meat alternates[e]	3.9	4	3.5
Combination entrees	2.9	2.4*	4.8
Desserts and other menu items	2	1.9*	2.5
Accompaniments	0.3	0.3	0.2
Vegetables[e]	<0.1	<0.1	<0.1
Iron			
Separate grains and breads[e]	63.9	65.3*	57.9
Desserts and other menu items	11.8	11.9	11.5
Fruits/100% fruit juices[e]	9	8.3*	11.8
Milk	6.9	6.7	7.9
Combination entrees	6.1	5.6	8.3
Separate meats and meat alternates[e]	2	1.9	2.4
Accompaniments	0.3	0.2	0.3
Vegetables[e]	0.1	0.1	<0.1
Total fat			
Separate grains and breads[e]	36.3	36.5	35.5
Milk	24.6	27*	14.5
Desserts and other menu items	16	15.1*	19.6
Combination entrees	8.8	7.5*	14.1
Separate meats and meat alternates[e]	8.1	7.4	11.2
Fruits/100% fruit juices[e]	3.2	3.1	3.5
Accompaniments	2.9	3.3*	1.6
Vegetables[e]	0.2	0.2	0.1
Saturated fat			
Milk	41.4	44.1*	30
Separate grains and breads[e]	24.7	24.3	26.4
Desserts and other menu items	11.9	11.1*	15.2
Separate meats and meat alternates[e]	8.7	8.2	10.9
Combination entrees	8.4	7.1*	13.9

Table A-12. Contribution of major food groups to calories and nutrients at breakfast, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Accompaniments	3.1	3.5*	1.6
Fruits/100% fruit juices[e]	1.6	1.5	1.9
Vegetables[e]	0.1	0.2	0.1
Sodium			
Separate grains and breads[e]	38.9	40*	34.5
Milk	34.5	34.9	33
Desserts and other menu items	11.2	10.9	12.5
Combination entrees	7.4	6.4*	11.5
Separate meats and meat alternates[e]	5.4	5.3	5.8
Accompaniments	1.3	1.4	1.2
Fruits/100% fruit juices[e]	1.2	1.1*	1.4
Vegetables[e]	0.1	0.1	<0.1
Dietary fiber			
Fruits/100% fruit juices[e]	41.3	39.8*	47.6
Separate grains and breads[e]	41	43*	32.7
Desserts and other menu items	10.3	10.7	8.7
Combination entrees	5.5	5	7.5
Separate meats and meat alternates[e]	1	0.7*	2.7
Accompaniments	0.4	0.4	0.6
Milk	0.2	0.2	0.1
Vegetables[e]	0.2	0.2	0.1
Number of sites (unweighted)	523	405	118
Number of sites (weighted)	43,795	35,321	8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[e] Excluding combination entrees.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-13. Top food sources of calories and nutrients in breakfast, overall and by summer meal program type

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Calories					
Low-fat milk, unflavored	16.3	Low-fat milk, unflavored	17.7	Fat-free milk, flavored	11.7
Fat-free milk, flavored	8.3	Cold cereal, sweetened[b]	8.6	Low-fat milk, unflavored	10.4
Cold cereal, sweetened[b]	8.2	100% fruit juice	7.6	100% fruit juice	9.3
100% fruit juices	8.0	Fat-free milk, flavored	7.4	Cold cereal, sweetened[b]	6.6
Muffins (excluding English muffins), sweet/quick breads	6.8	Muffins (excluding English muffins), sweet/quick breads	7.0	Fresh fruits	6.0
Fresh fruits	6.0	Fresh fruits	6.1	Muffins (excluding English muffins), sweet/quick breads	5.9
Cookies	4.1	Cookies	4.3	Cakes	5.7
Cakes	3.9	Cold cereal, unsweetened	3.7	Canned fruits, sweetened	4.5
Cold cereal, unsweetened	3.6	Cakes	3.5	Pancakes, waffles, French toast	3.8
Canned fruits, sweetened	3.5	Granola and breakfast bars	3.5	Breads, rolls, bagels, and other plain breads	3.2
Protein					
Low-fat milk, unflavored	37.5	Low-fat milk, unflavored	40.0	Low-fat milk, unflavored	26.9
Fat-free milk, flavored	13.3	Fat-free milk, flavored	11.6	Fat-free milk, flavored	20.4
Fat-free milk, unflavored	6.8	Fat-free milk, unflavored	6.9	Fat-free milk, unflavored	6.1
Cold cereal, sweetened[b]	3.8	Cold cereal, sweetened[b]	3.8	Cold cereal, sweetened[b]	3.9
Muffins (excluding English muffins), sweet/quick breads	3.3	Muffins (excluding English muffins), sweet/quick breads	3.3	Pancakes, waffles, French toast	3.8
Breads, rolls, bagels, and other plain breads	3.1	Breads, rolls, bagels, and other plain breads	3.0	Breads, rolls, bagels, and other plain breads	3.6

Table A-13. Top food sources of calories and nutrients in breakfast, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Pancakes, waffles, French toast	3.0	Pancakes, waffles, French toast	2.8	Breakfast sandwich	3.4
Cakes	2.2	Cold cereal, unsweetened	2.2	Muffins (excluding English muffins), sweet/quick breads	3.4
Cold cereal, unsweetened	2.1	Cookies	2.2	Cakes	3.3
Cookies	2.1	Cheese	2.0	Fresh fruits	2.2
Vitamin A					
Low-fat milk, unflavored	35.3	Low-fat milk, unflavored	37.3	Low-fat milk, unflavored	26.6
Fat-free milk, flavored	15.1	Cold cereal, sweetened[b]	14.4	Fat-free milk, flavored	22.2
Cold cereal, sweetened[b]	14.4	Fat-free milk, flavored	13.4	Cold cereal, sweetened[b]	14.6
Cold cereal, unsweetened	7.2	Fat-free milk, unflavored	6.9	Cold cereal, unsweetened	8.2
Fat-free milk, unflavored	7.1	Cold cereal, unsweetened	6.9	Fat-free milk, unflavored	7.8
Granola and breakfast bars	2.8	Granola and breakfast bars	3.3	Fruit cobblers and crisps	2.7
Fruits cobblers and crisps	2.2	Fruit cobblers and crisps	2.1	Pancakes, waffles, French toast	2.5
Pancakes, waffles, French toast	1.9	Pancakes, waffles, French toast	1.8	Muffins (excluding English muffins), sweet/quick breads	2.5
Muffins (excluding English muffins), sweet/quick breads	1.5	Condiments and toppings	1.3	Cakes	1.9
Fresh fruits	1.2	Muffins (excluding English muffins), sweet/quick breads	1.3	Fresh fruits	1.4
Vitamin C					
100% fruit juices	44.6	100% fruit juice	42.4	100% fruit juice	54.1
Fresh fruits	23.7	Fresh fruits	24.8	Fresh fruits	19.2

Table A-13. Top food sources of calories and nutrients in breakfast, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Cold cereal, sweetened[b]	7.6	Cold cereal, sweetened[b]	7.9	Cold cereal, sweetened[b]	6.7
Canned fruits, unsweetened	6.3	Canned fruits, unsweetened	7.2	Canned fruits, sweetened	4.7
Canned fruits, sweetened	6.2	Canned fruits, sweetened	6.5	Cold cereal, unsweetened	3.4
Cold cereal, unsweetened	4.1	Cold cereal, unsweetened	4.3	Canned fruits, unsweetened	2.9
Fat-free milk, flavored	2.8	Fat-free milk, flavored	2.8	Fat-free milk, flavored	2.7
Frozen fruits	1.7	Frozen fruits	1.5	Frozen fruits	2.7
Granola and breakfast bars	1.0	Granola and breakfast bars	1.1	Parfaits	1.5
Fruits cobblers and crisps	0.8	Fruit cobblers and crisps	0.8	Fruit cobblers and crisps	0.8
Calcium					
Low-fat milk, unflavored	44.2	Low-fat milk, unflavored	46.7	Low-fat milk, unflavored	34.0
Fat-free milk, flavored	16.4	Fat-free milk, flavored	14.3	Fat-free milk, flavored	25.4
Fat-free milk, unflavored	8.2	Fat-free milk, unflavored	8.2	Fat-free milk, unflavored	8.4
Cold cereal, sweetened[b]	4.7	Cold cereal, sweetened[b]	4.6	Cold cereal, sweetened[b]	5.1
Cold cereal, unsweetened	2.3	Cold cereal, unsweetened	2.3	100% fruit juice	3.1
100% fruit juices	2.2	Granola and breakfast bars	2.1	Cold cereal, unsweetened	2.5
Muffins (excluding English muffins), sweet/quick breads	2.1	Muffins (excluding English muffins), sweet/quick breads	2.1	Breakfast sandwich	2.2
Cheese	1.9	100% fruit juice	2.0	Muffins (excluding English muffins), sweet/quick breads	2.1
Granola and breakfast bars	1.8	Cheese	1.9	Pancakes, waffles, French toast	2.0
Pancakes, waffles, French toast	1.7	Yogurt	1.7	Cheese	2.0

