

## 5 — DIETARY SPECIFICATIONS

The HHFKA required the USDA to update school meal nutrition standards to reflect current dietary science based on the *Dietary Guidelines for Americans*. The purpose of the USDA's nutrition standards (known as dietary specifications) is to provide nutrient-dense school meals that help combat the dual problems of childhood obesity and hunger.

All school breakfasts and lunches must meet weekly dietary specifications for calories (minimum and maximum levels), saturated fats, and sodium. In addition, all food products and ingredients used to prepare school meals must contain zero grams of trans fats per serving, as indicated by the nutrition label or manufacturer specifications.

### Menu Planning

The daily and weekly servings of each meal pattern component for the NSLP and SBP are intended to meet the calorie and nutrient needs for each grade group. The actual calorie and nutrient content of school meals is determined by the types of foods selected by the menu planner. The examples below show how different food choices within the same meal pattern component vary in nutrient content.

- **Grains:** A 1-ounce equivalent serving of 100 percent whole-grain bread provides more fiber and nutrients, and less calories and fat than a 1-ounce serving of blueberry muffin made with 50 percent whole-grain flour and 50 percent enriched flour.
- **Fruits:** A ½-cup serving of fresh fruit salad provides fiber, more nutrients, and less calories than ½ cup of 100 percent apple juice.
- **Vegetables:** A ½-cup serving of baked potato provides more fiber and nutrients, and less calories, fat, and sodium than ½ cup of oven-baked french fries.
- **Meat/Meat Alternates:** A 1-ounce serving of skinless turkey breast provides less calories, fat, and sodium than a 1-ounce serving of beef salami.

Menu planners must determine how foods with solid fats and added sugars affect the menu's nutrient analysis and plan menus appropriately. All foods served as part of reimbursable meals count toward the weekly dietary specifications and are included in the CSDE's nutrient analysis of school menus. The CSDE reviews the dietary specifications for calories, saturated fats, sodium, and trans fats as part of the administrative review of school nutrition programs. For more information, see "Nutrient Analysis" in [section 3](#).



## COMPLIANCE STRATEGIES

This section contains specific strategies to help menu planners meet the calorie ranges for school meals, and limit solid fats, added sugars, and sodium. The USDA has many nutrition and menu planning resources that can assist school nutrition programs with providing healthy meals that meet the dietary specifications. The USDA's Healthier School Day [Tools for Schools](#) Web site includes topic-specific policy and resource materials to assist schools in meeting the nutrition standards.



The USDA's [Recipes for Healthy Kids Cookbook for Schools](#) features healthy recipes that are low in saturated fats, added sugars, and sodium, and include more dark green and orange vegetables, dry beans and peas, and whole grains. The USDA's [What's Cooking? USDA Mixing Bowl](#) Web site is a searchable collection of recipes and other resources for the federal nutrition assistance programs. Some additional resources are listed below.

- *Food Buying Guide for Child Nutrition Programs:*  
[www.fns.usda.gov/tn/food-buying-guide-for-child-nutrition-programs](http://www.fns.usda.gov/tn/food-buying-guide-for-child-nutrition-programs)
- *Fruits & Vegetables Galore: Helping Kids Eat More (USDA):*  
[www.fns.usda.gov/tn/fruits-vegetables-galore-helping-kids-eat-more](http://www.fns.usda.gov/tn/fruits-vegetables-galore-helping-kids-eat-more)
- Healthy Meals Resource System :  
<http://healthymeals.nal.usda.gov/>
- *Measuring Success with Standardized Recipes (ICN):*  
<http://nfsmi-web01.nfsmi.olemiss.edu/ResourceOverview.aspx?ID=88>
- Menu Planning Tools :  
<https://healthymeals.nal.usda.gov/menu-planning/menu-planning-tools>
- *On the Road to Professional Food Preparation (ICN):*  
[www.nfsmi.org/ResourceOverview.aspx?ID=99](http://www.nfsmi.org/ResourceOverview.aspx?ID=99)
- Team Nutrition Resource Library (USDA):  
[www.fns.usda.gov/tn/resource-library](http://www.fns.usda.gov/tn/resource-library)
- USDA Food (Commodity) Resources:  
<https://healthymeals.nal.usda.gov/menu-planning/usda-food-commodity-resources>

The CSDE's handout, [Menu Planning Resources for School Meals](#), includes key menu planning resources for the NSLP and SBP. For additional resources and guidance, see the CSDE's [Menu Planning](#) Web page and the "Menu Planning and Food Production" section of the CSDE's "Resources for School Nutrition Programs" Web page.

## Calories

The dietary specifications require age-appropriate minimum and maximum calorie levels for lunches and breakfasts offered to each grade group. The calorie ranges apply on a weekly basis. Meals offered on average over the week must be within the specific calorie range for each grade group. Individual meals offered may be above or below the calorie range. The calorie ranges do not apply to meals selected by individual students. Student selections may be above or below the weekly ranges. For information on the calorie ranges for each grade group, see the NSLP and SBP meal patterns in [section 1](#).

### DEVIATIONS FOR DEVELOPMENTAL ISSUES

Schools are allowed, on a case-by-case basis, to offer age-appropriate meals to individual students in unique situations such as older or younger students who are placed in the grade group for developmental or other exceptional reasons. An example is a 16-year-old teen with developmental issues who is placed with students in grades K-5. The SFA must seek written permission from the CSDE prior to deviating from the required meal pattern for the prevalent grade group.

### STUDENTS WITH SPECIAL ENERGY NEEDS

The USDA designed the nutrition standards for school meals based on age-appropriate nutrition and physical activity habits of the average student. Meals for students with special energy needs such as athletes and pregnant teens, who may require additional calories and protein, must still meet the weekly calorie limits. Schools can provide opportunities for all students to select additional meal pattern components if meals do not exceed the weekly calorie limit. Students may obtain extra needed calories from other USDA meals such as breakfast and snack, and can also purchase additional a la carte foods. For more information, see the USDA's *Fact Sheet: Athletic Programs and Afterschool Meal Service* and *Fact Sheet: Calories in School Meals*.



## MEETING WEEKLY CALORIE RANGES

The daily and weekly servings of each food component in the lunch and breakfast meal patterns are intended to meet the minimum and maximum calories for each grade group. The strategies below assist menu planners with adjusting school menus that are not within the required weekly calorie ranges.

### Increasing Calories

When a school menu requires more calories to meet the minimum weekly calories, the menu planner should add calories from nutrient-dense foods, following the recommendations of the *Dietary Guidelines for Americans*. Nutrient-dense foods provide substantial amounts of naturally occurring vitamins, minerals and other nutrients with relatively few calories. Examples include fruits, vegetables, whole grains, low-fat or nonfat dairy products, lean meat, skinless poultry, fish, and eggs.



For best nutrition, additional calories should come from more servings of naturally nutrient-dense fruits, vegetables (especially the dark green, red/orange, and legumes subgroups) and whole grains. For example, menu planners can include more legumes (dry beans and peas) in school menus by:

- serving legume-based dishes instead of meat, poultry, or cheese dishes at least once a week;
- serving more legume side dishes such as three-bean salad, split pea or lentil soup, and hummus dip (pureed garbanzo beans) for cut-up vegetables;
- using whole or pureed beans to replace some or all of the meat in entree recipes, e.g., chili, burritos, and tacos; and
- adding legumes to commercial foods, e.g., kidney beans in Minestrone soup.

Meals can include larger amounts of any food component if the weekly menu does not exceed the weekly calorie limit and other dietary specifications. For more information, see “Second Servings” and “Extra Servings of Vegetables and Fruits” in [section 3](#).

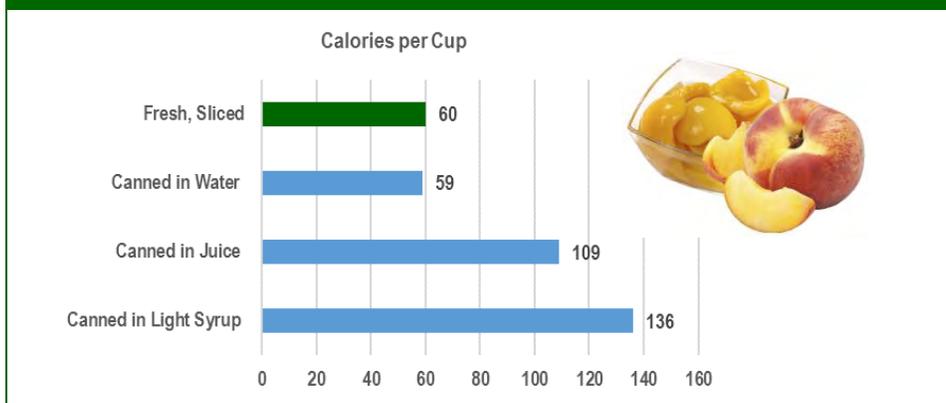
### Decreasing Calories

When school menus exceed the weekly calorie limit, menu planners should reduce the amount of noncreditable foods and limit creditable foods that are higher in saturated fats and added sugars. The recommendations below help menu planners decrease calories in school meals.

