Solid Fats and Added Sugars (SoFAS)

*Decrease intake of solid fats and added sugars*

*Grade: 9-12*

**I. Nutrition Education Objective:**

Goal 1: Students will comprehend concepts consistent with USDA guidance related to eating and physical activity for good health.

Objective: As a result of Pennsylvania’s SNAP-Ed plan, students will know, understand, analyze, and apply concepts, as developmentally appropriate, that are consistent with USDA guidance about the benefits of:

1. Limiting foods high in fat, sodium and added sugar.

Goal 2: Students will apply skills consistent with USDA guidance related to eating and physical activity for good health.

Objective: As a result of Pennsylvania’s SNAP-Ed plan, students will be able to:

1. Assess personal health practices.
2. Plan strategies for performing health-enhancing practices

**II. Pennsylvania Education Standards:**

A. 1.5 Speaking and Listening
B. 10.2 Healthful Living
C. 11.3 Food Science and Nutrition

**III. Outcomes:**

A. Students will discuss the consequences of consuming SoFAS in excess.
B. Students will identify foods containing solid fats and added sugars.
C. Students will list the benefits of substituting nutrient dense foods for SoFAS.

**IV. Materials**

A. Laptop/Projector with PowerPoint presentation
B. Visuals:
C. Handout: Where’s the Solid Fat
D. Alternate Activity: Where’s the Added Sugar
E. Supplies: food models, food labels from foods and beverages that contain varying amounts of solid fats
F. Food Tasting
G. Reinforcement that conveys the appropriate nutrition message.
H. Hand wipes
I. Caregiver newsletter: SoFAS
J. Extension lessons for the teacher

V. Procedure
A. Introductory
   1. Introduction of educator and lesson topic
   2. Review the last lesson if applicable.

B. Developmental
   1. Slide 1: SoFAS
   2. Slide 2: Project Sponsors
      a. According to the 2010 Dietary Guidelines for Americans, SoFAS contribute on average to 35% of the calories in the American diet (providing nearly 800 calories) without contributing importantly to overall nutrient adequacy of the diet.
      b. The Dietary Guidelines make several recommendations, including reduced consumption of solid fats and added sugars (SoFAS).
      Ask students: What kinds of fat are found or used in food?
      Solicit responses such as unsaturated, saturated, trans or even specific sources of fat like butter, margarine, and lard.
      a. Not all fats are the same. Some are solid at room temperature, whereas others are liquid.
      b. Fats that are solid at room temperature are called “solid fats” and contain a large amount of saturated and/or trans fatty acids. Examples include the fat found in animal products (butter, cheese, milk, meat) and baked and fried foods (cookies, cakes, French fries).
      c. Some oils, like partially hydrogenated oil, palm oil, and coconut oil, are called solid fats because they contain large amounts of saturated fat or trans fat.
   5. Slide 5: Why Eat Less Solid Fat?
      Ask students: What kinds of fat are found in food may raise LDL (“bad”) cholesterol and increase risk of getting heart disease.
      a. By reducing the intake of solid fats, the risk of heart disease can be decreased.
      c. Consuming solid fats in excess adds extra calories to the diet, which can cause weight gain which can further increase risk for other diseases such as Type 2 diabetes.
      Ask students: What fats do you have at home that are solid at room temperature?
      Solicit answers such as butter, shortening, lard, and stick margarine. Review list with students.
a. Solid fats might be added to a food (e.g., margarine added to make cookie dough) or occur in the food naturally (e.g., fat in a piece of roasted meat)
b. Although milk is a fluid, it contains solid fat which is used to make butter. Fat-free milk does not contain solid fat. Drinking low-fat and fat-free milk products instead of whole or 2% milk can decrease your intake of solid fats.

