Let’s Talk Oils and Fats!

Lesson Overview

**Lesson Participants:** School Nutrition Assistants/Technicians, School Nutrition Managers, Child and Adult Care Food Program Staff, Teachers

**Type of Lesson:** Short, face-to-face training session

**Time Needed to Conduct the Lesson:** 15 minutes

**Lesson Description:** This lesson explains the recommendations for oils and fats found on the MyPlate website. Participants will learn why oils and fats are an important part of the daily diet. Nutrition professionals will be able to apply the information presented in this lesson to school menu planning. MyPlate and related resources developed by USDA are helpful tools for child nutrition program staff to use when providing nutrition education to children of all ages.

**Lesson Objectives:**
At the end of this lesson, the participant will be able to:
1. Discuss why oils and fats in limited amounts are important to the diet.
2. Identify oil and fat food sources.

**Get Ready to Train**

**Note:** This lesson should be taught following the No Time to Train lessons on the Dietary Guidelines for Americans 2010 and MyPlate – The “New Generation” Food Icon.

The format for the No Time to Train lessons includes an overview, preparation checklist, lesson at a glance with a timeline for conducting the lesson, references, handouts, and an instructor’s script. The manager/instructor will use the script to present the lesson to the participants. The script gives directions to the manager/instructor—DO, SAY, ASK, LISTEN, AND ACTIVITY—for delivering the lesson.

No special audiovisual or electronic equipment is needed to conduct the lesson. The lesson can be presented in the cafeteria, media center, or classroom.

Teachers and others in the school or child care setting may wish to participate. This lesson also could be used to integrate nutrition education into the classroom. With some modifications, the lesson could be used with middle and secondary students.
Preparation Checklist

**Directions:** Use the Preparation Checklist to prepare for the training session. Track your progress by checking off tasks as they are completed.

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<table>
<thead>
<tr>
<th>Done</th>
<th>Lesson Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑</td>
<td></td>
</tr>
</tbody>
</table>

### Gather Materials

**Materials Needed:**

- Instructor’s Script
- Handout 1: How Do I Count the Oils I Eat? (one for each participant; accessible at http://www.choosemyplate.gov/foodgroups/oils_count.html#)
- Handout 2: Oils and Fats (one for each participant)
- Pencils (one for each participant)
- Session Evaluation form (one for each participant)

### Prepare for Lesson

**Before the Training:**

- Make copies of Handouts 1 and 2 (one for each participant).
- Make copies of Session Evaluation form (one for each participant).

**On Training Day:**

- Place pencils on tables (one for each participant).
- Distribute Handouts 1 and 2 to each participant.

**On the Instructor’s Table:**

- Instructor’s Script
- Handout 1: How Do I Count the Oils I Eat?
- Handout 2: Oils and Fats
- Session Evaluation forms
### Lesson at a Glance
(15 minutes)

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Task</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 minutes</td>
<td>Introduction and Overview</td>
<td>Introduce topic and relate to the Dietary Guidelines for Americans 2010 and MyPlate—The “New Generation” Food Icon No Time to Train Lessons.</td>
<td>Instructor’s Script</td>
</tr>
<tr>
<td>4 minutes</td>
<td>Objective 1: Discuss why oils and fats in limited amounts are important to the diet.</td>
<td>Use Handout 1 to relate the importance of limiting oils and fats in a healthy diet.</td>
<td>Handout 1: How Do I Count the Oils I Eat?</td>
</tr>
<tr>
<td>5 minutes</td>
<td>Objective 2: Identify oil and fat food sources.</td>
<td>Use Handouts 1 and 2 to identify foods containing oils and fats. Participants complete activity and brainstorm ways to encourage students to know the limits on oils and fats in foods.</td>
<td>Handout 1: How Do I Count the Oils I Eat? Handout 2: Oils and Fats</td>
</tr>
<tr>
<td>2 minutes</td>
<td>Wrap Up and Review</td>
<td>Instructor encourages participants to ask questions and to make comments.</td>
<td>Handout 1: How Do I Count the Oils I Eat? Handout 2: Oils and Fats</td>
</tr>
<tr>
<td>2 minutes</td>
<td>Session Evaluation</td>
<td>Conduct a short evaluation of the lesson.</td>
<td>Session Evaluation form</td>
</tr>
</tbody>
</table>

**Note to Instructor:**
Answer questions to the best of your ability. If there are questions you can’t answer, tell the participants you will find out the answer and let them know later. If you need assistance in finding answers, please call the National Food Service Management Institute at 800-321-3054.