- Use low-fat dairy products.** The milk component of the lunch and breakfast meal patterns requires unflavored low-fat (1%) or unflavored or flavored fat-free milk. Menu planners can decrease calories and saturated fats in school recipes by using low-fat or fat-free milk instead of whole or reduced-fat (2%) milk, and substituting low-fat dairy products (e.g., low-fat cheese and low-fat or fat-free yogurt) for full-fat dairy products. For more information, see “Milk” and “Meat/Meat Alternates” in [section 2](#).
- Use whole or cut-up fruits and vegetables most often.** Whole fruits and vegetables are low in calories, high in nutrients, and do not contain any added fats, sugars, or salt. For more information, see “Fruits” and “Vegetables” in [section 2](#).
- Serve less juice.** Juice is more calorie dense than whole fruits and vegetables. For example,  $\frac{1}{2}$  cup of grape juice contains about 80 calories while  $\frac{1}{2}$  cup of fresh grapes contains about 52 calories. In addition, juice does not provide the same nutritional benefits as whole fruits. For more information, see “Fruits” in [section 2](#) and “Weekly Juice Limits at Lunch” and “Weekly Juice Limits at Breakfast” in [section 3](#).
- Serve less canned fruit.** Canned fruits in juice and light syrup contain more calories than whole fruits and canned fruits in water. Substituting whole fruits for canned fruits decreases calories and provides more nutrients. For example, peaches in juice and light syrup contain about twice the amount of calories as fresh peaches and canned peaches in water (see table 5-1).



Table 5-1. Calorie Content of Fresh and Canned Peaches



U.S. Department of Agriculture, Agricultural Research Service. 2014. USDA National Nutrient Database for Standard Reference, Release 27. <http://ndb.nal.usda.gov/>

- **Serve whole grains instead of WGR grains.** Whole grains generally contain more nutrients and less fat than processed grains. For best nutrition, menu planners should include 100 percent whole-grain foods most often, such as whole-wheat bread, quinoa, and brown rice. For more information, see “Identifying Whole Grains” in [section 2](#).
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- **Serve only the minimum daily and weekly requirements for meat/meat alternates.** Additional servings of meat/meat alternates provide more calories and may also provide more saturated fats and sodium. Other strategies to reduce calories from meat/meat alternates include:
    - limiting or eliminating processed meats such as luncheon meats, hot dogs, and sausage;
    - using only reduced-fat or low-fat cheese in recipes and only purchasing commercial products made with reduced-fat or low-fat cheese; and
    - writing purchasing specifications for the fat content (total fat, saturated fats and trans fats) of commercial meat/meat alternate products.
  - **Serve only the minimum daily and weekly requirements for grains.** Additional servings of grains provide more calories. Menu planners can also reduce calories by reducing the frequency of processed grains such as sweetened grain-based desserts.
  - **Limit the frequency and amount of noncreditable foods.** Noncreditable foods are foods and beverages that do not contribute to the meal patterns. They often contain little nutritional value and are often higher in fat, added sugars, and sodium. Examples include bacon, enriched white rice, potato chips, pudding, gelatin, ice cream, jam, maple syrup, butter, cream cheese, salad dressing, ketchup, mayonnaise, and mustard. For more information, see [section 2](#) and [appendix F](#).



For more information on the calorie maximums and tips to improve acceptance of school meals, see the USDA’s [Fact Sheet: Calories in School Meals](#).

## COMPLEX CARBOHYDRATES

## Increasing Calories with Complex Carbohydrates

The 2015-2020 *Dietary Guidelines for Americans* encourages increased consumption of complex carbohydrate foods such as whole grains, vegetables, legumes, fruits, nuts, and seeds. These foods are naturally rich in fiber and other nutrients and provide a variety of health benefits such as decreasing the risk of cardiovascular disease.

When a school menu does not provide the minimum weekly calories, the menu planner should add calories from additional servings of naturally nutrient-dense fiber-rich fruits, vegetables (especially the dark green, red/orange, and legumes subgroups), and whole grains.



To increase complex carbohydrates in school meals menu planners should adjust menus to:

- increase the frequency of whole-grains and cereals, e.g., whole-wheat pasta, whole-grain breads, oatmeal, bulgur, and brown rice;
- provide whole unprocessed or minimally processed fruits and vegetables most often;
- increase the frequency of legumes (dry beans and peas), e.g., such as kidney beans, lentils, black beans, lentils, split peas, and garbanzo beans (chickpeas);
- provide additional servings of vegetables and fruits, e.g., serving three kinds of fruits or vegetables instead of two; and
- increase the serving size of vegetables and fruits, as appropriate to the age group being served.

## FIBER CONTENT

The CSDE recommends providing minimally processed whole foods instead of processed convenience foods supplemented with fiber. Whole foods contain a large variety of naturally occurring nutrients and other health-enhancing compounds that cannot be duplicated in processed foods.

Food labels indicate the amount of fiber as “dietary fiber” in grams (g). The food label can state that a product is “a good source” of fiber if it contributes 10 percent of the Daily Value (2.5 grams of fiber per serving). The package can claim “high in,” “rich in,” or “excellent source of” fiber if the product provides 20 percent of the Daily Value (5 grams of fiber per serving).

Processed foods fortified with added fiber (such as cereal bars or cookies with added cellulose, inulin, or chicory root) are not nutritionally equivalent to nutrient-dense whole foods with naturally occurring fiber. Some processed convenience high-fiber foods such as breakfast cereals and snack bars may also contain added fat, sugars, and sodium. Read labels to compare nutrient content and ingredients (see [table 5-6](#)).

## COMPLEX CARBOHYDRATES

The following guidance assists school nutrition programs with meeting the weekly calorie ranges by increasing nutrient-dense fiber-rich complex carbohydrate foods through menu planning, purchasing, meal preparation, and modifying recipes. The foods and ingredients below may or may not credit in school meals. For more information, consult the USDA's *Food Buying Guide* and the CSDE's *Crediting Foods* Web page. For information on how to read a label, see table 5-6.

## MENU PLANNING

- Review recipes and commercial products for fiber content. Choose nutrient-dense foods that are naturally high in fiber.
- Plan menus to include more 100 percent whole-grain products than WGR products. For information on whole grains, see table 2-16 in section 2.
- Add more legumes (e.g., chickpeas, lentils, and pinto beans) and whole grains (e.g., barley, bulgur, and brown rice) to menus and recipes. To increase acceptability to students, plan nutrition education activities and taste tests around the new food items.
- Serve whole or cut-up fruits and vegetables most often.
- Serve a variety of raw vegetables regularly.
- Serve fresh fruits instead of canned fruits.
- Serve whole-grain pasta-vegetable salads made with low-fat dressings.
- Serve baked potatoes as an alternative to mashed potatoes.
- Serve more salads and offer a variety of vegetable and fruit ingredients.
- Serve fresh fruit or vegetables instead of fruit or vegetable juice. Juice is not nutritionally equivalent to whole fruits and vegetables, and provides more calories.
- Serve 100 percent whole-grain cold breakfast cereals and hot breakfast cereals (such as oatmeal or buckwheat) more often than WGR cereals.
- Serve applesauce or other fruit purees (e.g., strawberries) as an alternative to maple syrup on pancakes and waffles.
- Serve dried fruit such as raisins or a trail mix containing dried fruits and whole-grain low-sugar cereals.
- Serve legume-based dishes instead of meat, poultry, or cheese dishes at least once a week.
- Add vegetable-based soups to the menu. *Note: Only certain commercial vegetable-based soups are creditable. School-made soups credit based on the amount of vegetables in the standardized recipe. For more information, see "Soups" in section 2. Review commercial soups for sodium content.*



## COMPLEX CARBOHYDRATES

## PURCHASING

- Request that vendors provide nutrition information for all products. Read labels and ingredients to identify products that are naturally high in fiber.
- Compare brands before purchasing to determine if a comparable product is higher in fiber.
- Purchase a variety of fresh fruits and vegetables regularly.
- Purchase cruciferous vegetables frequently, such as broccoli, cauliflower, cabbage, and Brussels sprouts. 
- Purchase whole-grain products frequently. Write food specifications to include more 100 percent whole-grain foods, e.g., whole-grain bread products, oatmeal, quinoa, and brown rice. Make sure products received are the ones specified. For information on whole grains, see table 2-16 in [section 2](#). 
- Purchase legumes (dried beans and peas) frequently. For examples of legumes, see table 2-6 in [section 2](#).
- Purchase whole-grain foods instead of fiber-fortified processed foods. Read labels to compare nutrient content and ingredients. 
- Compare product information and purchase whole-grain breakfast cereals containing at least 2.5 grams of fiber per manufacturer's serving. At least 5 grams of fiber per serving is ideal.