7. **Slide 7: Top 10 Sources of Solid Fats in America**
   a. The table shown on the slide contains major food sources of solid fats in the U.S.
   b. *Take a poll to see which foods listed in the table are most commonly eaten by the students.*

8. **Slide 8: How Much Solid Fat Should I Have?**
   a. Solid fats provide an average of 19% of the total calories in American diets, but few essential nutrients and no dietary fiber.
   b. The Dietary Guidelines recommend limiting the intake of calories from saturated fats to less than 10% of calories and replacing them with mono- and polyunsaturated fats. Monounsaturated oils include olive, canola, and safflower oils, and polyunsaturated oils include soybean, corn, and cottonseed oils.
   c. Keep *trans* fatty acid consumption as low as possible by limiting foods that contain synthetic sources of *trans* fats, such as partially hydrogenated oils, and by limiting other solid fats.
   d. *Review the table with students and discuss how quickly calories from solid fat can add up. Time permitting, ask students which of these foods they regularly eat and how large their portion size is, referencing either food models or common household objects for estimation (e.g., 1 baseball = 1 cup).*

9. **Slide 9: Identifying Solid Fats on the Food Label**
   a. The Food label is a great guide to make healthier choices. When looking at the food label to figure out how much solid fat a food contains, look at the Nutrition Facts and find “Saturated Fat” and “*Trans Fat*” below the words “Total Fat.” It will state how many grams of each are in the product.
   b. Read the ingredient list to identify the sources of solid fat. There are numerous ingredients that either contain solid fats (like cream) or are composed mostly or entirely of solid fat (like butter).

10. **Slide 10: Activity**
    *Distribute the “Where’s the Solid Fat” worksheet and food labels to students. Have students review the Nutrition Facts and ingredients on their product to determine if there are solid fats and their source, if applicable. Instruct students to complete the worksheet according to the information on their food label.*
    a. Step 1: Write down the number of calories per serving on the Nutrition Facts label. Locate “Saturated Fat” and “*Trans Fat*” and copy the number of grams of each. Add these two numbers to find total solid fat.
b. Step 2: To find how many calories of solid fat are in the food, multiply the grams of solid fat by 9 (because all fats have 9 calories per gram).
c. Step 3: Divide the number of calories from solid fat by the number of calories in one serving of the food to determine what percentage of the food’s calories come from solid fats. The resulting number is multiplied by 100 to convert the decimal into a percentage.

As a further exercise, ask students what percent of daily calorie needs come from solid fat if this was being eaten by someone on a 2,000 calorie diet (answer will vary according to the reference food).

11. Slide 11: Make the Changes!
There are many ways to decrease solid fats while keeping food tasty! Many foods come prepared with solid fats in them, so check the Nutrition Facts and ingredients and make smart choices based on what you see. Additional tips:
a. Choose lean meats and poultry
b. Trim visible fat from meat and remove skin from poultry
c. Cook with small amounts of vegetable oil instead of butter, lard, or margarine
d. Switch from whole milk to low-fat or skim
e. Try grilling, broiling, poaching, or roasting instead of frying
f. Try peanut butter on toast instead of butter
g. Eat fewer baked goods made with stick margarine or shortening. Look for trans fat on the label!

12. Slide 12: What Are Added Sugars?
The second part of the SoFAS acronym, Added Sugars (AS), is another component of food that the Dietary Guidelines recommend reducing. Direct students to look at the pictures on the slide and identify which foods contain added sugars and why. Plain milk has naturally occurring sugar, candy has added sugar, and chocolate covered strawberries have both.
a. Many foods have some type of sugar, either naturally occurring, added, or both. Sugars are found naturally in fruits (fructose) and fluid milk and milk products (lactose).
b. The majority of the sugars in the typical American diets are sugars added to foods during processing, preparation, and at the table. Sugar is sometimes added for taste, food preservation, or to make the texture and appearance of food more appealing and appetizing.
c. Added sugars account for about 16% of the total calories in the American diets. Identifying added sugars on the food label is important in eating less of them.