Table A-13. Top food sources of calories and nutrients in breakfast, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Iron					
Cold cereal, sweetened[b]	24.3	Cold cereal, sweetened[b]	24.4	Cold cereal, sweetened[b]	24.2
Cold cereal, unsweetened	13.8	Cold cereal, unsweetened	13.4	Cold cereal, unsweetened	15.4
Muffins (excluding English muffins), sweet/quick breads	7.6	Muffins (excluding English muffins), sweet/quick breads	8.3	Fat-free milk, flavored	6.5
Breads, rolls, bagels, and other plain breads	5.9	Breads, rolls, bagels, and other plain breads	6.2	Pancakes, waffles, French toast	5.4
Pancakes, waffles, French toast	5.0	Granola and breakfast bars	5.6	Cakes	5.0
Granola and breakfast bars	4.8	Pancakes, waffles, French toast	4.8	Muffins (excluding English muffins), sweet/quick breads	4.7
Fat-free milk, flavored	4.6	Cookies	4.4	Breads, rolls, bagels, and other plain breads	4.7
Cookies	4.2	Fat-free milk, flavored	4.2	Cookies	3.6
Cakes	4.2	Cakes	4.0	100% fruit juice	3.5
Fruits cobblers and crisps	3.3	Fruit cobblers and crisps	3.4	Canned fruits, sweetened	3.4
Total fat					
Low-fat milk, unflavored	22.0	Low-fat milk, unflavored	23.9	Low-fat milk, unflavored	14.0
Muffins (excluding English muffins), sweet/quick breads	10.8	Muffins (excluding English muffins), sweet/quick breads	10.6	Muffins (excluding English muffins), sweet/quick breads	11.5
Cold cereal, sweetened[b]	7.6	Cold cereal, sweetened[b]	8.0	Cakes	11.3
Cakes	6.6	Cookies	6.5	Pancakes, waffles, French toast	8.0
Cookies	6.3	Cakes	5.4	Cold cereal, sweetenedb	6.2

Table A-13. Top food sources of calories and nutrients in breakfast, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Pancakes, waffles, French toast	5.9	Pancakes, waffles, French toast	5.4	Breakfast sandwich	5.3
Granola and breakfast bars	4.2	Granola and breakfast bars	4.8	Cookies	5.1
Breakfast sandwich	3.2	Cold cereal, unsweetened	3.2	Nuts, nut butters and seeds	3.8
Fruits cobblers and crisps	3.0	Condiments and toppings	3.2	Fruit cobblers and crisps	3.2
Cold cereal, unsweetened	2.9	Fruit cobblers and crisps	2.9	Breads, rolls, bagels, and other plain breads	2.8
Saturated fat					
Low-fat milk, unflavored	37.6	Low-fat milk, unflavored	39.7	Low-fat milk, unflavored	29.1
Muffins (excluding English muffins), sweet/quick breads	7.8	Muffins (excluding English muffins), sweet/quick breads	7.5	Cakes	9.7
Cakes	5.9	Cakes	5.0	Muffins (excluding English muffins), sweet/quick breads	8.8
Pancakes, waffles, French toast	4.7	Pancakes, waffles, French toast	4.3	Pancakes, waffles, French toast	6.5
Cold cereal, sweetened[b]	4.0	Cold cereal, sweetened[b]	3.9	Breakfast sandwich	5.2
Cookies	3.6	Granola and breakfast bars	3.9	Cold cereal, sweetened[b]	4.5
Granola and breakfast bars	3.5	Cookies	3.7	Cheese	3.5
Cheese	3.5	Condiments and toppings	3.4	Cookies	2.9
Condiments and toppings	3.1	Cheese	3.4	Nuts, nut butters and seeds	2.6
Breakfast sandwich	3.1	Breakfast sandwich	2.5	Fruit cobblers and crisps	2.5

Table A-13. Top food sources of calories and nutrients in breakfast, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Sodium					
Low-fat milk, unflavored	17.9	Low-fat milk, unflavored	19.5	Fat-free milk, flavored	19.3
Fat-free milk, flavored	12.4	Cold cereal, sweetened[b]	12.2	Low-fat milk, unflavored	11.0
Cold cereal, sweetened[b]	11.5	Fat-free milk, flavored	10.7	Cold cereal, sweetened[b]	8.5
Muffins (excluding English muffins), sweet/quick breads	6.9	Muffins (excluding English muffins), sweet/quick breads	7.1	Muffins (excluding English muffins), sweet/quick breads	6.2
Pancakes, waffles, French toast	5.0	Cold cereal, unsweetened	4.9	Pancakes, waffles, French toast	5.9
Cold cereal, unsweetened	4.9	Breads, rolls, bagels, and other plain breads	4.9	Cakes	5.7
Breads, rolls, bagels, and other plain breads	4.9	Pancakes, waffles, French toast	4.8	Breads, rolls, bagels, and other plain breads	5.2
Cookies	4.5	Cookies	4.6	Cold cereal, unsweetened	5.1
Cakes	4.0	Cakes	3.5	Breakfast sandwich	4.8
Fat-free milk, unflavored	3.0	Granola and breakfast bars	3.5	Cookies	3.7
Dietary fiber					
Fresh fruits	20.4	Fresh fruits	20.0	Fresh fruits	22.1
Cold cereal, sweetened[b]	15.1	Cold cereal, sweetened[b]	15.9	Cold cereal, sweetened[b]	11.7
Canned fruits, sweetened	8.2	Canned fruits, sweetened	7.4	Canned fruits, sweetened	11.6
100% fruit juices	6.8	100% fruit juice	7.2	Canned fruits, unsweetened	5.5
Cold cereal, unsweetened	6.2	Cold cereal, unsweetened	6.4	Cold cereal, unsweetened	5.4
Canned fruits, unsweetened	5.9	Canned fruits, unsweetened	5.9	Breads, rolls, bagels, and other plain breads	5.0

Table A-13. Top food sources of calories and nutrients in breakfast, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Muffins (excluding English muffins), sweet/quick breads	5.3	Muffins (excluding English muffins), sweet/quick breads	5.7	100% fruit juice	5.0
Breads, rolls, bagels, and other plain breads	5.2	Breads, rolls, bagels, and other plain breads	5.3	Pancakes, waffles, French toast	4.5
Cookies	4.4	Cookies	4.9	Cakes	4.3
Pancakes, waffles, French toast	4.1	Pancakes, waffles, French toast	4.0	Muffins (excluding English muffins), sweet/quick breads	3.7
Number of sites (unweighted)	523		405		118
Number of sites (weighted)	43,795		35,321		8,475

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[b] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

[c] Includes beans and peas credited as meat alternates in the site menu analysis.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-14. Contribution of major food groups to calories and nutrients at lunch, overall and by summer meal program type

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Calories			
Combination entrees	39.4	39.9*	37
Milk	19.9	20.2*	18.3
Fruits/100% fruit juices[e]	12.2	12.4*	11.1
Accompaniments	7.9	7.6	9.4
Separate meats and meat alternates[e]	7.6	7.7	6.9
Vegetables[e]	5.9	5	10.7
Separate grains and breads[e]	5.2	5.2	5.3
Desserts and other menu items	1.9	2*	1.3
Protein			
Combination entrees	47.5	48	45.4
Milk	29.7	30.1*	27.4
Separate meats and meat alternates[e]	11.2	11.3	10.7
Vegetables[e]	4.6	3.7	8.8
Separate grains and breads[e]	3.1	3	3.7
Fruits/100% fruit juices[e]	2.1	2.1	2.1
Accompaniments	1.1	1.1*	1.5
Desserts and other menu items	0.6	0.6	0.5
Vitamin A			
Milk	51	52.2*	45.4
Vegetables[e]	27.1	25.1*	37
Combination entrees	13.2	13.8*	10.2
Fruits/100% fruit juices[e]	3.4	3.3	3.5
Separate meats and meat alternates[e]	3.2	3.6*	1.7
Accompaniments	1.4	1.4	1.7
Separate grains and breads[e]	0.4	0.4	0.4
Desserts and other menu items	0.2	0.2	0.1
Vitamin C			
Fruits/100% fruit juices[e]	57.9	60.8*	43.8
Vegetables[e]	28.2	25.6*	40.8
Combination entrees	5	4.9	5.5
Milk	4.6	4.4*	5.5
Desserts and other menu items	1.6	1.7	1.1
Accompaniments	1.5	1.4*	2.3

Table A-14. Contribution of major food groups to calories and nutrients at lunch, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Separate meats and meat alternates[e]	0.8	0.8	0.6
Separate grains and breads[e]	0.4	0.4	0.3
Calcium			
Milk	55.3	55.4	55.1
Combination entrees	29.3	29.8*	27
Separate meats and meat alternates[e]	5.4	5.8*	3.4
Vegetables[e]	3.6	3.1*	6.5
Fruits/100% fruit juices[e]	2.5	2.5	2.4
Separate grains and breads[e]	2.3	2*	3.7
Accompaniments	1.2	1.1*	1.5
Desserts and other menu items	0.4	0.4	0.3
Iron			
Combination entrees	52.9	54*	47.1
Vegetables[e]	10.2	8.8	17.1
Fruits/100% fruit juices[e]	8.4	8.5*	7.7
Milk	8.2	8.3*	7.7
Separate grains and breads[e]	7.9	7.9	7.5
Separate meats and meat alternates[e]	7.6	7.4	8.5
Accompaniments	2.6	2.5	2.9
Desserts and other menu items	2.3	2.4*	1.4
Total fat			
Combination entrees	50.6	50.9	49.4
Accompaniments	17.1	16.5	20
Separate meats and meat alternates[e]	12.6	13.1*	10.4
Milk	7.9	8.4*	5.4
Separate grains and breads[e]	4.6	4.6	4.2
Vegetables[e]	4.4	3.5*	8.6
Desserts and other menu items	1.7	1.8*	1
Fruits/100% fruit juices[e]	1.1	1.1*	0.9

Table A-14. Contribution of major food groups to calories and nutrients at lunch, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Saturated fat			
Combination entrees	52.9	52.8	53.4
Milk	15.2	15.9*	11.7
Separate meats and meat alternates[e]	12.9	13.3*	10.7
Accompaniments	11.1	10.7	13
Separate grains and breads[e]	3.3	3.2	3.6
Vegetables[e]	3	2.3*	6.3
Desserts and other menu items	1.1	1.2*	0.7
Fruits/100% fruit juices[e]	0.5	0.5*	0.5
Sodium			
Combination entrees	48.6	50.3*	40.2
Milk	14.5	14.6*	13.6
Accompaniments	12.6	11.7*	17.1
Separate meats and meat alternates[e]	9.1	9.3	8.2
Vegetables[e]	8.2	7*	14.5
Separate grains and breads[e]	5.3	5.3	5.4
Desserts and other menu items	1.2	1.3*	0.6
Fruits/100% fruit juices[e]	0.5	0.5*	0.4
Dietary fiber			
Combination entrees	32.5	33.5*	27.5
Fruits/100% fruit juices[e]	29.4	30.4*	24.3
Vegetables[e]	23.5	21.2	34.9
Separate grains and breads[e]	5.5	5.6	4.6
Separate meats and meat alternates[e]	4.8	4.5	6
Accompaniments	2.1	2.1	2
Desserts and other menu items	1.4	1.6*	0.8
Milk	0.9	1*	<0.1