## MEAL PREPARATION

- Add whole-grain pasta, brown rice, quinoa, and other whole grains to soups, stews, and casseroles.
- Sprinkle oat bran or wheat germ over salad, soups, breakfast cereals, and yogurt. *Note: Bran and germ add fiber to recipes but are not whole grains and do not credit toward the grains component in the NSLP and SBP. For more information, see "Noncreditable Grains" in [section 2](#).*
- Use crushed whole-grain unsweetened cereal or rolled oats as breading for baked fish and chicken.
- Serve fruits and vegetables with their skins.

## COMPLEX CARBOHYDRATES

## MODIFYING RECIPES

For information on how to modify recipes, see the ICN's *Measuring Success with Standardized Recipes* and *On the Road to Professional Food Preparation*.

- Substitute whole-grain brown rice, bulgur, and quinoa when recipes include white rice. *Note: Brown rice, bulgur and quinoa are whole grains and credit toward the grains component. White rice does not credit unless it is part of a WGR food. For more information, see "Whole-Grain-rich Requirement" in section 2.*
- Add chopped dried fruits (e.g., apricots, raisins, dates, figs, and prunes), finely chopped nuts, oatmeal, and pureed vegetables and fruits (e.g., canned pumpkin and applesauce) to baked goods. 
- Substitute whole-wheat or other whole-grain flours for some of the enriched white flour in recipes. *Note: Enriched white flour does not credit unless it is part of a WGR food. For more information, see "Whole-Grain-rich Requirement" in section 2.*
- Use whole-grain products (e.g., whole-grain bread, cracker crumbs or cereal) as a topping for casseroles or breading for chicken.
- Add rolled oats to entree recipes such as meatloaf, tacos, and meat sauce.
- Add lentils or bulgur to hamburger dishes. *Note: Lentils are a legume and credit toward either the vegetables or meat/meat alternates component (see "Legumes Credited as Vegetables" and "Legumes Credited as Meat/Meat Alternates" in section 2). Bulgur is a whole grain and credits toward the grains component.*
- Add legumes (whole, mashed, or pureed) such as kidney beans, lentils, black beans, and garbanzo beans (chickpeas) to entrees, stews, side dishes, and salads. For example, black beans added to burritos and lentils added to brown rice pilaf. *Note: Legumes credit toward either the vegetables or meat/meat alternates component (see "Legumes Credited as Vegetables" and "Legumes Credited as Meat/Meat Alternates" in section 2).* 
- Add legumes such as kidney beans and black beans to school-made and commercial soups, e.g., kidney beans added to minestrone soup. *Note: Legumes credit toward either the vegetables or meat/meat alternates component (see "Legumes Credited as Vegetables" and "Legumes Credited as Meat/Meat Alternates" in section 2). Only certain commercial vegetable-based soups are creditable. For more information, see "Soups" in section 2.*
- Add pureed beans to taco mix, meat sauce, and similar entrees. They will thicken the mixture and take on the flavor of the dish. *Note: Pureed beans credit as meat/meat alternates but not vegetables unless the food also contains an adequate amount of recognizable creditable vegetables. For information, see "Pureed Vegetables" under "Vegetables" in section 2.*



## COMPLEX CARBOHYDRATES

## MODIFYING RECIPES, continued

- Add rolled oats to entree recipes such as meatloaf and tacos.
- Increase the amount of whole grains (e.g., brown rice, quinoa, and whole-grain pasta) and vegetables in stews, soups, casseroles, and similar entrees.
- Make bread items such as French toast and garlic bread from 100 percent whole-grain bread.



## Decreasing Calories by Limiting Added Sugars

The 2015-2020 *Dietary Guidelines for Americans* recommends limiting added sugars to less than 10 percent of daily calories. This recommendation is intended to help people achieve a healthy eating pattern by meeting nutrient and food group needs through nutrient-dense food and beverage choices, and staying within calorie limits. Eating patterns that include lower intake of added sugars are associated with reduced risk of cardiovascular disease, obesity, type 2 diabetes, and some types of cancer.

Added sugars provide calories without any nutrients. Americans consume an average of almost 270 calories per day (more than 13 percent of daily calories) from added sugars. Intakes as a percent of calories are particularly high among children, adolescents, and young adults. Limiting foods with added sugars helps school menus stay under the required weekly calorie limit for each grade group.

Manufacturers often add sugars to foods in processing or preparation, most commonly as white table sugar (sucrose) and corn sweeteners. Beverages (soft drinks, fruit drinks, sweetened coffee and tea, energy drinks, alcoholic beverages, and flavored waters) account for almost half of all added sugars in the U.S. The other major source is snacks and sweets, which includes:

- grain-based desserts such as cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries;
- dairy desserts such as ice cream, other frozen desserts, and puddings;
- candies;
- sugars;
- jams;
- syrups; and
- sweet toppings.



Menu planners cannot determine the amount of added sugars from the food label because the Nutrition Facts panel currently lists total sugars (naturally occurring and added). However, in May 2016, the FDA announced several changes to the Nutrition Facts label that include listing added sugars in grams and as a percent Daily Value. Manufacturers must comply with these new requirements by July 26, 2018. Manufacturers with less than \$10 million in annual food sales have an additional year to make the changes. For more information, see [“Food Label Updates for 2018”](#) in this section and the FDA’s [“Changes to the Nutrition Facts Label.”](#)

In the meantime, menu planners can use the ingredients statement to provide an indication of the amount of added sugars in a product. The closer an ingredient is to the beginning of the list, the more of it the food contains. Names for common sugars and sweeteners are listed in table 5-2 under “Added Sugars.” A food is likely to be high in added sugars if one of these

ADDED SUGARS

names appears first or second in the ingredients statement or if several names are listed. School meals should consist of foods that are naturally nutrient rich and low in added sugars.

Table 5-2. Common Sugars and Sweeteners

ADDED SUGARS	ARTIFICIAL AND NONNUTRITIVE SWEETENERS *		
	Common Artificial Sweeteners	Sugar Alcohols	“Natural” Nonnutritive Sweeteners **
Brown rice syrup Brown sugar Corn sweetener Corn syrup Corn syrup solids Dextrin Dextrose Fructose Fruit juice concentrate Glucose High-fructose corn syrup Honey Invert sugar Lactose Malt syrup Maltose Molasses Maple syrup Nectars, e.g., peach nectar, pear nectar Raw sugar Sorghum syrup Sucrose Syrup	Acesulfame Potassium (Acesulfame-K, Sunett, Sweet & Safe, Sweet One) Aspartame (NutraSweet, Equal) Neotame Saccharin (Sweet and Low, Sweet Twin, <b>Sweet 'N Low Brown</b> , Necta Sweet) Sucralose (Splenda) Tagatose	Erythritol Isomalt Lactitol Maltitol Mannitol Sorbitol Xylitol Hydrogenated starch hydrolysates (e.g., hydrogenated glucose syrups, maltitol syrups and sorbitol syrups)	Stevia (Rebiana, Rebaudioside A, Truvia, PureVia, SweetLeaf)



\* Unless medically necessary, the CSDE does not recommend using foods that contain artificial sweeteners, nonnutritive sweeteners, or sugar alcohols as a replacement for high-sugar foods in CACFP meals. Choose nutrient-dense foods that are naturally low in sugars.

\*\* The term “natural” has not been defined by the FDA, and does not have any consistent meaning when used to describe foods or beverages.

## ADDED SUGARS

The following guidance assists school nutrition programs with meeting the weekly calorie ranges by reducing added sugars through menu planning, purchasing, meal preparation, and modifying recipes. These strategies will help menu planners reduce calories in school meals. The foods and ingredients below may or may not credit in school meals. For more information, consult the USDA's *Food Buying Guide* and the CSDE's *Crediting Foods* Web page. For information on how to read a label, see [table 5-6](#).

## MENU PLANNING

- Review recipes and commercial products for sources of added sugars (see [table 5-2](#)) and choose foods lowest in added sugars.
- Increase the frequency of 100 percent whole-grain foods and fresh vegetables and fruits instead of processed high-sugar foods.
 