**References:**


Instructor’s Script

**SAY:**
In previous lessons, we learned about the *Dietary Guidelines for Americans, 2010* and *MyPlate – The “New Generation” Food Icon*. Medical research shows that we all need to learn more about basic nutrition so that we all can make healthier food choices and live longer lives. Today, we will continue our discussion about basic nutrition.

This lesson will focus on limiting fats and oils. We are going to discuss why fats and oils are important in our diet and what foods are high in fats and oils.

**DO:**
Distribute copies of **Handout 1: How Do I Count the Oils I Eat?**

**SAY:**
The MyPlate.gov website includes information on oils, and the website provides links to other information on oils.

**DO:**
Refer participants to the **Handout 1** and discuss the recommendations in the *Dietary Guidelines for Americans, 2010* regarding fats and oils.

- Consume less than 10 percent of calories from saturated fatty acids by replacing them with monounsaturated and polyunsaturated fatty acids.
- Keep *trans* fatty acid consumption as low as possible, especially by limiting foods that contain synthetic sources of *trans* fats, such as partially hydrogenated oils, and by limiting other solid fats.
- Replace protein foods that are higher in solid fats with choices that are lower in solid fats and calories and/or are sources of oils.
- Use oils to replace solid fats where possible.

**ASK:**
Why do you think fats and oils should be consumed in limited amounts but are an important part of our diet?

**LISTEN:**
Listen to individual responses.

**SAY:**
Oils and fats are essential in the overall functioning of the body by helping in digestion, energy metabolism, and absorption of fat soluble vitamins (A, D, E, and K). Oils and fats are a part of a healthful diet, but the type, amounts, and mixture of fatty acids makes a difference in good health.

The major kinds of fats in the foods we eat are saturated, polyunsaturated, monounsaturated, and *trans* fatty acids.
**Saturated fats** typically are solid at room temperature because they contain higher amounts of hydrogen. The main sources of saturated fat in the typical American diet are foods from animals (whole milk, cream, ice cream, whole milk cheeses, butter, lard, visible fat on meats) and some plant oils (palm, palm kernel and coconut oils, cocoa butter).

Oils are a liquid form of fat and contain larger amounts of unsaturated fatty acids, which are liquid at room temperature. Some examples are cooking oils such as canola, corn, and soybean oil.

**Polyunsaturated fats** are found in plant foods such as corn, safflower, sunflower, sesame oils, nuts, and seeds, as well as fish and seafood.

**Monounsaturated fats** are found in plant foods such as canola, peanut, and olive oils, nuts, and avocados. The fat in meats (beef, pork, and poultry) is made of monounsaturated and saturated fatty acids.

**Trans fats** are common in a wide range of foods made with partially hydrogenated oils, such as baked goods, fried foods, and some margarine products. Through the process of hydrogenation, unsaturated fatty acids can be made more saturated. This process converts a liquid fat into a stable liquid or semisolid form. Trans fats can be found naturally in low amounts in meats and dairy products.

**ASK:**
Why do we need to know the limits on fats and oils?

**LISTEN:**
Listen to individual responses.

**SAY:**
In order to maintain a healthful diet, it is important to know that limiting saturated and trans fats are essential.

Saturated fats and trans fats raise blood cholesterol. A high level of cholesterol increases unhealthy blood lipids (low-density lipoproteins, or LDL cholesterol). A high level of LDL and total cholesterol in the blood is a major risk factor for coronary heart disease (heart attacks, stroke). It is important to check nutrition facts labels and ingredient lists on similar foods. Schools should serve meals with little or no trans fats and saturated fats to reduce risks of heart disease.

The *Dietary Guidelines for Americans 2010* recommendation is to limit fats not to exceed 30% of the total daily caloric intake. Only 10% of those calories should be from saturated fat and the other 20% should be divided between monounsaturated and polyunsaturated fat.

Child nutrition programs follow the dietary guidelines in menu planning. When averaged over a week, school meals must provide not more than 10% of calories from saturated fats (no more than 6-8 grams at lunch). The grams of fat will vary depending on the calorie level of the appropriate age group.
Aim for less than 100 mg of cholesterol at lunch and less than 75 mg at breakfast averaged over a week. Schools can meet these recommendations by serving lean meats (skinless chicken, low-fat hamburgers); encouraging more fruits, vegetables, dry beans, and whole grains; and serving only fat-free or low-fat (1%) milk.

**DO:**
Distribute **Handout 2: Oils and Fats.**

**ASK AND SAY:**
What are the oils and fats we serve at mealtime? Acknowledge responses. Take a few minutes to complete the activity on **Handout 2** and think about what oils and fats we add to our school menus. How will you encourage the students to maintain a healthy diet by limiting oils and fats?