Table A-14. Contribution of major food groups to calories and nutrients at lunch, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Number of sites (unweighted)	731	578	153
Number of sites (weighted)	67,285	55,926	11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[e] Excluding combination entrees.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Calories					
Sandwich with plain meat, poultry, or fish	13.7	Sandwich with plain meat, poultry, or fish	15.5	Fat-free milk, flavored	10.4
Low-fat milk, unflavored	8.8	Low-fat milk, unflavored	9.3	Low-fat milk, unflavored	6.5
Fat-free milk, flavored	8.3	Fat-free milk, flavored	7.9	Salad dressing	6.1
Fresh fruits	4.5	Fresh fruits	4.6	Sandwich with plain meat, poultry, or fish	4.8
Peanut butter sandwich	4.3	Peanut butter sandwich	4.4	Starchy vegetables, cooked	4.2
Salad dressing	4.2	Condiments and toppings	3.8	Cheeseburger, similar beef/pork sandwiches	3.8
Condiments and toppings	3.7	Salad dressing	3.8	Canned fruits, sweetened	3.7
Mexican-style entrées	3.3	Mexican-style entrées	3.3	Fresh fruits	3.7
Hot dogs, corn dogs, similar sausage sandwiches	2.8	100% fruit juice	2.8	Hamburger, similar beef/pork sandwiches	3.5
Canned fruits, sweetened	2.8	Hot dogs, corn dogs, similar sausage sandwiches	2.7	Peanut butter sandwich	3.4
Protein					
Sandwich with plain meat, poultry, or fish	18.8	Sandwich with plain meat, poultry, or fish	21.0	Fat-free milk, flavored	12.4
Low-fat milk, unflavored	15.4	Low-fat milk, unflavored	16.1	Low-fat milk, unflavored	12.0
Fat-free milk, flavored	9.9	Fat-free milk, flavored	9.4	Sandwich with plain meat, poultry, or fish	7.5

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Peanut butter sandwich	3.6	Peanut butter sandwich	3.8	Cheeseburger, similar beef/pork sandwiches	5.1
Mexican-style entrées	3.6	Mexican-style entrées	3.6	Hamburger, similar beef/pork sandwiches	4.7
Chicken and turkey, breaded or fried	3.2	Cheese	3.2	Chicken and turkey, breaded or fried	4.3
Cheese	2.9	Chicken and turkey, breaded or fried	3.0	Pizza without meat	4.0
Sandwich with breaded/fried meat, poultry, or fish	2.9	Hot dogs, corn dogs, similar sausage sandwiches	2.8	Sandwich with breaded/fried meat, poultry, or fish	3.9
Hot dogs, corn dogs, similar sausage sandwiches	2.8	Sandwich with breaded/fried meat, poultry, or fish	2.6	Mixtures with grain, meat/meat alternate, and/or vegetables	3.5
Pizza without meat	2.8	Pizza without meat	2.6	Mexican-style entrées	3.5
Vitamin A					
Low-fat milk, unflavored	25.6	Low-fat milk, unflavored	26.9	Fat-free milk, flavored	21.1
Fat-free milk, flavored	17.9	Fat-free milk, flavored	17.3	Low-fat milk, unflavored	19.1
Red and orange vegetables, raw	17.1	Red and orange vegetables, raw	16.7	Red and orange vegetables, raw	18.9
Fresh fruits	1.6	Fresh fruits	1.7	Fresh fruits	1.6
Vegetable mixtures, raw	1.6	Dark green vegetables, raw	1.6	Vegetable mixtures, cooked	1.5
Fresh fruits	1.6	Fresh fruits	1.7	Fresh fruits	1.6
Vegetable mixtures, raw	1.6	Dark green vegetables, raw	1.6	Vegetable mixtures, cooked	1.5

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Vitamin C					
Fresh fruits	26.1	Fresh fruits	26.4	Fresh fruits	24.2
100% fruit juices	19.4	100% fruit juice	22.5	Red and orange vegetables, raw	9.1
Red and orange vegetables, raw	8.9	Red and orange vegetables, raw	8.9	Starchy vegetables, cooked	9.0
Canned fruits, unsweetened	6.2	Canned fruits, unsweetened	6.5	Canned fruits, sweetened	7.3
Canned fruits, sweetened	5.5	Canned fruits, sweetened	5.1	Dark green vegetables, cooked	7.3
Starchy vegetables, cooked	5.2	Starchy vegetables, cooked	4.4	Fat-free milk, flavored	5.5
Fat-free milk, flavored	4.3	Fat-free milk, flavored	4.1	Dark green vegetables, raw	5.0
Dark green vegetables, raw	3.9	Dark green vegetables, raw	3.7	Frozen fruits	4.8
Dark green vegetables, cooked	2.8	Other vegetables, raw	2.9	Canned fruits, unsweetened	4.7
Frozen fruits	2.8	Frozen fruits	2.4	100% fruit juice	4.0
Calcium					
Low-fat milk, unflavored	28.8	Low-fat milk, unflavored	29.7	Fat-free milk, flavored	25.0
Fat-free milk, flavored	18.7	Fat-free milk, flavored	17.4	Low-fat milk, unflavored	24.2
Sandwich with plain meat, poultry, or fish	12.8	Sandwich with plain meat, poultry, or fish	14.5	Fat-free milk, unflavored	5.6
Fat-free milk, unflavored	4.7	Fat-free milk, unflavored	4.5	Sandwich with plain meat, poultry, or fish	4.6
Cheese	3.8	Cheese	4.2	Cheeseburger, similar beef/pork sandwiches	3.7
Mexican-style entrées	2.2	Low-fat milk, flavored	2.2	Pizza without meat	2.9

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Pizza without meat	2.0	Mexican-style entrées	2.2	Breads, rolls, bagels, and other plain breads	2.7
Peanut butter sandwich	1.9	Peanut butter sandwich	1.9	Mexican-style entrées	2.3
Low-fat milk, flavored	1.8	Pizza without meat	1.8	Peanut butter sandwich	2.1
Cheeseburger, similar beef/pork sandwiches	1.6	Hot dogs, corn dogs, similar sausage sandwiches	1.3	Hamburger, similar beef/pork sandwiches	2.1
Iron					
Sandwich with plain meat, poultry, or fish	19.5	Sandwich with plain meat, poultry, or fish	22.1	Sandwich with plain meat, poultry, or fish	6.8
Fat-free milk, flavored	5.8	Peanut butter sandwich	5.6	Fat-free milk, flavored	6.7
Peanut butter sandwich	5.4	Fat-free milk, flavored	5.6	Cheeseburger, similar beef/pork sandwiches	5.0
Hot dogs, corn dogs, similar sausage sandwiches	3.6	Mexican-style entrées	3.6	Hamburger, similar beef/pork sandwiches	4.9
Mexican-style entrées	3.6	Hot dogs, corn dogs, similar sausage sandwiches	3.6	Pizza without meat	4.6
Pizza without meat	3.5	Crackers, croutons, pretzels	3.3	Cooked beans and peas	4.6
Sandwich with breaded/fried meat, poultry, or fish	3.1	Pizza without meat	3.2	Peanut butter sandwich	4.4
Chicken and turkey, breaded or fried	3.1	Sandwich with breaded/fried meat, poultry, or fish	3.0	Breads, rolls, bagels, and other plain breads	3.9

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Crackers, croutons, or pretzels	2.9	Chicken and turkey, breaded or fried	2.9	Sandwich with breaded/fried meat, poultry, or fish	3.9
Hamburger, similar beef/pork sandwiches	2.8	Fresh fruits	2.8	Hot dogs, corn dogs, similar sausage sandwiches	3.7
Total fat					
Sandwich with plain meat, poultry, or fish	16.4	Sandwich with plain meat, poultry, or fish	18.7	Salad dressing	15.0
Salad dressing	9.1	Condiments and toppings	8.4	Cheeseburger, similar beef/pork sandwiches	5.4
Condiments and toppings	7.8	Salad dressing	7.9	Low-fat milk, unflavored	5.2
Low-fat milk, unflavored	6.5	Low-fat milk, unflavored	6.8	Sandwich with plain meat, poultry, or fish	5.2
Peanut butter sandwich	5.6	Peanut butter sandwich	5.8	Chicken and turkey, breaded or fried	4.9
Mexican-style entrées	4.8	Mexican-style entrées	4.8	Hot dogs, corn dogs, similar sausage sandwiches	4.9
Hot dogs, corn dogs, similar sausage sandwiches	4.1	Hot dogs, corn dogs, similar sausage sandwiches	3.9	Mexican-style entrées	4.8
Chicken and turkey, breaded or fried	3.7	Cheese	3.8	Condiments and toppings	4.8
Cheese	3.4	Chicken and turkey, breaded or fried	3.4	Starchy vegetables, cooked	4.5
Pizza without meat	3.1	Pizza without meat	2.8	Sandwich with breaded/fried meat, poultry, or fish	4.5