- Instead of dessert, serve whole fruits or unsweetened cooked fruit such as baked apples with raisins. Add spices like cinnamon, nutmeg, cloves, and allspice to enhance the flavor of cooked fruit.
- Eliminate or limit sweetened grain-based foods such as cakes with frosting, cobblers, cookies, doughnuts, sweet rolls, toaster pastries, and coffee cake. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see "Limit for Grain-based Desserts" in [section 2](#)).*
- Eliminate or limit highly sweetened breakfast cereals. Replace with low-sugar whole-grain cereals.
- Compare product information and purchase low-sugar whole-grain breakfast cereals containing at least 2.5 grams of fiber per manufacturer's serving. At least 5 grams of fiber per serving is ideal.
- Serve whole fruits instead of desserts.
- If serving dessert, choose foods made with less sugar and more nutritious ingredients like whole-wheat flour, oatmeal, chopped nuts, peanut butter, and fruits and vegetables, e.g., pumpkin, zucchini, cranberries, raisins, and carrots. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see "Limit for Grain-based Desserts" in [section 2](#)).*
- Replace foods containing high levels of sugars with those containing moderate levels of sugars.
- Limit servings of high-sugar foods such as gelatin, jams, jellies, syrups, and sweet toppings.
 

## ADDED SUGARS

## PURCHASING

- Request that vendors provide nutrition information for all products. Read labels and ingredients to determine if products contain added sugars (see table 5-2). Compare brands before purchasing to determine if a comparable product is lower in added sugars.
- Write food specifications to include food items without added sugars and sweeteners (see table 5-2). Make sure the products received are the ones specified.
- Purchase whole-grain breakfast cereals that are unsweetened or low in sugar.
- Compare nutrition information for condiments such as salad dressings and barbecue sauce. Some are high in sugar.
- Purchase foods that are low in added sugars.
- Purchase canned fruit packed in natural juices or water instead of syrup.
- Purchase frozen fruit without added sugar.
- Purchase dried fruit without added sugar.
- Purchase vanilla or lemon yogurt as an alternative to higher-sugar fruit flavors or mix half plain yogurt and half fruited yogurt.
- Avoid snack or convenience foods with sugars listed as the first three ingredients (see table 5-2).



## ADDED SUGARS

## MEAL PREPARATION

- Do not add sugars or sweeteners to recipes when they are not listed as an ingredient.
- Compare recipes and use those that are lowest in sugars and sweeteners.

## MODIFYING RECIPES

For information on how to modify recipes, see the ICN's *Measuring Success with Standardized Recipes* and *On the Road to Professional Food Preparation*.

- Use cinnamon and vanilla to increase the sweet flavor of a food, while reducing the sugar content.
- If serving cake, sprinkle with powdered sugar or top with fruit instead of frosting or icing. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see "Limit for Grain-based Desserts" in section 2).*
- Replace canned pie fillings with unsweetened, spiced cooked fruit when making cobblers or pies.
- Reduce sugar in baked goods. Usually the amount of sugar can be reduced by one-third to one-half without altering the flavor. Adding spices, dried fruits, vanilla, lemon zest, and other similar ingredients can make up for missing sugar. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see "Limit for Grain-based Desserts" in section 2).*



## Limiting Saturated and Trans Fats

The 2015-2020 *Dietary Guidelines for Americans* recommends limiting saturated fats to less than 10 percent of daily calories. Replacing saturated fats with unsaturated fats, especially polyunsaturated fats, is associated with reduced blood levels of total cholesterol and low-density lipoprotein (LDL) cholesterol, and a reduced risk of cardiovascular events (heart attacks) and related deaths.

The 2015-2020 *Dietary Guidelines for Americans* recommends keeping trans fats consumption as low as possible by limiting foods that contain artificial sources of trans fats, such as partially hydrogenated oils in margarines, and by limiting other solid fats. Trans fats increase the risk of cardiovascular disease by raising LDL cholesterol.

**The USDA dietary specifications require that school meals contain less than 10 percent of calories from saturated fats based on the menu's weekly average.**

### SATURATED FATS

All dietary fats contain a mix of both saturated and unsaturated fats. Most animal foods are high in saturated fats, except for fish. Most plant foods are high in unsaturated fats, except for coconut oil, palm oil, and palm kernel oil.

- Fats with a higher amount of saturated fatty acids are usually solid at room temperature and are referred to as “solid fats.” Fats containing trans fatty acids are also classified as solid fats, although they may or may not be solid at room temperature.
- Fats with a higher amount of polyunsaturated and monounsaturated fatty acids are usually liquid at room temperature and are referred to as “oils.”



Table 5-3 shows some examples of types of fats. Menu planners can help school nutrition programs comply with the dietary specifications by switching from saturated fats such as butter, stick margarine, and shortening to healthier monounsaturated or polyunsaturated oils, e.g., canola, corn, olive, safflower, sesame, soybean, and sunflower.

Mixed dishes, especially those dishes containing cheese, meat, or both (including burgers, sandwiches, and tacos; rice, pasta, and grain dishes; pizza; meat, poultry, and seafood dishes; and soups), are the major source (35 percent) of saturated fats in the United States. Other food categories that provide saturated fats are snacks and sweets, protein foods, and dairy products. Menu planners can have the greatest impact on reducing saturated fats in school meals through careful purchasing, e.g., comparing product nutrition labels and writing specifications for foods that are lower in saturated fats and do not contain partially hydrogenated oils.

SATURATED (SOLID) FATS		UNSATURATED FATS	
Beef fat (tallow, suet)	Palm oil	Monounsaturated	Polyunsaturated
Butter	Palm kernel oil	Canola	Soybean
Chicken fat	Partially hydrogenated	Olive	Corn
Coconut oil	oils (contain trans	Safflower	Cottonseed
Cream	fats)		Sunflower
Hydrogenated oils	Pork fat (lard)		
Milk fat	Shortening		
	Stick margarine		

**The USDA dietary specifications require that Nutrition Facts labels and manufacturer specifications indicate zero grams of trans fats per serving for all food products and ingredients used to prepare school meals.** Menu planners must obtain this information from the manufacturer. Nutrient databases cannot be used to determine trans fats values for foods used in school meals because nutrient databases do not currently have complete data for trans fats.

## TRANS FATS

Trans fats are unsaturated fats that are structurally different from the unsaturated fatty acids that occur naturally in plant foods. Most trans fats are artificially made as the result of “hydrogenation,” a manufacturing process where liquid vegetable oils are made into a solid (saturated) fat to increase shelf life. Sources of trans fats include partially hydrogenated vegetable oils used in processed foods such as desserts, microwave popcorn, frozen pizza, some margarines, and coffee creamer. Eliminating processed foods with partially hydrogenated oils will significantly lower children’s trans fats intake.

Trans fats are also present naturally in foods that come from ruminant animals (e.g., cattle and sheep), such as dairy products, beef, and lamb. Because natural trans fats are present in dairy products and meats in only small quantities and these foods can be important sources of nutrients, the *Dietary Guidelines* does not recommend eliminating these foods from the diet.

The current Food and Drug (FDA) labeling regulations ([21 CFR 101.9](#)) allow food labels to state “0 grams” of trans fats if the serving contains less than 0.5 grams, even if the food contains artificial trans fats. In November 2013, the FDA announced a proposal to remove partially hydrogenated oils from the “generally recognized as safe” (GRAS) list, and thereby eliminate most trans fats from the food supply.

Total Fat	2g	5%
Saturated Fat	0.5g	29%
Trans Fat	0g	6%
Cholesterol	700mg	4%
Sodium	15mg	
Total Carbohydrate	19g	
Dietary Fiber	1g	
		Vitamin
		Iron

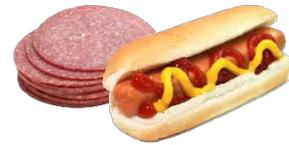
In June 2015, the FDA issued *Final Determination Regarding Partially Hydrogenated Oils* (80 FR 34650), indicating that partially hydrogenated oils are not GRAS for any use in human food. Manufacturers must remove artificial trans fats from all products by June 18, 2018. In the meantime, the CSDE strongly encourages menu planners to read labels and select food products without any partially hydrogenated oils.

To meet the USDA’s dietary specifications for saturated and trans fats, menu planners must be careful to limit foods with solid fats (see [table 5-3](#)). Limiting solid fats also helps to lower total fat and cholesterol content, and keep school meals within the weekly calorie range for each grade group.

