

LESSON 5



Fast-Food Frenzy

Background

Fat is a necessary part of our diets, and what matters most is the type of fat we eat. Fat makes food taste good, and it helps the body absorb and transport fat-soluble vitamins, such as vitamins A, D, E, and K. In addition, components of fat are also involved in other important body functions such as maintaining healthy skin and hair. For decades, the low-fat diet was promoted as a way to lose weight, and food manufacturers reformulated their products to be reduced fat or fat free, often adding salt, sugar, or refined grains to compensate for differences in flavor and texture. Research has found, however, that low-fat diets are no better than any other type of diet at helping people control weight, nor do they boost health. The total amount of fat we eat isn't really linked with weight or disease. What really matters is the type of fat. The problem is that most Americans consume too much unhealthy fat (especially saturated fat and even trans fat), which increases the risk of heart disease and stroke. The good news is that eating fewer foods that contain unhealthy fat and more foods with healthy fat (namely, polyunsaturated fat and monounsaturated fat) helps reduce the risk of heart disease.

Fat Facts

Healthy fat, meaning monounsaturated and polyunsaturated fat, can decrease the risk of heart disease. Examples of foods high in monounsaturated fat are olive, canola, and peanut oils; almonds, peanuts, and hazelnuts; and avocados. Soybean, corn, sunflower, and cottonseed oils are rich in polyunsaturated fat. Fatty ocean fish and walnuts contain a special type of polyunsaturated fat (omega-3 fat) that is also very healthy.

Unhealthy fat, meaning saturated and trans fat, can increase the risk of heart disease. Saturated fat comes mainly from animal-based foods. Examples include dairy products such as milk, butter, and cheese (and foods made with them, such as pizza, cookies, and ice cream); red meat and lard; and palm oil and coconut oil. One way to minimize the intake of unhealthy fat is to cut back on red meat (especially processed red meat, such as bacon) and cheese, choosing healthy protein such as fish, poultry, nuts, or beans instead. When it comes to food preparation, use ingredients that contain healthy unsaturated fat instead of those high in saturated fat (for instance, sautéing vegetables in olive oil rather than butter).

Trans fat is formed when polyunsaturated vegetable fat is partially hydrogenated. This process turns the normally liquid oils into solid or semisolid fat. Although trans fat has been substantially decreased or removed from the food supply in recent years, there are still some fast and processed junk foods that contain unnecessary trans fat in the form of added partially hydrogenated oils. Trans fat content is listed on food labels, and common sources of trans fat from partially hydrogenated oils in the U.S. diet include fast foods, packaged snacks (e.g., microwave popcorn, biscuits, crackers), baked goods (such as cookies, piecrusts, doughnuts, pastries, and cakes), hard stick margarines, and vegetable shortening. Foods that have 0 grams of trans fat may still contain small amounts of partially hydrogenated oils; the only way to tell whether a food is free of partially hydrogenated oils is to scan the ingredients list.* (See the background information in lesson 6 for details on scanning the ingredients for partially hydrogenated oils).

The *Dietary Guidelines for Americans* recognizes the importance of reducing saturated fat intake and sets a daily limit of 10% of total daily calories from saturated fat. The American Heart Association recommends an even lower limit for saturated fat—less than 7% of total daily calories. The *Dietary Guidelines for Americans* also advises keeping trans fat consumption as low as possible, and research suggests that it is most prudent to avoid consuming trans fat from partially hydrogenated oils.

This lesson helps students recognize that many of their favorite fast foods may be high in saturated and even trans fat. Students use nutrient information to assess fast-food menus

**At the time of publication, the FDA banned the use of partially hydrogenated oils in food products, giving manufacturers three years to comply with the decision. This edition's messaging on avoiding trans fat from partially hydrogenated oils remains important guidance during the transitional period.*

and identify items that are high in saturated and trans fat. The % Daily Value (% DV) can help you find out whether a food is relatively high or low in a nutrient (the % DV is listed on the nutrition facts label, and it is available for fast foods through restaurants' nutrition information in their brochures or on their websites). The Daily Value (DV) is a guideline for how much of each nutrient should be consumed each day. The % DV is based on a diet of 2,000 calories per day; for each nutrient, it tells us what percentage of the recommended DV is found in one serving of food. Note that a person's actual daily caloric needs vary depending on age, gender, and level of activity; for more information on caloric needs, see lesson 16, Keeping the Balance.

The % DV for saturated fat is particularly important. If a food's % DV for saturated fat is 5 or less, the food is considered low in saturated fat. The more foods chosen that have a % DV of 5 or less for saturated fat, the easier it is to maintain a healthy daily diet. A food that has a DV of 20% or more for saturated fat is considered high in saturated fat. Eating too many of these foods makes it easy to exceed the daily limit for saturated fat. The overall daily goal is to select foods that together contain less than 100% of the DV for saturated fat.

Because saturated fat should contribute no more than 10% of total daily calories, a person who requires 2,000 calories per day should not consume more than 200 calories of saturated fat. Given that 1 gram of fat contains 9 calories, 200 calories translates to no more than 22 grams of saturated fat ($2,000 \text{ calories} \times 0.10 = 200 \text{ calories from saturated fat}$, and $200 \text{ calories} \div 9 \text{ calories per gram} = 22 \text{ grams of saturated fat}$).

There is no % DV for trans fat, because it is unclear whether there is any safe level of intake.

How Is % Daily Value for Saturated Fat Calculated?

Although all food labels provide % DV for nutrients, it is good to know how to calculate the % DV for saturated fat.