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Saturated fat					
Sandwich with plain meat, poultry, or fish	18.7	Sandwich with plain meat, poultry, or fish	21.1	Low-fat milk, unflavored	11.3
Low-fat milk, unflavored	13.0	Low-fat milk, unflavored	13.3	Salad dressing	9.3
Salad dressing	5.7	Cheese	6.0	Sandwich with plain meat, poultry, or fish	6.7
Cheese	5.5	Condiments and toppings	5.6	Cheeseburger, similar beef/pork sandwiches	6.4
Condiments and toppings	5.3	Salad dressing	4.9	Pizza without meat	5.4
Mexican-style entrées	4.8	Mexican-style entrées	4.8	Hot dogs, corn dogs, similar sausage sandwiches	5.1
Hot dogs, corn dogs, similar sausage sandwiches	4.2	Peanut butter sandwich	4.2	Mexican-style entrées	5.1
Peanut butter sandwich	4.0	Hot dogs, corn dogs, similar sausage sandwiches	4.0	Hamburger, similar beef/pork sandwiches	4.9
Pizza without meat	3.5	Pizza without meat	3.2	Chicken and turkey, breaded or fried	4.5
Chicken and turkey, breaded or fried	3.1	Chicken and turkey, breaded or fried	2.8	Mixtures with grain, meat/meat alternate, and/or vegetables	4.3
Sodium					
Sandwich with plain meat, poultry, or fish	21.2	Sandwich with plain meat, poultry, or fish	24.0	Salad dressing	9.0
Fat-free milk, flavored	7.4	Fat-free milk, flavored	7.0	Fat-free milk, flavored	9.0
Condiments and toppings	6.6	Condiments and toppings	6.3	Condiments and toppings	8.0

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Salad dressing	5.9	Low-fat milk, unflavored	5.7	Sandwich with plain meat, poultry, or fish	7.4
Low-fat milk, unflavored	5.4	Salad dressing	5.2	Starchy vegetables, cooked	4.2
Hot dogs, corn dogs, similar sausage sandwiches	3.6	Hot dogs, corn dogs, similar sausage sandwiches	3.5	Hot dogs, corn dogs, similar sausage sandwiches	3.9
Mexican-style entrées	3.3	Mexican-style entrées	3.3	Cheeseburger, similar beef/pork sandwiches	3.8
Peanut butter sandwich	3.1	Peanut butter sandwich	3.2	Low-fat milk, unflavored	3.7
Sandwich with breaded/fried meat, poultry, or fish	2.8	Cheese	3.1	Pizza without meat	3.4
Cheese	2.7	Sandwich with breaded/fried meat, poultry, or fish	2.7	Sandwich with breaded/fried meat, poultry, or fish	3.4
Dietary fiber					
Fresh fruits	16.3	Fresh fruits	17.2	Fresh fruits	12.1
Sandwich with plain meat, poultry, or fish	10.6	Sandwich with plain meat, poultry, or fish	12.0	Starchy vegetables, cooked	7.5
Red and orange vegetables, raw	6.9	Red and orange vegetables, raw	7.0	Canned fruits, sweetened	7.1
Canned fruits, sweetened	6.5	Canned fruits, sweetened	6.3	Cooked beans and peas	6.7
Peanut butter sandwich	4.6	Peanut butter sandwich	4.8	Red and orange vegetables, raw	6.4
Starchy vegetables, cooked	4.4	Starchy vegetables, cooked	3.8	Peanut butter sandwich	3.4
Canned fruits, unsweetened	3.5	Canned fruits, unsweetened	3.7	Meat substitutes, hummus, legumes	3.3

Table A-15. Top food sources of calories and nutrients in lunch, overall and by summer meal program type (continued)

All sites		SFSP		SSO	
Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient	Top 10 food sources	Mean percent contribution to nutrient
Cooked beans and peas	2.9	Mexican-style entrées	2.9	Sandwich with plain meat, poultry, or fish	3.3
Mexican-style entrées	2.8	Pizza without meat	2.5	Pizza without meat	3.2
Pizza without meat	2.6	Crackers, croutons, pretzels	2.3	Dark green vegetables, cooked	3.2
Number of sites (unweighted)	731		578		153
Number of sites (weighted)	67,285		55,926		11,359

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-16. Contribution of major food groups to calories and nutrients at snack, overall and by summer meal program type

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Calories			
Fruits/100% fruit juices[e]	34.8	34.9	30.8
Desserts and other menu items	27.1	27.4	16.5
Separate grains and breads[e]	25.5	25.2	38.6
Separate meats and meat alternates[e]	6.3	6.3	7.6
Milk	4.5	4.4	6.5
Accompaniments	1.1	1.1*	0
Combination entrees	0.4	0.4	0
Vegetables[e]	0.3	0.3*	0
Protein			
Desserts and other menu items	34.0	34.4	16.1
Separate grains and breads[e]	32.6	32.2	51.7
Fruits/100% fruit juices[e]	13.1	13.1	9.4
Separate meats and meat alternates[e]	11.4	11.4	11.6
Milk	7.8	7.7	11.2
Vegetables[e]	0.5	0.5*	0
Combination entrees	0.4	0.4	0
Accompaniments	0.3	0.3*	0
Vitamin A			
Separate grains and breads[e]	33.1	32.5	52.1
Fruits/100% fruit juices[e]	28.5	28.9	12.6
Separate meats and meat alternates[e]	16.3	16.4	12.7
Milk	11.7	11.7	13.7
Desserts and other menu items	6.4	6.3	9.1
Vegetables[e]	3.1	3.2*	0
Accompaniments	0.7	0.7	0
Combination entrees	0.2	0.2	0
Vitamin C			
Fruits/100% fruit juices[e]	86.7	86.8	84.4
Separate grains and breads[e]	6.2	6.3	3.2
Vegetables[e]	2.4	2.4*	0
Milk	1.9	1.8	7.4
Separate meats and meat alternates[e]	1.5	1.4	2.4
Desserts and other menu items	1.0	1.0	2.6

Table A-16. Contribution of major food groups to calories and nutrients at snack, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Accompaniments	0.3	0.3*	0
Combination entrees	0	0	0
Calcium			
Fruits/100% fruit juices[e]	31.1	31.2	26.5
Separate grains and breads[e]	24.2	23.9	36.7
Desserts and other menu items	22.4	22.6	10.7
Separate meats and meat alternates[e]	11.5	11.5	13.1
Milk	9.1	9	13
Vegetables[e]	1.1	1.1*	0
Accompaniments	0.4	0.4*	0
Combination entrees	0.3	0.3	0
Iron			
Separate grains and breads[e]	36.9	36.5	56.2
Desserts and other menu items	36.8	37.1	23.3
Fruits/100% fruit juices[e]	20.4	20.6*	14
Separate meats and meat alternates[e]	3.1	3.1	3.3
Milk	1.5	1.4	3.2
Vegetables[e]	0.6	0.6*	0
Combination entrees	0.4	0.4	0
Accompaniments	0.2	0.3*	0
Total fat			
Desserts and other menu items	40.1	40.4	23.2
Separate grains and breads[e]	36.8	36.3	57.4
Separate meats and meat alternates[e]	10.5	10.5	9.8
Fruits/100% fruit juices[e]	6.1	6.2	5.5
Milk	3.8	3.8	4.1
Accompaniments	2.1	2.2*	0
Combination entrees	0.5	0.6	0
Vegetables[e]	0.1	0.1*	0
Saturated fat			
Desserts and other menu items	36.4	36.8	21
Separate grains and breads[e]	34.9	34.4	54.3
Separate meats and meat alternates[e]	12.3	12.3	11.1
Fruits/100% fruit juices[e]	8	8.1	5.4
Milk	5.8	5.8	8.1

Table A-16. Contribution of major food groups to calories and nutrients at snack, overall and by summer meal program type (continued)

Major food group	Mean percent contribution to nutrient		
		Program type	
	All sites	SFSP	SSO
Accompaniments	2.1	2.1*	0
Combination entrees	0.5	0.5	0
Vegetables[e]	0.1	0.1*	0
Sodium			
Desserts and other menu items	39.9	40.3	22.3
Separate grains and breads[e]	38.9	38.5	58.2
Separate meats and meat alternates[e]	9.7	9.7	9.5
Milk	5.0	5.0	7.0
Fruits/100% fruit juices[e]	4.6	4.6	2.9
Accompaniments	1.3	1.3*	0
Vegetables[e]	0.4	0.4*	0
Combination entrees	0.3	0.3	0
Dietary fiber			
Fruits/100% fruit juices[e]	34.8	34.9	30.8
Desserts and other menu items	31.1	31.3	21.1
Separate grains and breads[e]	30.3	29.9	47.9
Vegetables[e]	1.8	1.9*	0
Separate meats and meat alternates[e]	1.3	1.3*	0.2
Combination entrees	0.5	0.5	0
Accompaniments	0.2	0.2*	0
Milk	0	0	0
Number of sites (unweighted)	132	128	4
Number of sites (weighted)	11,212	10,968	244

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[e] Excluding combination entrees.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-17. Top food sources of calories and nutrients in snack

Top 10 food sources	Mean percent contribution to nutrient All sites
Calories	
100% fruit juices	30.0
Cookies	24.5
Crackers, croutons, or pretzels	15.4
Cheese	3.5
Granola and breakfast bars	3.2
Fresh fruits	3.1
Low-fat milk, unflavored	3.0
Muffins (excluding English muffins), sweet/quick breads	2.8
Yogurt	1.9
Corn/tortilla chips	1.7
Protein	
Cookies	31.3
Crackers, croutons, or pretzels	20.5
100% fruit juices	10.9
Cheese	6.7
Low-fat milk, unflavored	5.6
Granola and breakfast bars	3.7
Yogurt	3.1
Muffins (excluding English muffins), sweet/quick breads	2.9
Corn/tortilla chips	2.1
Pancakes, waffles, French toast	1.8
Vitamin A	
100% fruit juices	20.9
Crackers, croutons, or pretzels	15.8
Cheese	11.3
Low-fat milk, unflavored	8.3
Granola and breakfast bars	5.9
Fresh fruits	5.2
Yogurt	3.7
Muffins (excluding English muffins), sweet/quick breads	3.3
Pancakes, waffles, French toast	3.1
Red and orange vegetables, raw	2.6
Vitamin C	
100% fruit juices	74.4
Fresh fruits	8.0
Canned fruits, sweetened	2.7

Table A-17. Top food sources of calories and nutrients in snack (continued)