**ACTIVITY:**
Participants will complete **Handout 2** and brainstorm what oils and fats are added at mealtime and how they can encourage students to limit or choose more healthy oils or fats. Some suggestions could be to:
- Use an olive oil dressing on salads.
- Snack on nuts (Note: some nuts may be a choking hazard for younger children.).
- Limit use of solid fats (butter, mayonnaise, shortening).
- Prepare more fish.
- Use steam, broil or bake cooking methods

**SAY:**
Thank you for all of these great ideas! I’ll schedule some time for us to make a plan to implement some of these ideas. Today we’ve talked about the importance of limiting oils and fats. Know the limits to make the most of oils and fats that provide essential fatty acids and vitamins. It is important that we serve our customers oils and fats in limited amounts for maintaining a healthy diet.

**ASK:**
Do you have any questions about oils and fats?

**LISTEN:**
Listen to responses. Answer questions to the best of your ability. If there are questions you can’t answer, tell the participants you will find out the answer and let them know later. If you need assistance in finding answers, please call the National Food Service Management Institute at 800-321-3054.

**DO:**
Distribute the Session Evaluation form.

**SAY:**
Thank you for participating in the lesson today. Please take a couple of minutes to complete the Session Evaluation form. Thank you for your input.
Handout 1: How Do I Count the Oils I Eat?

This chart gives a quick guide to the amount of oils in some common foods:

<table>
<thead>
<tr>
<th>Oils:</th>
<th>Amount of Food</th>
<th>Amount of Oil (teaspoons/grams)</th>
<th>Calories from Oil (approximate)</th>
<th>Total Calories (approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetable oils (such as canola, corn, cottonseed, olive, peanut, safflower, soybean, and sunflower)</td>
<td>1 Tablespoon</td>
<td>3 teaspoons/14 grams</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Foods rich in oils:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margarine, soft</td>
<td>1 Tablespoon</td>
<td>2 ½ teaspoons/11 grams</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Mayonnaise</td>
<td>1 Tablespoon</td>
<td>2 ½ teaspoons/11 grams</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Mayonnaise-type salad dressing</td>
<td>1 Tablespoon</td>
<td>1 teaspoon/5 grams</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>Italian dressing</td>
<td>2 Tablespoons</td>
<td>2 teaspoons/8 grams</td>
<td>75</td>
<td>85</td>
</tr>
<tr>
<td>Thousand Island dressing</td>
<td>2 Tablespoons</td>
<td>2 ½ teaspoons/11 grams</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>Olives*, ripe, canned</td>
<td>4 large</td>
<td>½ teaspoon/2 grams</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Avocado*</td>
<td>½ medium</td>
<td>3 teaspoons/15 grams</td>
<td>130</td>
<td>160</td>
</tr>
<tr>
<td>Peanut butter*</td>
<td>2 Tablespoons</td>
<td>4 teaspoons/16 grams</td>
<td>140</td>
<td>190</td>
</tr>
<tr>
<td>Peanuts, dry roasted*</td>
<td>1 ounce</td>
<td>3 teaspoons/14 grams</td>
<td>120</td>
<td>165</td>
</tr>
<tr>
<td>Mixed nuts, dry roasted*</td>
<td>1 ounce</td>
<td>3 teaspoons/15 grams</td>
<td>130</td>
<td>170</td>
</tr>
<tr>
<td>Cashews, dry roasted*</td>
<td>1 ounce</td>
<td>3 teaspoons/13 grams</td>
<td>115</td>
<td>165</td>
</tr>
<tr>
<td>Almonds, dry roasted*</td>
<td>1 ounce</td>
<td>3 teaspoons/15 grams</td>
<td>130</td>
<td>170</td>
</tr>
<tr>
<td>Hazelnuts*</td>
<td>1 ounce</td>
<td>4 teaspoons/18 grams</td>
<td>160</td>
<td>185</td>
</tr>
<tr>
<td>Sunflower seeds*</td>
<td>1 ounce</td>
<td>3 teaspoons/14 grams</td>
<td>120</td>
<td>165</td>
</tr>
</tbody>
</table>

*Avocados and olives are part of the Vegetable Group; nuts and seeds are part of the Protein Goods Group. These foods are also high in oils. Soft margarine, mayonnaise, and salad dressings are mainly oil and are not considered to be part of any food group.

**Handout 2: Oils and Fats**

Oils and fats are essential in the overall functioning of the body by helping in digestion, energy metabolism, and absorption of fat soluble vitamins (A, D, E, and K). Oils and fats are a part of a healthful diet, but the type, amounts, and mixture of fatty acids makes a difference in good health. How can you encourage customers to recognize ingredient sources of oils and fats to limit?