The following guidance provides strategies to assist school nutrition programs with reducing saturated fats and eliminating artificial trans fats through menu planning, purchasing, meal preparation, and modifying recipes. The foods and ingredients below may or may not credit in school meals. For more information, consult the USDA’s *Food Buying Guide* and the CSDE’s *Crediting Foods* Web page. For information on how to read a label, see [table 5-6](#).

## MENU PLANNING

- Review recipes and commercial products for saturated fats. Commercial convenience items and snack foods are often high in saturated fats.
- Review Nutrition Facts labels and manufacturer specifications for all food products and ingredients to ensure they indicate zero grams of trans fats per serving.
- To eliminate trans fats, read product ingredient lists and avoid products that contain partially hydrogenated oils.
- Increase servings of legumes, fruits, vegetables, and whole grains. *Note: Legumes credit toward either the vegetables or meat/meat alternates component (see “Legumes Credited as Vegetables” and “Legumes Credited as Meat/Meat Alternates” in section 2). For information on determining if a product is whole grain, see “Identifying Whole Grains” under “Grains” in section 2.*
- Plan only enough meat or meat alternate to meet the minimum daily and weekly serving size requirement for each grade group.
- Limit use of convenience foods and foods prepared from scratch that are higher in saturated fats.
- Limit frequency of processed meats such as luncheon meats, hot dogs, and sausage. *Note: Meat products with binders and extenders credit based on the actual amount of meat without the weight of the binders and extenders (see “Binders and Extenders” in section 2).*
- Eliminate or limit the amount of full-fat cheese served. Replace with low-fat or reduced-fat 100 percent natural cheese.
- Limit servings of battered or breaded foods that are fried in fat during processing including foods that are “set in breading” (deep fried just long enough to set the breading).
- Use broth-based soups instead of cream-based soups or prepared bases. *Note: Only certain commercial vegetable-based soups are creditable. For more information, see “Soups” in section 2.*



## MENU PLANNING, continued

- Eliminate or limit high-fat foods such as cookies, cake, doughnuts, and brownies and modify recipe ingredients to lower fat content. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see “Limit for Grain-based Desserts” in section 2).*
- Offer mustard, ketchup, and low-fat mayonnaise as alternatives to high-fat spreads such as regular mayonnaise. *Note: Read labels for sodium content (see “Limiting Sodium” in this section).*
- Offer low-fat or fat-free salad dressings instead of regular full-fat varieties. *Note: Read labels for sodium content (see “Limiting Sodium” in this section).*



## PURCHASING

- Request that vendors provide nutrition information for all products. Read labels to determine the amount of saturated fats per serving. Compare brands before purchasing to determine if a comparable product is lower in saturated fats.
- Read labels and ingredients to determine trans fats content. Be sure all food products and ingredients used to prepare school meals contain zero grams of trans fats per serving.
- Write food specifications to include the amount of saturated and trans fats per serving, e.g., specify zero trans fats and the percentage of saturated fats for entree items, side dishes, and snack foods. To eliminate trans fats, specify that products cannot contain any partially hydrogenated oils. Make sure products received are the ones specified.
- Purchase ground chicken or turkey (without skin) to mix with or substitute for lean ground beef.
- Limit purchases of processed meats, e.g., hotdogs and deli meats. If purchased, specify reduced-fat products. *Note: Meat products with binders and extenders credit based on the actual amount of meat without the weight of the binders and extenders (see “Binders and Extenders” in section 2).*
- Purchase leaner meats, e.g., ground beef with no more than 15 percent fat.
- Purchase tuna packed in water instead of oil.
- Avoid products with animal fat (lard), saturated vegetable oils (coconut oil, palm oil, and palm kernel oil), hydrogenated shortening, and stick-type margarine.

## PURCHASING, continued

- Purchase lean ham as a substitute for bacon or sausage. *Note: Bacon is not creditable as a meat/meat alternate (see “Noncreditable Meat/Meat Alternates” in section 2). Meat products with binders and extenders credit based on the actual amount of meat without the weight of the binders and extenders (see “Binders and Extenders” in section 2).*
- Purchase low-fat mayonnaise and salad dressings and avoid commercial barbecue sauces and canned sauces. *Note: Read labels for sodium content (see “Limiting Sodium” in this section).*
- Purchase lower fat whole-grain breads (e.g., bagels, pita bread, corn tortillas, and English muffins) most often, instead of higher fat grain products such as muffins, croissants, doughnuts, Danish pastries, and sweet rolls. Purchase 100 percent whole-grain products most often. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see “Limit for Grain-based Desserts” in section 2). For information on determining if a product is whole grain, see “Identifying Whole Grains” under “Grains” in section 2.*
- Instead of full-fat cheese, purchase low-fat or reduced-fat natural cheese and products made with these cheeses, e.g., pizza with part-skim mozzarella cheese instead of regular mozzarella.
- Limit use of convenience and prepared food items that are higher in saturated fats. Compare nutrition information for processed foods such as pizza and hot dogs. A different brand of the product may contain less fat.
- Purchase soft margarine, which is lower in saturated fats than stick margarine and butter. Compare brands and choose margarine that has no trans fats and is highly polyunsaturated.
- If using commercial baking mixes such as muffins and pancakes, purchase products to which fat must be added so the type and amount of fat can be controlled.



## MEAL PREPARATION

- Prepare items from scratch to control the type and amount of fat.
- Avoid frying foods. Bake, broil, steam, poach, braise or stir-fry.
- Brown meats by broiling or cooking in nonstick pans with little or no oil.
- Instead of basting with fat, baste or coat foods with herbs, seasonings, broth, fruit juices, or an oil-based marinade made from an oil low in saturated fats, e.g., canola, corn, olive, safflower, sesame, soybean, and sunflower.
- Use nonstick cooking spray instead of oil or shortening for braising and sautéing.
- Roast meat, poultry, and fish on a rack so fat will drain off. Completely drain fat from precooked ground meats. Drain in a colander or use a meat baster to remove fat that has cooked out of product.
- To thicken gravies and sauces without adding fat, mix cornstarch with a small amount of cold water to make a slurry. Slowly stir this mixture into the liquid to be thickened and bring back to a boil. Cornstarch can also be used to replace a roux (a butter-flour mixture used for thickening). Use an amount of cornstarch equal to one-half the amount of flour indicated.
- Reduce ground beef in chili and similar entrees by half, and add more beans.  
*Note: Legumes credit toward either the vegetables or meat/meat alternates component (see “Legumes Credited as Vegetables” and “Legumes Credited as Meat/Meat Alternates” in section 2).*
- Cook soups, stews, sauces, broths, and boiled meat ahead of time. Refrigerate and remove congealed fat. Make gravies after fat has hardened and is removed from liquid.
- Replace shortening and butter in recipes with soft margarine (liquid oil should be the first ingredient and trans fats must be zero) or vegetable oil. Choose oils low in saturated fats such as canola, corn, olive, safflower, sesame, soybean, and sunflower.
- Reduce the amount of cheese in entree items (e.g., ¼ ounce instead of ½ ounce) and increase the amount of lean meat or meat alternates if needed to meet the minimum daily serving for the meat/meat alternates component.



## MEAL PREPARATION, continued

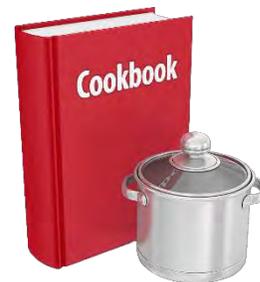
- Make casserole toppings by reducing cheese and combining with dry whole-grain bread crumbs and herbs. Boost cheese flavor with enhancers such as dry mustard and lemon juice.
- Use low-fat (1%) or fat-free milk in recipes instead of reduced-fat (2%) or whole milk.
 
- For sauces and dressings, use low-calorie bases such as vinegar, mustard, tomato juice, and fat-free bouillon instead of high-calorie bases such as creams, fats, oils, and mayonnaise. *Note: Read labels for sodium content (see “Limiting Sodium” in this section).*
- Cut mayonnaise with low-fat yogurt (up to half).
- Use only enough low-fat salad dressing to lightly coat salad. *Note: Read labels for sodium content (see “Limiting Sodium” in this section).*
- Use the leanest cuts of meat and trim away all fat. Remove all fat and skin from poultry.
- Prepare cooked vegetables without added fat, e.g., butter, margarine, or oil. Use herbs and spices to boost flavor.
- When sautéing or stir-frying, use only a small amount of vegetable oil. Choose oils that are low in saturated fats, e.g., canola, corn, olive, safflower, sesame, soybean, and sunflower.
- Use nonstick skillet and baking pans when possible.
- For baked goods or other foods, use pan liners and nonstick cooking spray instead of greasing sheet pans.
- Use nonstick cooking spray instead of oil when pan-frying or sautéing foods.
- Brush breads and rolls with egg white or fat-free or low-fat milk instead of butter before baking to improve browning.
 