Top 10 food sources	Mean percent contribution to nutrient All sites
Crackers, croutons, or pretzels	2.1
Fat-free milk, flavored	1.9
Canned fruits, unsweetened	1.8
Red and orange vegetables, raw	1.8
Granola and breakfast bars	1.4
Muffins (excluding English muffins), sweet/quick breads	1.2
Cold cereal, sweetened[b]	1.0
Calcium	
100% fruit juices	28.3
Cookies	20.7
Crackers, croutons, or pretzels	13.5
Cheese	7.6
Low-fat milk, unflavored	6.4
Granola and breakfast bars	4.1
Yogurt	3.3
Muffins (excluding English muffins), sweet/quick breads	2.8
Fresh fruits	2.0
Fat-free milk, flavored	1.7
Iron	
Cookies	33.8
Crackers, croutons, or pretzels	22.7
100% fruit juices	16.4
Granola and breakfast bars	4.6
Muffins (excluding English muffins), sweet/quick breads	3.1
Fresh fruits	2.5
Pancakes, waffles, French toast	2.0
Corn/tortilla chips	1.8
Fruits cobblers and crisps	1.4
Cold cereal, sweetenedb	1.3
Total fat	
Cookies	36.7
Crackers, croutons, or pretzels	22.2
Cheese	6.3
100% fruit juices	5.2
Granola and breakfast bars	4.7

Table A-17. Top food sources of calories and nutrients in snack (continued)

Top 10 food sources	Mean percent contribution to nutrient
	All sites
Muffins (excluding English muffins), sweet/quick breads	4.2
Low-fat milk, unflavored	3.7
Yogurt	2.7
Corn/tortilla chips	2.5
Pancakes, waffles, French toast	1.9
Saturated fat	
Cookies	33.2
Crackers, croutons, or pretzels	21.2
Cheese	7.5
100% fruit juices	7.2
Low-fat milk, unflavored	5.7
Granola and breakfast bars	4.6
Muffins (excluding English muffins), sweet/quick breads	3.8
Yogurt	3.2
Corn/tortilla chips	2.2
Pancakes, waffles, French toast	1.9
Sodium	
Cookies	36.2
Crackers, croutons, or pretzels	24.4
Cheese	5.7
Granola and breakfast bars	4.5
100% fruit juices	4.2
Muffins (excluding English muffins), sweet/quick breads	3.5
Low-fat milk, unflavored	3.2
Yogurt	2.8
Corn/tortilla chips	2.3
Pancakes, waffles, French toast	2.1
Dietary fiber	
Cookies	28.8
100% fruit juices	24.7
Crackers, croutons, or pretzels	18.7
Fresh fruits	7.0
Granola and breakfast bars	2.6
Muffins (excluding English muffins), sweet/quick breads	2.4
Corn/tortilla chips	2.4

Table A-17. Top food sources of calories and nutrients in snack (continued)

Top 10 food sources	Mean percent contribution to nutrient
	All sites
Canned fruits, sweetened	1.7
Pancakes, waffles, French toast	1.7
Red and orange vegetables, raw	1.3
Number of sites (unweighted)	132
Number of sites (weighted)	11,212

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

[a] Excluding grain-based desserts.

[b] A cereal was classified as sweetened if it contained 21.3 grams of sugar or more per 100 gram serving—the current criterion for cereals allowed under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

Table A-18. Nutrient content of breakfast and percent of DRI met#

Nutrient	All sites				
		% DRI			
	Mean	3 year olds	4-8 year olds	9-13 year olds	14-18 year olds
Macronutrients					
Linoleic acid, g	2.1	30.2	21.1	17.6	13.2
α-Linolenic acid, g	0.2	32.6	25.4	19.0	14.2
Protein, g	14.6	112.4	76.9	42.9	28.1
Carbohydrate, g	74.9	57.6	57.6	57.6	57.6
Vitamins					
Vitamin A, µg (RAE)	274.3	91.4	68.5	45.7	30.4
Vitamin C, mg	30.6	204.0	122.4	68.0	40.8
Vitamin D, µg	3.6	24.0	24.0	24.0	24.0
Vitamin E, mg	1.1	19.1	16.4	10.4	7.6
Vitamin B6, mg	0.6	110.2	91.8	55.1	42.4
Vitamin B12, µg	2.0	222.2	166.6	111.1	83.3
Folate, µg (DFE)	110.7	73.7	55.3	36.8	27.6
Thiamin, mg	0.5	90.2	75.1	50.1	37.5
Riboflavin, mg	0.8	168.1	140.1	93.4	64.6
Niacin, mg	4.7	78.5	58.8	39.2	29.4
Minerals					
Calcium, mg	441.1	63.0	44.1	33.9	33.9
Iron, mg	4.4	63.3	44.3	55.4	29.5
Magnesium, mg	65.8	82.3	50.6	27.4	16.0
Phosphorus, mg	391.2	85.0	78.2	31.2	31.2
Potassium, mg	734.0	36.7	31.9	29.3	24.4
Sodium, mg	456.4	57.0	45.6	38.0	30.4
Zinc, mg	3.2	105.3	63.1	39.4	28.7
Other dietary components					
Total dietary fiber, g	3.8	19.8	15.0	12.1	9.9
Number of sites (Unweighted)	523				
Number of sites (Weighted)	43,795				

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

Where DRI values differ for males and females for an age range, the higher value is used in the calculation of the percent met.

Table A-19. Nutrient content of breakfast and percent of DRI met#, by summer meal program

Nutrient	SFSP					SSO				
		% DRI					% DRI			
	Mean	3 year olds	4-8 year olds	9-13 year olds	14-18 year olds	Mean	3 year olds	4-8 year olds	9-13 year olds	14-18 year olds
Macronutrients										
Linoleic acid, g	2.0*	27.9	19.5	16.3	12.2	2.8	39.5	27.6	23.0	17.2
α-Linolenic acid, g	0.2	31.4	24.4	18.3	13.7	0.3	37.6	29.2	21.9	16.4
Protein, g	14.3*	109.7	75.1	41.9	27.4	16.0	123.3	84.4	47.1	30.8
Carbohydrate, g	71.1*	54.6	54.6	54.6	54.6	90.9	69.9	69.9	69.9	69.9
Vitamins										
Vitamin A, µg (RAE)	271.7	90.5	67.9	45.2	30.1	284.8	94.9	71.2	47.4	31.6
Vitamin C, mg	27.4*	182.5	109.5	60.8	36.5	44.0	293.3	176.0	97.7	58.6
Vitamin D, µg	3.6	24.0	24.0	24.0	24.0	3.7	24.3	24.3	24.3	24.3
Vitamin E, mg	1.0*	17.4	14.9	9.5	6.9	1.6	26.4	22.6	14.4	10.5
Vitamin B6, mg	0.5	108.1	90.1	54.0	41.5	0.6	119.0	99.2	59.5	45.8
Vitamin B12, µg	2.0	220.4	165.3	110.2	82.6	2.1	229.8	172.3	114.9	86.1
Folate, µg (DFE)	106.1*	70.7	53.0	35.3	26.5	129.8	86.5	64.8	43.2	32.4
Thiamin, mg	0.4*	87.7	73.1	48.7	36.5	0.5	100.6	83.8	55.8	41.9
Riboflavin, mg	0.8	166.7	138.9	92.6	64.1	0.9	173.9	144.9	96.6	66.8
Niacin, mg	4.6*	76.7	57.5	38.3	28.7	5.2	85.9	64.4	42.9	32.2
Minerals										
Calcium, mg	436.1*	62.2	43.6	33.5	33.5	462.2	66.0	46.2	35.5	35.5
Iron, mg	4.3*	60.9	42.6	53.3	28.4	5.1	73.3	51.3	64.1	34.2
Magnesium, mg	63.4*	79.2	48.7	26.4	15.4	76.1	95.1	58.5	31.7	18.5
Phosphorus, mg	382.7*	83.1	76.5	30.6	30.6	427.0	92.8	85.3	34.1	34.1
Potassium, mg	708.4*	35.4	30.8	28.3	23.6	840.8	42.0	36.5	33.6	28.0
Sodium, mg	437.9*	54.7	43.7	36.4	29.1	533.3	66.6	53.3	44.4	35.5
Zinc, mg	3.1*	103.0	61.8	38.6	28.0	3.5	115.0	69.0	43.1	31.3
Other dietary components										
Total dietary fiber, g	3.5*	18.4	13.9	11.2	9.2	4.9	25.9	19.6	15.8	12.9
Number of sites (Unweighted)	405					118				
Number of sites (Weighted)	35,321					8,475				

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.
Where DRI values differ for males and females for an age range, the higher value is used in the calculation of the percent met.
* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.
SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-20. Nutrient content of lunch/supper and percent of DRI met#

Nutrient	All sites				
		% DRI			
	Mean	3 year olds	4-8 year olds	9-13 year olds	14-18 year olds
Macronutrients					
Linoleic acid, g	5.9	84.8	59.3	49.4	37.1
α-Linolenic acid, g	0.7	94.9	73.8	55.4	41.5
Protein, g	29.0	222.8	152.4	85.2	55.7
Carbohydrate, g	86.2	66.2	66.2	66.2	66.2
Vitamins					
Vitamin A, µg (RAE)	385.6	128.5	96.3	64.2	42.8
Vitamin C, mg	31.9	212.4	127.4	70.8	42.4
Vitamin D, µg	3.4	22.7	22.7	22.7	22.7
Vitamin E, mg	2.6	43.4	37.2	23.6	17.3
Vitamin B6, mg	0.5	105.7	88.1	52.8	40.6
Vitamin B12, µg	1.8	201.7	151.2	100.8	75.6
Folate, µg (DFE)	112.3	74.8	56.1	37.4	28.0
Thiamin, mg	0.5	97.3	81.1	54.0	40.5
Riboflavin, mg	0.9	170.3	141.9	94.6	65.5
Niacin, mg	6.7	112.3	84.2	6.1	42.1
Minerals					
Calcium, mg	590.0	84.2	59.0	45.3	45.3
Iron, mg	3.7	53.0	37.1	46.4	24.7
Magnesium, mg	104.8	130.9	80.5	43.6	25.5
Phosphorus, mg	625.4	135.9	125.0	50.0	50.0
Potassium, mg	1,118.4	55.9	48.6	44.7	37.2
Sodium, mg	1,219.9	152.4	121.9	101.6	81.3
Zinc, mg	3.9	128.9	77.3	48.3	35.1
Other dietary components					
Total dietary fiber, g	6.9	36.2	27.5	22.2	18.1
Number of sites (unweighted)	731				
Number of sites (weighted)	67,285				