<table>
<thead>
<tr>
<th>Vegetable Oils</th>
<th>Foods Naturally High in Oils (Fats)</th>
<th>Solid Fats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canola oil</td>
<td>Nuts</td>
<td>Butter</td>
</tr>
<tr>
<td>Corn oil</td>
<td>Peanuts</td>
<td>Beef fat (tallow, suet)</td>
</tr>
<tr>
<td>Cottonseed oil</td>
<td>Mixed nuts</td>
<td>Chicken fat</td>
</tr>
<tr>
<td>Olive oil</td>
<td>Cashews</td>
<td>Mayonnaise</td>
</tr>
<tr>
<td>Peanut oil</td>
<td>Almonds</td>
<td>Pork fat (lard)</td>
</tr>
<tr>
<td>Safflower oil</td>
<td>Hazelnuts</td>
<td>Stick margarine</td>
</tr>
<tr>
<td>Soybean oil</td>
<td>Sunflower seeds</td>
<td>Shortening</td>
</tr>
<tr>
<td>Sunflower oil</td>
<td>Olives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some fish (salmon, tuna)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Avocados</td>
<td></td>
</tr>
</tbody>
</table>

Ingredient Sources of Oils and Fats to Limit Activity

Match the food items on the column to the major kinds of oils and fats in the foods we eat. There may be more than one correct match:

<table>
<thead>
<tr>
<th>a. saturated (sat) fat</th>
<th>b. polyunsaturated (poly) fat</th>
<th>c. monounsaturated (mono) fat</th>
<th>d. trans fat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Shortening or partially hydrogenated vegetable oil</td>
<td>2. Cheese (regular)</td>
<td>3. Nuts</td>
</tr>
<tr>
<td></td>
<td>7. Tuna, salmon</td>
<td>8. Pork fat (lard)</td>
<td>9. Corn, safflower, sunflower, or sesame oils</td>
</tr>
<tr>
<td></td>
<td>10. Margarine, soft or stick</td>
<td>11. Palm and coconut oils, or cocoa butter</td>
<td>12. Whole or reduced-fat (2%) milk</td>
</tr>
</tbody>
</table>
Ingredient Sources of Oils and Fats to Limit Activity (Answers)

Match the food items on the column to the major kinds of oils and fats in the foods we eat. There may be more than one correct match:

- **a. saturated (sat) fat**
- **b. polyunsaturated (poly) fat**
- **c. monounsaturated (mono) fat**
- **d. trans fat**

1. Shortening or partially hydrogenated vegetable oil
   - saturated & trans fat
2. Cheese (regular)
   - saturated fat
3. Nuts
   - polyunsaturated fat
4. Olive oil
   - monounsaturated fat
5. Butter
   - saturated fat
6. Avocados
   - monounsaturated fat
7. Tuna, salmon
   - polyunsaturated fat
8. Pork fat (lard)
   - saturated fat
9. Corn, safflower, sunflower, or sesame oils
   - polyunsaturated fat
10. Margarine, soft or stick
    - trans fat
11. Palm and coconut oils, or cocoa butter
    - saturated fat
12. Whole or reduced-fat (2%) milk
    - saturated fat
13. Sunflower seeds
    - polyunsaturated fat
14. Seafood
    - polyunsaturated fat
15. Canola oil
    - monounsaturated fat
# Session Evaluation

**Instructions:**
Completely fill in the circle of your answer. Use a #2 pencil.
Please select only one response for each statement. Do not fold or crease this sheet.

<table>
<thead>
<tr>
<th>Titic of Meeting:</th>
<th>Teacher's Code:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session Topic:</td>
<td>Time Slot:</td>
</tr>
<tr>
<td>Date:</td>
<td>Location:</td>
</tr>
<tr>
<td>Trainer's Code:</td>
<td>Length of Event (hrs/min):</td>
</tr>
</tbody>
</table>

## Attendee Status:
- District director
- State agency staff
- Major city director
- Site-level manager
- Private consultant/trainer
- Foodservice assistant
- Other (please list) __________________________

## Reaction to this Session

Please read the following statements related to the session. Rate your level of agreement by using the scale 5 (Strongly Agree) to 1 (Strongly Disagree).

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The session objectives were clearly presented.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>2. The session objectives were achieved.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>3. I can apply what I learned in this session to my job.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>4. Attending the session increased my skill on the topic.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>5. Attending the session increased my knowledge on the topic.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>6. I would recommend this session to others.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>7. Overall, the session met or exceeded my expectations.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>

## Comments about this Session

The information I found MOST useful was:

________________________
________________________
________________________

Please share any additional comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

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National Food Service Management Institute - The University of Mississippi