## MODIFYING RECIPES

For information on how to modify recipes, see the ICN's *Measuring Success with Standardized Recipes* and *On the Road to Professional Food Preparation*.

- Substitute ground turkey or chicken (without skin) for half of the ground beef in recipes such as chili, spaghetti, lasagna, and meat loaf.
- Reduce fat in recipes by as much as half, starting with one-quarter less fat and testing the recipe.
- Substitute vegetable oil or margarine for butter. Choose margarine brands that are lowest in saturated fats and contain zero grams of trans fats per serving.
- Replace one-quarter of ground meat with mashed beans, e.g., Great Northern beans in tacos. *Note: Legumes credit toward either the vegetables or meat/meat alternates component (see "Legumes Credited as Vegetables" and "Legumes Credited as Meat/Meat Alternates" in section 2).*
- Substitute low-fat yogurt, applesauce, or plum or prune puree for oil, shortening, margarine, or butter in recipes for baked goods. Generally, the amount of fat can be reduced by half and fruit products can be substituted for an equal amount of fat in muffin or quick bread recipes. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see "Limit for Grain-based Desserts" in section 2)*
- Substitute low-fat cheese such as ricotta, farmer, cottage, or mozzarella for regular cheese in recipes.
- Eliminate fat from recipes when possible. For example, instead of sautéing onions in oil for spaghetti sauce, cook the onions in the sauce.
- Substitute two egg whites for one whole egg in recipes or use an egg substitute product. *Note: Egg whites and egg substitutes do not credit as meat/meat alternates. If used as an ingredient, the recipe must be evaluated for compliance with the meal pattern requirements.*
- Make pizza with lean ham or Canadian bacon instead of sausage or pepperoni. *Note: Dried pepperoni credits only when used as a topping on CN labeled pizza (see "Dry Meats" in section 2).*
- Make low-fat recipe substitutions such as:
  - low-fat or fat-free yogurt or low-fat or fat-free sour cream for sour cream;
  - cocoa powder for chocolate;
  - nonfat milk or nonfat dry milk for whole and reduced-fat milk; and
  - part-skim mozzarella cheese for regular mozzarella.



## Limiting Sodium

The 2015-2020 *Dietary Guidelines for Americans* recommends limiting daily sodium intake to 2,300 milligrams for children ages 14 and older, and adults. The sodium limits for younger children are 1,500 milligrams for ages 1-3, 1,900 milligrams for ages 4-8, and 2,200 milligrams for ages 9-13.

On average, Americans ages 1 year and older consume 3,440 milligrams of sodium per day. A high-sodium diet increases the risk of high blood pressure in individuals who are sodium sensitive. Keeping blood pressure in the normal range reduces the risk of heart disease, congestive heart failure, and kidney disease.

**The USDA dietary specifications for school meals require gradual reductions in sodium levels to meet specific targets for sodium over the next ten years.** The USDA recognizes that it is difficult to achieve substantial reductions in sodium immediately. Therefore, breakfasts and lunches are required to meet two intermediate sodium limits before the final limit. The first target is required for school year 2014-15, the second target for school year 2017-18, and the final target for school year 2022-23. Prior to implementing the second and final sodium targets, the USDA will evaluate relevant data on the relationship between sodium intake and health. The specific sodium targets for breakfast and lunch are contained in [appendix B](#).

Sodium is found in almost all food categories. Food manufacturers use sodium extensively in processed foods as a flavor and color enhancer, binder, preservative, and stabilizer. Sodium content varies even among very similar products, due to the way foods are processed and prepared.

Mixed dishes account for almost half of the sodium consumed in the United States, including:

- burgers, sandwiches, and tacos;
- rice, pasta, and grain dishes;
- pizza;
- meat, poultry, and seafood dishes; and
- soups.



The foods in many of these categories are often commercially processed or prepared. Other high-sodium food categories include protein foods, dairy, sweets and snacks, vegetables, and accompaniments such as condiments, gravies, spreads, and salad dressings.

Menu planners can have the greatest impact on reducing sodium in school meals through careful purchasing, e.g., comparing product nutrition labels and specifying foods that are lower in sodium. Foods containing 20 percent or more of the Daily Value for sodium are high in sodium and should be limited in school menus.

The following guidance provides strategies to assist school nutrition programs with reducing sodium through menu planning, purchasing, meal preparation, and modifying recipes. The foods and ingredients below may or may not credit in school meals. For more information, consult the USDA's *Food Buying Guide* and the CSDE's *Crediting Foods* Web page, and the USDA's Web site, *What's Shaking: Creative Ways to Boost Flavor with Less Sodium*. For information on how to read a label, see [table 5-6](#).

## MENU PLANNING

- Review recipes and commercial products for sodium content.
- When the menu includes entrees that are higher in sodium, plan low-sodium foods to accompany them, e.g., fresh fruits and vegetables with a breaded chicken patty.
- Serve smaller portions of high-sodium foods.
- Eliminate or limit high-sodium foods such as bacon, pickles, olives, and sauerkraut. *Note: Bacon does not credit as a meat/meat alternate.*
- Eliminate processed meats such as luncheon meats, hot dogs, and sausage, or limit to no more than one serving per week. *Note: Meat products with binders and extenders credit based on the actual amount of meat without the weight of the binders and extenders (see "Binders and Extenders" in [section 2](#)).*
- Limit ingredients that contain sodium in CACFP meals and recipes, e.g., baking powder, baking soda, sodium nitrite, MSG, and soy sauce.
- Use fresh vegetables instead of canned when possible.
- Use low-fat or reduced-fat low-sodium natural cheeses (e.g., brick, cheddar, Colby, Monterey Jack, mozzarella, Muenster, provolone, and Swiss) instead of processed cheeses, e.g., pasteurized process cheese food, pasteurized process cheese spread, and pasteurized process cheese product.
- Plan more menu items that are made from scratch to control the amount of added salt.
- Plan unprocessed whole foods more frequently, e.g., fruits, vegetables (especially dark green and orange vegetables and legumes), grains, low-fat dairy, and lean meats.
- Keep table salt and high-sodium condiments away from serving and dining areas.



## PURCHASING

- Request that vendors provide nutrition information for all products. Read labels and ingredients to determine sodium content. Compare brands before purchasing to determine if a comparable product is lower in sodium.
- Write food specifications for no or low sodium in food products. Make sure products received are the ones specified.
- Purchase lower sodium varieties of foods such as tomato products, canned vegetables, and soup. *Note: Only certain commercial vegetable-based soups are creditable. For more information, see “Soups” in section 2.*
- Purchase fresh and frozen vegetables most often. When purchasing canned vegetables, specify low or no sodium.
- Reduce purchases of commercially prepared convenience foods and prepare more foods from scratch. Convenience foods are the greatest source of sodium in school meals.
- Purchase spices and herbs to use instead of salt and seasonings that contain salt.
- Purchase seasoning powders (e.g., garlic and onion) instead of seasoning salts.
- Purchase unsalted or reduced-salt crackers instead of traditional crackers.
- Purchase old-fashioned cooked cereals (e.g., rolled oats) instead of instant cooked cereals that are high in salt.



## MEAL PREPARATION

- If canned vegetables contain added salt, rinse under cold running water for two to three minutes before heating.
- Do not add salt to boiling water when cooking pasta, vegetables, or cereal grains.
- Do not add additional salt to recipes. Eliminate or reduce the amount of added salt when possible.
- Use fresh or frozen vegetables instead of canned vegetables in a recipe.
- Keep table salt and high-sodium condiments off the serving line.
- Make cakes, biscuits, pancakes, and desserts from scratch instead of using prepared mixes. *Note: Grain-based desserts are limited to no more than 2 ounce equivalents per week in the NSLP (see “Limit for Grain-based Desserts” in section 2).*
- Avoid recipes that contain substantial amounts of baking soda or baking powder.
- Use spices and herb blends creatively in place of salt.
- Use seasoning powders instead of seasoning salts, e.g., garlic and onion.



## MODIFYING RECIPES

For information on how to modify recipes, see the ICN's *Measuring Success with Standardized Recipes* and *On the Road to Professional Food Preparation*.

- Review recipes and reduce or eliminate the amount of high-sodium ingredients or added salt when possible.



## Using Food Labels

Food labels can help menu planners choose foods and plan menus to meet the USDA's dietary specifications. The Nutrition Facts panel and ingredients statement appear on almost all packaged foods. Menu planners can use this information to compare the nutritional value of similar foods, for example, choosing products without trans fats and with less saturated fats, sodium, and added sugars.