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

Where DRI values differ for males and females for an age range, the higher value is used in the calculation of the percent met

Table A-21. Nutrient content of lunch/supper and percent of DRI met, by summer meal program type#

Nutrient	SFSP					SSO				
		% DRI					% DRI			
	Mean	3 year olds	4-8 year olds	9-13 year olds	14-18 year olds	Mean	3 year olds	4-8 year olds	9-13 year olds	14-18 year olds
Macronutrients										
Linoleic acid, g	5.8	82.9	58.0	48.4	36.3	6.6	93.8	65.6	54.7	41.0
α-Linolenic acid, g	0.6*	90.8	70.6	53.0	39.7	0.8	115.2	89.6	67.2	50.4
Protein, g	28.5*	219.1	149.9	83.7	54.7	31.4	241.2	165.0	92.2	60.3
Carbohydrate, g	83.5*	64.2	64.2	64.2	64.2	99.1	76.2	76.2	76.2	76.2
Vitamins										
Vitamin A, µg (RAE)	371.0*	123.6	92.7	61.8	41.2	457.3	152.4	114.3	76.2	50.8
Vitamin C, mg	30.5*	203.6	122.1	67.8	40.7	38.4	255.7	153.4	85.2	51.1
Vitamin D, µg	3.4*	22.9	22.9	22.9	22.9	3.3	21.6	21.6	21.6	21.6
Vitamin E, mg	2.5*	41.8	35.8	22.8	16.7	3.1	51.0	43.7	27.8	20.4
Vitamin B6, mg	0.5*	102.1	85.1	51.0	39.2	0.6	123.8	103.2	61.9	47.6
Vitamin B12, µg	1.8*	198.3	148.7	99.1	74.3	2.0	218.1	163.6	109.0	81.8
Folate, µg (DFE)	107.5*	71.6	53.7	35.8	26.8	136.4	90.9	68.1	45.4	34.0
Thiamin, mg	0.5*	94.1	78.4	52.3	39.2	0.6	113.0	94.2	62.8	47.1
Riboflavin, mg	0.8*	168.8	140.6	93.7	64.9	0.9	177.9	148.2	98.8	68.4
Niacin, mg	6.6*	109.9	82.4	54.9	41.2	7.5	124.4	93.3	62.2	46.6
Minerals										
Calcium, mg	591.6	84.5	59.1	45.5	45.5	582.2	83.1	58.2	44.7	44.7
Iron, mg	3.6*	50.8	35.6	44.5	23.7	4.5	63.7	44.6	55.7	29.7
Magnesium, mg	101.7*	127.1	78.2	42.3	24.8	119.9	149.8	92.2	49.9	29.2
Phosphorus, mg	620.1*	134.8	124.0	49.6	49.6	651.3	141.5	130.2	52.1	52.1
Potassium, mg	1,085.1	54.2	47.1	43.4	36.1	1,282.3	64.1	55.7	51.2	42.7
Sodium, mg	1,185.4*	148.1	118.5	98.7	79.0	1,389.8	173.7	138.9	115.8	92.6
Zinc, mg	3.8*	125.0	75.0	46.8	34.0	4.4	148.3	88.9	55.6	40.4
Other dietary components										
Total dietary fiber, g	6.5	34.0	25.8	20.8	17.0	9.0	47.2	35.9	28.9	23.6
Number of sites (unweighted)	578					153				
Number of sites (weighted)	55,926					11,359				

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

Where DRI values differ for males and females for an age range, the higher value is used in the calculation of the percent met.

* Differences between SFSP sites and SSO sites are significant at the 0.05 confidence level using t-tests.

SFSP = Summer Food Service Program SSO = Seamless Summer Option

Table A-22. Nutrient content of snack and percent of DRI met#

Nutrient	All sites				
		% DRI			
	Mean	3 year olds	4-8 year olds	9-13 year olds	14-18 year olds
Macronutrients					
Linoleic acid, g	1.7	24.6	17.2	14.3	10.7
α-Linolenic acid, g	0.2	26.0	20.2	15.1	11.3
Protein, g	4.5	34.8	23.8	13.3	8.7
Carbohydrate, g	44.1	33.9	33.9	33.9	33.9
Vitamins					
Vitamin A, µg (RAE)	50.2	16.7	12.5	8.3	5.5
Vitamin C, mg	37.0	246.7	148.0	82.2	49.3
Vitamin D, µg	0.4	2.7	2.7	2.7	2.7
Vitamin E, mg	0.7	11.0	9.4	6.0	4.4
Vitamin B6, mg	0.2	30.9	25.8	15.4	11.9
Vitamin B12, µg	0.3	29.2	21.9	14.6	10.9
Folate, µg (DFE)	39.7	26.4	19.8	13.2	9.9
Thiamin, mg	0.2	31.5	26.2	17.5	13.1
Riboflavin, mg	0.2	42.5	35.4	23.6	16.3
Niacin, mg	1.8	29.4	22.0	14.7	11.0
Minerals					
Calcium, mg	109.2	15.5	10.9	8.3	8.3
Iron, mg	1.5	21.6	15.1	18.9	10.1
Magnesium, mg	29.5	36.9	22.7	12.3	7.2
Phosphorus, mg	119.2	25.9	23.8	9.5	9.5
Potassium, mg	302.3	15.1	13.1	12.0	10.0
Sodium, mg	230.3	28.7	23.0	19.1	15.3
Zinc, mg	0.7	24.0	14.4	9.0	6.5
Other dietary components					
Total dietary fiber, g	1.8	9.2	7.0	5.6	4.6
Number of sites (unweighted)	132				
Number of sites (weighted)	11,212				

Source: USDA Summer Meals Study, site menu analysis, summer 2018. Tabulations are weighted to be nationally representative of all sites offering the summer meal programs. Percentages are the weighted average of menus offered at each site.

Where DRI values differ for males and females for an age range, the higher value is used in the calculation of the percent met.

Appendix B

Major and Minor Food Groups

Appendix B
Major and Minor Food Groups[36]

Table B-1. Major and minor food groups

Major	Minor	Examples[1]
Milk	2%, flavored	2% chocolate or strawberry milk
	2%, unflavored	2% milk with no added flavoring
	Fat-free, flavored	Fat-free chocolate or strawberry milk
	Fat-free, unflavored	Fat-free milk with no added flavoring
	Low-fat, flavored	Low-fat chocolate or strawberry milk
	Low-fat, unflavored	Low-fat milk with no added flavoring
	Other milk beverages	Soy milk or almond milk
	Whole, unflavored	Whole milk with no added flavoring
Fruits/100% fruit juices	Canned, sweetened	Any canned fruit in light or heavy syrup or juice-packed, including fruit cocktail, peaches, pears, sweetened applesauce
	Canned, unsweetened	Any canned fruit water-packed or drained, including fruit cocktail, peaches, pears, unsweetened applesauce
	Dried	Any dried fruit, including raisins, cranberries, apples, apricots, mixtures
	Fresh	Any fresh fruit, including apples, oranges, bananas, pears, grapes
	Frozen	Any frozen fruit including blueberries, peaches, strawberries
	Juice	Apple juice, orange juice, grape juice, fruit juice blends
Vegetables	Cooked, beans and peas	Baked beans, black beans, pinto/kidney beans, chickpeas, bean soups
	Cooked, dark green	Broccoli, spinach, collards, turnip greens, kale, mustard greens
	Cooked, mixtures	Mixed vegetables, peas and carrots, corn and peppers, vegetable soup
	Cooked, other	String beans, summer squash, cabbage, cauliflower, asparagus, onions
	Cooked, red and orange	Carrots, sweet potato, tomato soup, winter squash, red peppers
	Cooked, starchy	French fries, tater tots, white potatoes, green peas, corn, plantains

[36]Gearan, E., Fox, M.K., Niland, K., Dotter, D., Washburn, L., Connor, P., Olsho, L., and Wommak, T. (2019). *School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals.* https://www.fns.usda.gov/school-nutrition-and-meal-cost-study

Table B-1. Major and minor food groups (continued)

Major	Minor	Examples
	Raw, dark green	Broccoli, side salads with spinach
	Raw, mixtures	Side salad bars, lettuce and tomato, carrots and celery, side salad with vegetable mixtures
	Raw, other	Cucumber, celery, green peppers, side salads with iceberg lettuce, coleslaw
	Raw, red and orange	Carrots, tomatoes, red peppers
	Raw, starchy	Jicama, peas
Combination Entrées	Breakfast burritos	Burrito with egg, cheese, sausage, ham or bacon
	Breakfast sandwich	Sandwich with egg and cheese or meat, sausage biscuit
	Cheeseburgers and similar beef/pork sandwiches	Cheeseburger, barbecue rib sandwich with cheese
	Entrée food bars	Self-serve sandwich or deli bar, entrée salad bar, nacho or taco bar, pasta or Italian bar, baked potato bar
	Entrée salads	Chef's salad, cobb salad, grilled chicken Caesar salad, crispy chicken salad, taco salad
	Hamburger and similar beef/pork sandwiches	Hamburger, barbecue rib sandwich, sloppy joe
	Hot dogs, corn dogs, and similar sausage sandwiches	Hot dog on bun, chicken hot dog on bun, corn dog, pancake-on-a-stick
	Mexican-style entrees	Burrito, taco, nachos, quesadillas, fajitas, and enchiladas
	Mixtures with grain, meat/meat alternate, and/or vegetables	Spaghetti with sauce, macaroni and cheese, lasagna, ravioli, chicken, beef or pork with rice or noodles
	Other mixtures with meat/meat alternate and/or vegetables	Chili with meat and/or beans, baked potato with cheese and/or meat, mixtures with chicken, potatoes and corn
	Parfaits	Parfaits with yogurt, fruit, and granola
	Peanut butter sandwich	Peanut butter sandwich, peanut butter and jelly sandwich, Uncrustables
	Pizza pockets, pizza sticks, and calzones	Pizza pocket, calzone, Italian dunkers, cheese breadsticks
	Pizza with meat	Sausage, pepperoni, chicken, and breakfast pizzas
	Pizza without meat	Cheese pizzas and vegetable pizzas
	Sandwich with breaded/fried meat, poultry or fish	Chicken patty, breaded beef or pork patty, breaded fish patty sandwiches
	Sandwich with cheese only	Grilled cheese, sandwich with cheese and vegetables