13. Slide 13: Why Should We Eat Less Added Sugar?
a. Although the human body does not respond differently to natural sugar versus added sugar, foods with natural sugars contain many healthful nutrients while foods with added sugars often contain few or no essential nutrients (e.g., a piece of fruit versus a soda). Filling up on added sugars could mean missing out on important vitamins and minerals from other foods.
b. Eating too many calories from any source can lead to weight gain.
c. Eating too much sugar of any type can promote tooth decay.

14. Slide 14: Top 10 Sources of Added Sugars in the U.S.
a. The data represent the most common sources of added sugars in the U.S. Added sugars are found in numerous types of foods and beverages, with the most commonly consumed category of added sugars being soda, energy drinks, and sports drinks.
b. Ask students: What beverages could you choose as an alternative to soda, energy drinks and sports drinks?
   Review list with students and identify which sources of added sugar they most often consume.
c. “Juice drinks” (or punches, -ades, and cocktails) have added sugar and are not the same as 100% juice, which contains no added sugar. 100% fruit juice contains a lot of natural sugar from the fruit, but it also provides important vitamins and minerals. Non-100% juices (like fruit punch or lemonade) can contain lots of added sugars but little or no vitamins and/or minerals, making them a source of empty calories.
d. Alternative options are available for many of these foods (e.g., choose a cereal that does not have added sugar versus one that does). Choosing smaller portions is another strategy to consume less added sugar. Ask students to name alternatives to the foods or beverages that they consume that have added sugar.

15. Slide 15: Sugar Is Not Just “Sugar!”
a. Added sugar is not always called “Sugar” in the ingredients. It can go by many other names. Review the examples of added sugar.
b. Nutrition labels are required to list how much sugar is in a food; however, it can be difficult to distinguish between how much of that sugar is added sugar versus natural sugar. The ingredients list is a great place to look if you want to know if a food contains added sugars.
c. The first ingredient listed on the ingredients label is the one that there is the most of, followed by the 2nd highest, 3rd highest, etc. This means that the closer a sugar ingredient is to the beginning of the list, the more added sugar there is compared with the other ingredients that come after it.

16. Slide 16: How Can We Eat Less Added Sugar?
Discuss students’ ideas of how to reduce the amount of added sugar that they eat. What are some foods/beverages that they could choose instead?
a. Choose water instead of sugary drinks
b. Limit candy, gum, and other sweets
c. Choose breakfast cereals with little or no added sugar
d. Have fresh fruit for dessert instead of cakes, cookies, and pies
e. Choose canned fruit packed in water or 100% juice instead of syrup
f. Use smaller amounts of condiments because sugar is sometimes added to salad dressings, ketchup, and others
17. Slide 17: What Do Solid Fats and Added Sugars Have in Common?
a. SoFAS are energy dense, which means that they are high in calories compared with the amount of nutrients like vitamins and minerals. SoFAS can contribute to lots of “empty calories.”
b. SoFAS often do not contain many other healthful nutrients like vitamins, minerals, or dietary fiber.
c. There are many foods that contain both solid fats and added sugars. Ask students to provide examples. Examples include ice cream and other dairy desserts, beverages like lattes, cappuccinos, and other coffee drinks, chocolates, and baked goods like cookies, pies, and cakes.

18. Slide 18: Get off the SoFAS!
a. Solid fats and added sugars provide Americans with too many calories and not enough essential nutrients and dietary fiber.
b. The more calories that we eat from SoFAS, the more difficult it becomes to eat foods with essential vitamins and minerals while staying within our calorie budget.
c. For most people, no more than about 5-15% of calories from SoFAS can fit into USDA recommendations.

19. Slide 19: Questions

VI. Conclusion:
A. Distribute hand wipes.
B. Provide each student with a food tasting and encourage him or her to make small changes in his or her diet now. Explain why this food is a healthy option.
C. Distribute the reinforcement, read the message and/or explain the reason why they are receiving reinforcement.
D. Thank the students for their participation and answer any questions the students have.
E. Distribute Caregiver Newsletter.

VII. Extension Lessons:
A. Activites from the SoFAS Activity Packet