Food labels can also help budget and balance the amount of nutrients in school menus and identify good sources of fiber, vitamins and minerals. For example, if a school menu includes a food that is high in fat, sugar, or sodium, food labels can help the menu planner choose other foods that are low in these same nutrients to balance the overall menu.



### DETERMINING MEAL PATTERN COMPLIANCE

Menu planners cannot use the Nutrition Facts label and ingredients statement to determine a product's compliance with the NSLP and SBP meal patterns because they do not provide sufficient information. Meal pattern compliance can only be determined by reviewing either:

- an original label CN label from the product carton for meat/meat alternate products (see [appendix G](#)); or
- a PFS signed by an official of the manufacturer (see [appendix H](#)).

For additional guidance on accepting product documentation, see the CSDE's handout, *Accepting Processed Product Documentation*, and [Operational Memo 10-15](#), *Guidance for Accepting Processed Product Documentation for Meal Pattern Requirements*.

### INGREDIENTS STATEMENT

Ingredients on product labels are listed by weight, from most to least. The closer an ingredient is to the beginning of the list, the more of it the food contains.

The ingredients statement provides important information for school nutrition programs. It assists menu planners with determining whether foods meet the USDA's WGR criteria for grains (see "WGR Requirement" in [section 2](#)). It also provides information for accommodating students with special dietary considerations such as food allergies. Knowing how to read a food label helps avoid problems caused by ingredients in food. For more information on food allergies, see the CSDE's [Special Diets](#) Web page and *Accommodating Special Dietary Needs in School Nutrition Programs*.

## NUTRIENT CONTENT CLAIMS

Many food labels include nutrient content claims such as “low fat,” “lean,” or “high in fiber.” FDA regulations define these descriptions. They are based on a standard single-serving size set by the FDA and mean the same thing for all foods regardless of manufacturer.



While the Nutrition Facts panel is required by law, nutrition descriptions are optional. Food manufacturers decide whether to include these terms. Table 5-4 includes definitions for commonly used nutrient content claims. For additional information on nutrient content claims, see the FDA’s *Guidance for Industry, A Food Labeling Guide — Appendix A: Definitions of Nutrient Content Claims* and *Appendix B: Additional Requirements for Nutrient Content Claims*.

Table 5-4. Common Nutrient Claims on Food Labels

**Extra lean:** A serving of meat, poultry, seafood and game meats contains less than 5 grams of fat, 2 grams of saturated fats, and 95 milligrams of cholesterol.

**Free:** A serving contains none or a very small amount, e.g., less than 5 calories, less than 5 milligrams sodium, less than 0.5 gram of total fat, less than 0.5 gram of saturated fats, less than 0.5 gram of trans fats, less than 2 milligrams of cholesterol, and less than 0.5 gram of sugar. Other terms that may be used include “no,” “zero,” “without,” “trivial source of,” **“negligible source of,” “dietarily insignificant source of,” and “non”** (nonfat only).

**Fresh:** 1) A food is raw, has never been frozen or heated and contains no preservatives; or 2) the term **accurately describes the products, for example, “fresh milk” or “freshly baked bread.”**

**Fresh frozen:** The food has been quickly frozen while still fresh. Blanching is allowed before freezing to prevent nutrient breakdown.

**Good source:** A serving contains 10-19 percent of the Daily Value (compared with a standard serving size of the **traditional food**) **for a particular nutrient, for example “good source of fiber.”** Other terms that may be used include **“contains” and “provides.”**

**Healthy:** A food is low in fat (3 grams or less) and saturated fats (1 gram or less and 15 percent or less of calories) and a serving contains no more than 480 milligrams of sodium, 60 milligrams of cholesterol, and at least 10 percent of the daily value for vitamin A, vitamin C, calcium, iron, protein, and fiber.

**High:** A serving contains 20 percent or more of the Daily Value (compared with a standard serving size of the **traditional food**) **for a particular nutrient, for example, “high in vitamin C,” “high fiber,” and “high calcium.”** Other terms that may be used include **“excellent source of” and “rich in.”**

**Lean:** A serving of meat, poultry, seafood and game meats contains less than 10 grams of fat, 4.5 grams or less of saturated fats, and less than 95 milligrams of cholesterol.

**Less:** The food contains 25 percent less of a nutrient or 25 percent fewer calories than a reference food.

Table 5-4. Common Nutrient Claims on Food Labels, Continued

**Light:** A food with one-third fewer calories or 50 percent of the fat in a traditional food. A low-calorie, low-fat food with 50 percent less sodium can also be called “light.” Another term that may be used is “lite.”

**Low:** A serving contains no more than 40 calories, 140 milligrams of sodium, and 3 grams of fat. Other terms that may be used include “few” (calories), “contains a small amount of,” “low source of,” “low in,” “little,” and “a little.”

**Organic:** A regulatory term for food that meets specific standards set by the USDA. Organic food differs from conventionally produced food in the way it is grown or produced. However, the USDA makes no claims that organically produced food is safer or more nutritious than conventionally produced food. For more information, see the [Glossary](#).

**More:** A serving contains 10 percent or more of the Daily Value (compared with a standard serving size of the traditional food) for a particular nutrient, for example “more fiber,” or “more iron.” This term does not apply to meat or poultry products. Other terms that may be used include “enriched,” “fortified,” “added,” “plus,” and “more.”

**Percent (%) fat free:** A product must be low fat or fat free and the percentage must accurately reflect the amount of fat in 100 grams of a food. For example, 2.5 grams of fat in 50 grams of food results in a “95% fat-free” claim.

**Natural:** For the purposes of food labeling, “natural” means that the food does not contain added colors, artificial flavors, or synthetic substances. However, it does not necessarily mean that a product is healthier or more nutritious. While the FDA allows manufacturers to use this term if a product meets these requirements, the FDA has not developed a definition for use of the term natural or its derivatives.

**Reduced:** A serving contains 25 percent less of a nutrient (e.g., fat, saturated fats, cholesterol, sodium) or 25 percent fewer calories than a comparable food. “Reduced” cannot be used if the reference food already meets the requirement for a “low” claim. Other terms that may be used include “reduced in,” “\_\_\_% reduced,” “fewer,” “lower,” “lower in,” and “less.”

Source: *Guidance for Industry, A Food Labeling Guide*. FDA, Revised January 2013.

## HEALTH CLAIMS

The FDA allows manufacturers to make certain claims linking the effect of a nutrient or food to a disease or health-related condition. The FDA only allows claims supported by scientific evidence. These claims can only be used under certain conditions, such as when the food is an adequate source of the appropriate nutrients. A reference to the claim usually appears on the front label, but the claim itself may appear elsewhere on the label. For more information on allowable health claims, see the FDA’s *Guidance for Industry A Food Labeling Guide — Appendix C: Health Claims*.

For information on using the whole grain health claim to determine whether a product meets the USDA’s WGR requirement, see “WGR Requirement” in [section 2](#).

## SERVING SIZES

Serving sizes on food labels are listed in household measures (e.g., cups, ounces) and metric measures (e.g., grams). Table 5-5 shows some common abbreviations and equivalents for serving sizes on food labels.

Table 5-5. Common Abbreviations and Equivalents for Food Labels

1,000 milligrams (mg) = 1 gram (g)
28.35 grams (g) = 1 ounce (oz)
16 ounces (oz) = 1 pound (lb)
2 tablespoons (Tbsp) = 1 ounce (oz)

The FDA determines serving sizes for food labels based on commonly used portions, which are called the “reference amounts customarily consumed” (RACC). This allows for consistency in comparing the nutritional value of similar products from different manufacturers. For more information, see the FDA’s [Frequently Asked Questions for Industry on Nutrition Facts Labeling Requirement](#).

The nutrient values listed on the food label are based on the stated serving size. The portion size actually eaten may be more or less than the serving size on the label. Menu planners may need to adjust these values based on the USDA meal pattern serving size. For example, if a label indicates that one serving (1 cup) of vegetable juice provides 885 milligrams of sodium, a ½-cup portion contains half this amount (443 milligrams).

The serving size on a food label may differ from the required serving size for the NSLP and SBP meal patterns. For example, the label may indicate that one serving of a food is ¼ cup, but the school menu may require a serving size of ½ cup to meet the meal pattern requirements. Schools must always provide at least the minimum amount of food required by the USDA’s meal patterns. For more information on the NSLP and SBP meal patterns, see (see [section 1](#)).