Table B-1. Major and minor food groups (continued)

Major	Minor	Examples
	Sandwich with mayonnaise-based poultry, tuna, or egg salad	Chicken, egg, and tuna salad sandwiches
	Sandwich with meat substitute	Burger with vegetarian patty
	Sandwich with plain meat or poultry	Turkey, ham, turkey ham, grilled chicken, roast beef sandwiches
Separate grains/breads	Biscuits, croissants, seasoned breadsticks, cornbread, and stuffing	Biscuits, cornbread, croissant, hush puppy, bread stuffing
	Bread or bread alternates with added fat	Buttered toast or English muffin, bagel stuffed with cream cheese, garlic bread
	Breads, rolls, bagels, and other plain breads	Bread, rolls, bagels, English muffins, tortillas, soft pretzels
	Cold cereal, sweetened[b]	Any type of sweetened cold cereal: Cinnamon Toast Crunch, Cocoa Puffs, Lucky Charms, Honey Nut Cheerios, Trix
	Cold cereal, unsweetened	Any type of unsweetened cold cereal: Cheerios, Frosted Mini-Wheats, Rice Krispies, Kix, Rice Chex, Special K
	Corn/tortilla chips	Corn chips, tortilla chips, taco shells
	Crackers, croutons, or pretzels[d]	Animal crackers, graham crackers, saltines, hard pretzels, hard breadsticks
	Granola and breakfast bars	Granola bars, Milk 'n Cereal bars, Benefit bars, Ultimate Breakfast Rounds, PowerBars
	Hot cereal	Oatmeal, grits, cream of wheat
	Muffins (excluding English muffins), sweet/quick breads	Blueberry muffin, chocolate chip muffin, pumpkin bread, zucchini bread
	Other grains/breads	Egg rolls, won tons, dumplings
	Pancakes, waffles, French toast	Pancakes, waffles, waffle sticks, French toast, French toast sticks
	Pasta	Macaroni, spaghetti, noodles, pasta salad without meat, macaroni and cheese as a side dish
	Rice	White, brown, wild, or yellow rice, rice pilaf
Separate meats/meat alternates	Chicken and turkey, breaded or fried	Chicken nuggets, patties, tenders, poppers, fried chicken
	Chicken and turkey, plain	Grilled chicken, chicken fajita strips, roasted chicken breast, roasted turkey
	Chicken and turkey, with sauce, gravy or mayonnaise	Chicken or turkey salad, barbecue chicken, chicken or turkey with gravy, sweet and sour chicken or turkey
	Fish and shellfish, breaded or fried	Breaded fish patty or nuggets
	Fish and shellfish, plain	Baked or broiled cod, haddock, salmon

Table B-1. Major and minor food groups (continued)

Major	Minor	Examples
	Fish and shellfish, with sauce, gravy or mayonnaise	Tuna salad with mayonnaise
	Meat with sauce, gravy or mayonnaise	Beef stroganoff, spaghetti sauce with meat, meatballs with sauce, barbecue pork, beef or pork with gravy, sausage gravy
	Meat, breaded or fried	Breaded beef, breaded pork chop or patty
	Meat, plain	Ground beef, beef or pork crumbles, beef patty, ham, pork roast, rib patty
	Cheese	Cheddar cheese, mozzarella cheese, American cheese, cheese sticks, cheese sauce, cottage cheese
	Eggs	Omelets with meat, cheese, and/or vegetables; hard-boiled, scrambled and fried eggs
	Meat substitutes, hummus, legumes	Hummus, meatless chicken, tofu, chickpeas, black beans, pinto beans, refried beans
	Nuts, nut butters and seeds	Peanut butter, almond butter, soy nuts, sunflower seeds
	Sausage, frankfurters and cold cuts	Beef, pork, chicken or turkey sausage or hot dog, turkey ham, deli turkey or ham
	Yogurt	Fruited or plain yogurt, nonfat, lowfat, and regular
Desserts/Other Menu Items	Bacon	Pork or turkey bacon
	Bottled water	Unsweetened bottled water, tap water
	Dairy based desserts	Ice cream, frozen yogurt, ice cream bars or sticks, pudding
	Desserts containing fruit or fruit juice	Gelatin with fruit, sorbet, Italian Ice
	Brownies	Brownies with or without icing
	Cakes	Doughnut, cinnamon roll, cake or cupcake with or without icing
	Cookies	Animal crackers, graham crackers, chocolate chip cookie, oatmeal cookie, sugar cookie,
	Fruit cobblers and crisps	Blueberry, peach, cherry crisp or cobbler, Danish, fruit-filled breadstick
	Other items	Non-vegetable/non-entrée soups, gelatin without fruit, fruit snacks
	Snacks	Potato chips, Cheetos, Funyuns, Bugles
Accompaniments	Condiment bars	Self-serve condiment or fixins' bar
	Condiments and toppings	Mayonnaise, mustard, catsup, gravy, jelly, margarine, butter, barbecue sauce, cheese topping, salsa, hot sauce, sour cream, syrup
	Salad dressing	Ranch, Caesar, Italian, honey mustard, blue cheese, French, Thousand Island

[1] Food and beverage examples amended by Westat research team for the School Meals Study.

Appendix C

Meal Patterns

Appendix C
Meal Patterns

Table C-1. Summer Food Service Program meal patterns

In effect in Summer 2018

Meal component		Component definition	Number offered
Breakfast: Select all three			
Milk	1 cup	fluid milk	1
Fruit/vegetable	½ cup	juice,[1] fruit and/or vegetable	1
Grains/bread[2]	1 slice 1 serving ¾ cup ½ cup ½ cup	bread or cornbread or biscuit or roll or muffin or cold dry cereal or hot cooked cereal or pasta or noodles or grains	1
Lunch: Select all four			
Milk	1 cup	fluid milk	1
Fruit/vegetable	¾ cup	juice,[1] fruit and/or vegetable	2
Grains/bread[2]	1 slice 1 serving ½ cup ½ cup	bread or cornbread or biscuit or roll or muffin or hot cooked cereal or pasta or noodles or grains	1
Meat/meat alternate	2 oz. 2 oz. 2 oz. 1 large ½ cup 4 Tbsp. 1 oz. 8 oz.	lean meat or poultry or fish[3] or alternate protein product or cheese or egg or cooked dry beans or peas or peanut or other nut or seed butter or nuts and/or seeds[4] or yogurt[5]	1
Snack: Select two of four			
Milk	1 cup	fluid milk	1
Fruit/vegetable	¾ cup	juice,[1] fruit and/or vegetable	1
Grains/bread[2]	1 slice 1 serving ¾ cup ½ cup ½ cup	bread or cornbread or biscuit or roll or muffin or cold dry cereal or hot cooked cereal or pasta or noodles or grains	1

Table C-1. Summer Food Service Program meal patterns (continued)

In effect in Summer 2018

Meal component		Component definition	Number offered
Snack: select two of four (continued)			
Meat/meat alternate	1 oz. 1 oz. 1 oz. ½ large ¼ cup 2 Tbsp. 1 oz. 4 oz.	lean meat or poultry or fish[3] or alternate protein product or cheese or egg or cooked dry beans or peas or peanut or other nut or seed butter or nuts and/or seeds or yogurt[5]	1

[1] Fruit or vegetable juice must be full-strength. At snack, juice cannot be served when milk is the only other snack component.
[2] Breads and grains must be made from whole-grain or enriched meal or flour. Cereal must be whole-grain or enriched or fortified.
[3] A serving consists of the edible portion of cooked lean meat or poultry or fish.
[4] Nuts and seeds may meet only one-half of the total meat/meat alternate serving and must be combined with another meat/meat alternate to fulfill the lunch or supper requirement.
[5] Yogurt may be plain or flavored, unsweetened or sweetened.
https://www.fns.usda.gov/sfsp/meal-patterns
Accessed February 15, 2017

Table C-2. School Meal Programs meal patterns

In effect in Summer 2018

Requirements	School Breakfast Program			National School Lunch Program		
	Grades K-5[a]	Grades 6-8[a]	Grades 9-12[a]	Grades K-5	Grades 6-8[a]	Grades 9-12
Meal pattern	**Amount of food[b] per week (minimum per day)**					
Fruits (cups)[c,d]	5 (1)[e]	5 (1)[e]	5 (1)[e]	2½ (½)	2½ (½)	5 (1)
Vegetables (cups)[c,d]	0	0	0	3¾ (¾)	3¾ (¾)	5 (1)
Dark green[f]	0	0	0	½	½	½
Red/Orange[f]	0	0	0	¾	¾	1¼
Beans/Peas (Legumes)[f]	0	0	0	½	½	½
Starchy[f]	0	0	0	½	½	½
Other[f,g]	0	0	0	½	½	¾
Additional veg to reach total[h]	0	0	0	1	1	1½
Grains (oz. eq.)[i]	7-10 (1)[j]	8-10 (1) [j]	9-10 (1) [j]	8-9 (1)	8-10 (1)	10-12 (2)
Meats/Meat Alternates (oz. eq.)	0[k]	0[k]	0[k]	8-10 (1)	9-10 (1)	10-12 (2)
Fluid milk (cups)[l]	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
Other specifications: daily amount based on the average for a 5-day week						
Min-max calories (kcal)[m,n,o]	350-500	400-550	450-600	550-650	600-700	750-850
Saturated fat (% of total calories)[n,o]	< 10	< 10	< 10	< 10	< 10	< 10
Sodium (mg)[n,p]	< 430	< 470	< 500	< 640	< 710	< 740
Trans fat[n,o]	Nutrition label or manufacturer specifications must indicate zero grams of trans fat per serving.					

[a] In the SBP, the above age-grade groups are required beginning July 1, 2013 (SY 2013-14). In SY 2012-2013 only, schools may continue to use the meal pattern for grades K-12 (see § 220.23).

[b] Food items included in each food group and subgroup and amount equivalents. Minimum creditable serving is ⅛ cup.

[c] One quarter-cup of dried fruit counts as ½ cup of fruit; 1 cup of leafy greens counts as ½ cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.

[d] For breakfast, vegetables may be substituted for fruits, but the first two cups per week of any such substitution must be from the dark green, red/orange, beans and peas (legumes) or "Other vegetables" subgroups as defined in §210.10(c)(2)(iii).

[e] The fruit quantity requirement for the SBP (5 cups/week and a minimum of 1 cup/day) is effective July 1, 2014 (SY 2014- 2015).

[f] Larger amounts of these vegetables may be served.

[g] This category consists of "Other vegetables" as defined in §210.10(c)(2)(iii)(E). For the purposes of the NSLP, "Other vegetables" requirement may be met with any additional amounts from the dark green, red/orange, and beans/peas (legumes) vegetable subgroups as defined in §210.10(c)(2)(iii).

[h] Any vegetable subgroup may be offered to meet the total weekly vegetable requirement.

[i] At least half of the grains offered must be whole grain-rich in the NSLP beginning July 1, 2012 (SY 2012-2013), and in the SBP beginning July 1, 2013 (SY 2013-2014). All grains must be whole grain-rich in both the NSLP and the SBP beginning July 1, 2014 (SY 2014-15).

[j] In the SBP, the grain ranges must be offered beginning July 1, 2013 (SY 2013-2014).

[k] There is no separate meat/meat alternate component in the SBP. Beginning July 1, 2013 (SY 2013-2014), schools may substitute 1 oz. eq. of meat/meat alternate for 1 oz. eq. of grains after the minimum daily grains requirement is met.

[l] Fluid milk must be low-fat (1 percent milk fat or less, unflavored) or fat-free (unflavored or flavored).

[m] The average daily amount of calories for a 5-day school week must be within the range (at least the minimum and no more than the maximum values).

[n] Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, trans fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent milk fat are not allowed.

[o] In the SBP, calories and trans fat specifications take effect beginning July 1, 2013 (SY 2013-2014).

[p] Final sodium specifications are to be reached by SY 2022-2023 or July 1, 2022. Intermediate sodium specifications are established for SY 2014-2015 and 2017-2018. See required intermediate specifications in § 210.10(f)(3) for lunches and § 220.8(f)(3) for breakfast.

Table C-3. Child and Adult Care Food Program meal patterns

In effect in Summer 2018

Food components and food items	Ages 1-2	Ages 3-5	Ages 6-12	Ages 13-18[1] (at-risk afterschool programs and emergency shelters)
Breakfast: Select all three				
Fluid milk[2]	4 fluid ounces	6 fluid ounces	8 fluid ounces	8 fluid ounces
Vegetables, fruits or portions of both[3]	¼ cup	½ cup	½ cup	½ cup
Grains (oz. eq.)[4,5]				
Whole grain-rich or enriched bread	½ slice	½ slice	1 slice	1 slice
Whole grain-rich or enriched bread product, such as biscuit, roll, muffin	½ serving	½ serving	1 serving	1 serving
Whole grain-rich, enriched or fortified cooked breakfast cereal[6], cereal grain, and/or pasta	¼ cup	¼ cup	½ cup	½ cup
Whole grain-rich, enriched or fortified ready-to-eat breakfast cereal (dry, cold)[6,7]				
Flakes or rounds	½ cup	½ cup	1 cup	1 cup
Puffed cereal	¾ cup	¾ cup	1¼ cup	1¼ cup
Granola	1/8 cup	1/8 cup	¼ cup	¼ cup
Lunch: Select all five				
Fluid milk[2]	4 fluid ounces	6 fluid ounces	8 fluid ounces	8 fluid ounces
Meat/meat alternates				
Edible portions as served:				
Lean meat, poultry, or fish	1 ounce	1½ ounces	2 ounces	2 ounces
Tofu, soy products, or alternate protein products[8]	1 ounce	1½ ounces	2 ounces	2 ounces
Cheese	1 ounce	1½ ounces	2 ounces	2 ounces
Large egg	½	¾	1	1
Cooked dry beans or peas	¼ cup	3/8 cup	½ cup	½ cup
Peanut butter or soy nut butter or other nut or seed butters	2 Tbsp.	3 Tbsp.	4 Tbsp.	4 Tbsp.
Yogurt, plain or flavored unsweetened or sweetened[9]	4 ounces or ½ cup	6 ounces or ¾ cup	8 ounces or 1 cup	8 ounces or 1 cup

Table C-3. Child and Adult Care Food Program meal patterns (continued)

In effect in Summer 2018

Food components and food items	Ages 1-2	Ages 3-5	Ages 6-12	Ages 13-18[1] (at-risk afterschool programs and emergency shelters)
Lunch: Select all five (continued)				
The following may be used to meet no more than 50 percent of the requirement:				
Peanuts, soy nuts, tree nuts, or seeds, as listed in program guidance, or an equivalent quantity of any combination of the above meat/meat alternates (1 ounce of nuts/seeds = 1 ounce of cooked lean meat, poultry or fish)	½ ounce = 50%	¾ ounce = 50%	1 ounce = 50%	1 ounce = 50%
Vegetables[3]	1/8 cup	¼ cup	½ cup	½ cup
Fruits[3,10]	1/8 cup	¼ cup	¼ cup	¼ cup
Grains (oz eq)[4]				
Whole grain-rich or enriched bread	½ slice	½ slice	1 slice	1 slice
Whole grain-rich or enriched bread product, such as biscuit, roll, muffin	½ serving	½ serving	1 serving	1 serving
Whole grain-rich, enriched or fortified cooked breakfast cereal[6], cereal grain, and/or pasta	¼ cup	¼ cup	½ cup	½ cup
Snack: Select two of five				
Fluid milk[2]	4 fluid ounces	4 fluid ounces	8 fluid ounces	8 fluid ounces
Meat/meat alternates Edible portions as served:				
Lean meat, poultry, or fish	½ ounce	½ ounce	1 ounce	2 ounces
Tofu, soy products, or alternate protein products[8]	½ ounce	½ ounce	1 ounce	2 ounces
Cheese	½ ounce	½ ounce	1 ounce	2 ounces
Large egg	½	½	½	1
Cooked dry beans or peas	1/8 cup	1/8 cup	¼ cup	½ cup
Peanut butter or soy nut butter or other nut or seed butters	1 Tbsp.	1 Tbsp.	2 Tbsp.	4 Tbsp.
Yogurt, plain or flavored unsweetened or sweetened[9]	2 ounces or ¼ cup	2 ounces or ¼ cup	4 ounces or ½ cup	8 ounces or 1 cup
Peanuts, soy nuts, tree nuts, or seeds	½ ounce	½ ounce	1 ounce	1 ounce = 50%
Vegetables[3]	½ cup	½ cup	¾ cup	¾ cup
Fruits[3]	½ cup	½ cup	¾ cup	¾ cup

Table C-3. Child and Adult Care Food Program meal patterns (continued)

In effect in Summer 2018

Food components and food items	Ages 1-2	Ages 3-5	Ages 6-12	Ages 13-18[1] (at-risk afterschool programs and emergency shelters)
Snack: Select two of five (continued)				
Grains (oz. eq.)[4]				
Whole grain-rich or enriched bread	½ slice	½ slice	1 slice	1 slice
Whole grain-rich or enriched bread product, such as biscuit, roll, muffin	½ serving	½ serving	1 serving	1 serving
Whole grain-rich, enriched or fortified cooked breakfast cereal[6], cereal grain, and/or pasta	¼ cup	¼ cup	½ cup	½ cup
Whole grain-rich, enriched or fortified ready-to-eat breakfast cereal (dry, cold)[6,7]				
Flakes or rounds	½ cup	½ cup	1 cup	1 cup
Puffed cereal	¾ cup	¾ cup	1¼ cup	1¼ cup
Granola	1/8 cup	1/8 cup	¼ cup	¼ cup

[1] Larger portion sizes than specified may need to be served to children 13 through 18 years old to meet their nutritional needs.
[2] Must be unflavored whole milk for children age one. Must be unflavored low-fat (1 percent) or unflavored fat-free (skim) milk for children two through five years old. Must be unflavored low-fat (1 percent), unflavored fat-free (skim), or flavored fat-free (skim) milk for children six years old and older.
[3] Pasteurized full-strength juice may only be used to meet the vegetable or fruit requirement at one meal, including snack, per day.
[4] At least one serving per day, across all eating occasions, must be whole grain-rich. Grain-based desserts do not count towards meeting the grains requirement.
[5] Meat and meat alternates may be used to meet the entire grains requirement a maximum of three times a week. One ounce of meat and meat alternates is equal to one ounce equivalent of grains.
[6] Breakfast cereals must contain no more than 6 grams of sugar per dry ounce (no more than 21.2 grams sucrose and other sugars per 100 grams of dry cereal).
[7] Until October 1, 2019, the minimum serving size for any type of ready-to-eat breakfast cereals is 1/4 cup for children ages 1-2; 1/3 cup for children ages 3-5; 3/4 cup for children ages 6-12 and ages 13-18.
[8] Alternate protein products must meet the requirements in appendix A to CFR Part 226.
[9] Yogurt must contain no more than 23 grams of total sugars per 6 ounces.
[10] A vegetable may be used to meet the entire fruit requirement. When two vegetables are served at lunch or supper, two different kinds of vegetables must be served.