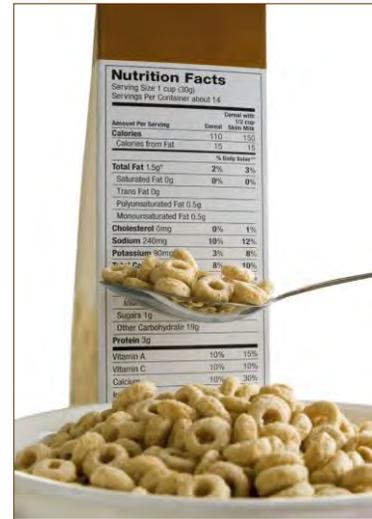
Note: The serving size information on the Nutrition Facts label will change effective July 26, 2018. For more information, see “[Food Label Updates for 2018](#)” in this section.



## NUTRIENTS LISTED

The Nutrition Facts panel includes only a few of the many nutrients found in foods. These are the nutrients that are most important to Americans' health. Unless their amounts are insignificant, labeling regulations require that the following nutrients are listed:

- fat;
- saturated fats;
- trans fats;
- cholesterol;
- total carbohydrate;
- dietary fiber;
- sugars;
- protein;
- vitamins A and C; and
- calcium and iron.



If a nutrition description is used, e.g., “fortified with vitamin D,” that nutrient must be listed on the Nutrition Facts panel. Nutrients added to a food, such as fortified breakfast cereal, are also listed. Manufacturers may also choose to list additional nutrients.

Note: The required nutrient information on the Nutrition Facts label will change effective July 26, 2018. For more information, see “[Food Label Updates for 2018](#)” in this section.

## DAILY REFERENCE VALUES

The label includes daily reference values or “Daily Values” for total fat, saturated fats, cholesterol, sodium, total carbohydrate, and fiber. The Daily Values provide recommendations for daily intake of nutrients based on daily caloric intakes of 2,000 and 2,500 calories. Some of these values are maximums, as with fat (65 grams or less) and others are minimums, as with carbohydrate (300 grams or more).

The “% Daily Value” shows how well the nutrients in a food fit into an overall daily diet with 2,000 calories. The sample food label in [table 5-6](#) shows that based on an intake of 2,000 calories, one serving of this product provides 5 percent of the Daily Value for total fat and 3 percent of the Daily Value for saturated fats. Daily Values for each nutrient are less when fewer calories are eaten. Likewise, when caloric intakes are greater, Daily Values are higher. As a guide, foods with 5 percent Daily Value or less contribute a small amount of that nutrient while those with 20 percent or more contribute a large amount.

Menu planners can use the Nutrition Facts panel to see if a food is a good source of a nutrient or to compare similar foods, for example, to determine which brand of frozen pizza is lower in saturated fats. The “% Daily Value” indicates whether a food is high or low in nutrients. To limit a nutrient such as fat, saturated fats, cholesterol or sodium, choose foods with a lower percent Daily Value. To consume more of a nutrient such as fiber, calcium and other vitamins and minerals, choose foods with a higher percent Daily Value.

The current food label does not list a Daily Value for trans fats, sugars, or protein. The FDA has not set a reference value for trans fats because national health recommendations have not set a reference value. The *Dietary Guidelines* recommends that consumption of trans fats should be kept as low as possible. Protein does not have a reference value because protein intake is not a public health concern for adults and children older than 4. A sugar reference value is not included because national health recommendations did not establish an amount for daily consumption of sugars until the 2015-2010 *Dietary Guidelines*. Effective July 26, 2018, the Nutrition Facts label will include a percent Daily Value for sugar. For more information, see “[Food Label Updates for 2018](#)” below.

## LABEL ROUNDING

The FDA regulations include specific requirements for rounding the numbers on the food label. As a result, the numbers on the food label may not add up exactly or the percentage may be slightly different when the menu planner calculates this information manually. For example, the sample product in [table 5-6](#) contains 3.5 grams of fat. There are 9 calories per gram of fat, so this product contains 31.5 calories from fat (3.5 grams multiplied by 9 calories per gram). However, the food label lists 35 calories from fat because of the FDA rounding rules. For more information, see the FDA’s [Appendix H: Rounding the Values According to FDA Rounding Rules](#).

## FOOD LABEL UPDATES FOR 2018

In May 2016, the FDA released the final rule, *Food Labeling: Revision of the Nutrition and Supplement Facts Labels* (81 FR 33741). This final rule requires changes to the Nutrition Facts label to provide consumers with more recent and accurate nutrition information. The changes include modifying the list of required nutrients that must be declared on the label, updating serving size requirements, and providing a new design. The new food label will include the changes below.

- The amount of added sugars in grams will be listed beneath the amount of total sugars and will also be listed as a percent Daily Value.
- Vitamin D and potassium will be added.
- Vitamins A and C will not be required, but manufacturers can choose to list them voluntarily.
- The actual amount of the mandatory vitamins and minerals must be listed, in addition to percent Daily Value.
- Serving sizes will be based on what people actually consume, based on the RACC. Some serving sizes will increase and others will decrease.
- The new format will highlight calories, servings per container, and serving size by increasing the type size and placing the number of calories and serving size declaration in bold type.
- The percent Daily Value will have a better explanation, i.e., “*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.*”

Manufacturers must comply with these changes by July 26, 2018. Manufacturers with less than \$10 million in annual food sales have an additional year to make the changes. For more information, see the FDA’s “[Changes to the Nutrition Facts Label](#).”

Table 5-6. How to Read a Food Label

Serving Size and Number of Servings

- The Nutrition Facts label is based on one serving but many packages contain more. If you are eating more than one serving, multiply the calories and nutrients by the number of servings. For example, 24 crackers equal 1½ servings and contain 50 percent more calories and nutrients.

Sodium

- Limit sodium to reduce the risk of high blood pressure.
- Less than 5 percent is low sodium and 20 percent or more is high sodium.

Fiber

- Most people do not get enough fiber. Foods with 10-19 percent daily value are good sources and foods with 20 percent or more are high sources.
- Choose whole-grain foods as often as possible by reading the ingredients list.

Sugars

- There is no percent daily value for sugars.
- Look for foods low in added sugars. The Nutrition Facts label lists total sugars (naturally occurring and added), so read the ingredients to determine if sugars are added. The closer sugar is to the beginning of the ingredients list, the more of it the food contains.

Nutrition Facts		
Serving Size	16 crackers (29g)	
Servings Per Container	About 14	
Amount Per Serving		
Calories 130	Calories from Fat 35	
% Daily Value*		
Total Fat 3.5g	5%	
Saturated fats 0.5g	3%	
Trans fats 0g		
Polyunsaturated fats 2g		
Monounsaturated fats 0.5g		
Cholesterol 0 mg	0%	
Sodium 230 mg	11%	
Potassium 55mg		
Total Carbohydrate 21g	7%	
Dietary Fiber 2g	4%	
Sugars 4g		
Protein 2 g		
Vitamin A	0%	
Vitamin C	0%	
Calcium	2%	
Iron	6%	
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:		
	Calories: 2,000	2,500
Total Fat	Less than 65g	80g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g
Calories per gram:		
Fat 9	Carbohydrate 4	Protein 4

Calories

- The label lists the number of calories in a single serving and how many calories come from fat.
- Low is 40 calories or less per serving. High is 400 calories or more per serving.
- Compare the calories per serving to the nutrients to see the "nutrient density" of the food.

Percent Daily Value

- The percent Daily Value shows how a serving of the food fits into an overall daily diet of 2,000 calories. People may need more or less calories, depending on age, gender and activity level.

Fats

- Look for foods that are lowest in saturated fat, trans fat and cholesterol.
- Most fats should be polyunsaturated or monounsaturated.
- There is no percent daily value for trans fat, but consume as little as possible.
- Labels can state "0 grams" of trans fat if the serving contains less than 0.5 gram of trans fat, even if the food contains sources of artificial trans fat. Read labels and select products that do not contain partially hydrogenated oils (see the Glossary).

Nutrients

- Look for foods with higher percent daily values for these nutrients.

Ingredients

- Ingredients on product labels are listed by weight, from most to least. The closer an ingredient is to the beginning of the list, the more of it the food contains.

**Ingredients:** Whole Grain Wheat Flour, Unbleached Enriched Flour (Wheat Flour, Niacin, Reduced Iron, Thiamine Mononitrate (Vitamin B1), Riboflavin (Vitamin B2), Folic Acid), Whole Grain Wheat Flour, Soybean Oil, Sugar, Defatted Wheat Germ, Cornstarch, Malt Syrup (From Barley and Corn), High Fructose Corn Syrup, Salt, Leavening (Calcium Phosphate and/or Baking Soda), Monoglycerides, Vegetable Color (Annatto Extract, Turmeric Oleoresin), Soy Lecithin.