To calculate % DV for a particular food, divide the number of grams of saturated fat per serving by 22 and multiply by 100 (22 is used because it is recommended that a person eating a 2,000-calorie daily diet consume no more than 22 grams of saturated fat each day, as described previously).

For example, 1 cup of whole milk has 5 grams of saturated fat; thus, $(5 \div 22) \times 100 = 23\%$. Although 5 grams may not sound like much, just 1 cup of whole milk contains 23% of the DV for saturated fat for a person who eats 2,000 calories a day.

Estimated Teaching Time and Related Subject Areas

Estimated teaching time: 65 minutes
Related subject areas: language arts, math, science, visual arts

Objectives

- Assess the saturated and trans fat content of their favorite fast-food meals.
- Design a fast-food meal with foods that are low to moderate in saturated fat (less than or equal to 34% of the DV for saturated fat) and have 0 grams of trans fat.

Materials

- Worksheet 5.1, Adding Up the Saturated and Trans Fat
- Worksheet 5.1 Solutions
- Large sheets of paper
- Nutrition information on menu items from fast-food restaurants, collected from fast-food restaurants or their websites (optional)

Worksheet 5.1

Adding Up the Saturated and Trans Fat

Name _____

How much saturated fat and trans fat do the most common foods at your favorite restaurant contain? This activity will help you find out.

Directions

1. Look at the foods you chose for your favorite fast-food meal. Find those foods on the following lists. If one of your foods isn't on the lists, find one that seems like it.
2. Find the % Daily Value (% DV) for saturated fat and the grams of trans fat (g) in the foods. Circle these for each of the foods you chose. Notice the items with 0 grams of trans fat but still contain small amounts of partially hydrogenated oils (marked with an *).
3. Add up the % DV for saturated fat that you circled. Write the number in the box on the last page of the worksheet.
4. Decide whether the total is greater than, equal to, or less than 34%. Circle the choice in the answer box.
5. Add up all of the grams of trans fat that you circled. Record that number in the answer box.
6. Count up and record the number of foods that contain partially hydrogenated oils.

TABLE 5.1 Percent Daily Values of Saturated Fat and Grams of Trans Fat for Fast Food

Burgers	% DV saturated fat	Grams of trans fat
Burger King Whopper	16	1.5
Jack-in-the-Box Ultimate Cheeseburger	95	2
McDonald's Big Mac	45	1
Wendy's Old-Fashioned Burger (1/4 lb., 115 g)	32	1
McDonald's Quarter Pounder with cheese	55	1.5
Burger King Double Whopper	86	2
Burger King Whopper Junior	20	.5
Wendy's Double Stack with cheese	73	1.5
McDonald's plain hamburger	16	.5
Burger King Veggie Burger	11	0

From L. Holtz, C. Chang, M. Dietz, S. Kral, B. Oles, and S.L. Gortmaker, 2003, *Eat Well & Stay Young*, 3rd ed. (Champaign, IL: Human Kinetics).

Lesson 5-Fast Food

Worksheet 5.1 Solutions

Adding Up the Saturated and Trans Fat

How much saturated fat and trans fat do the most common foods at your favorite fast-food restaurant contain? This activity will help you find out.

Directions

1. Look at the foods you chose for your favorite fast-food meal. Find those foods on the following lists. If one of your foods isn't on the lists, find one that seems like it.
2. Find the % Daily Value (% DV) for saturated fat and the grams of trans fat contained in the foods. Circle these for each of the foods you chose. Notice the items with 0 grams of trans fat but still contain small amounts of partially hydrogenated oils (marked with an *).
3. Add up the % DV for saturated fat that you circled. Write the number in the answer box.
4. Decide whether the total is greater than, equal to, or less than 34%. Circle the correct choice in the answer box on the last page of the worksheet.
5. Add up all of the grams of trans fat that you circled. Record that number in the answer box.
6. Count up and record the number of foods that contain partially hydrogenated oils.

TABLE 5.2 Percent Daily Value of Saturated Fat and Grams of Trans Fat for Fast Food

Burgers	% DV saturated fat	Grams of trans fat
Burger King Whopper	16	1.5
Jack-in-the-Box Ultimate Cheeseburger	95	2
McDonald's Big Mac	45	1
Wendy's Old-Fashioned Burger (1/4 lb., 115 g)	32	1
McDonald's Quarter Pounder with cheese	55	1.5
Burger King Double Whopper	86	2
Burger King Whopper Junior	20	.5
Wendy's Double Stack with cheese	73	1.5
McDonald's plain hamburger	16	.5
Burger King Veggie Burger	11	0

From L. Holtz, C. Chang, M. Dietz, S. Kral, B. Oles, and S.L. Gortmaker, 2003, *Eat Well & Stay Young*, 3rd ed. (Champaign, IL: Human Kinetics).

(continued)

Lesson 5-Fast Food Franny 1

Procedure

1. Ask the students to raise their hands if they like to eat at fast-food restaurants.
2. Have students tell you their favorite fast-food eating places.
3. Explain that in today's lesson, students will have a chance to learn about the nutrition of some of their favorite fast foods, especially about the types of fat these foods contain. Tell the students about the differences between healthy fat and unhealthy fat:
 - Healthy fat—monounsaturated and polyunsaturated fat—comes from plant-based foods, such as healthy oils (olive oil, canola oil, peanut oil, corn oil, and safflower oil), nuts, peanut butter, and avocados; and it is also found in fish. Choosing foods with healthy fat can help reduce the risk of heart disease.
 - Unhealthy fat—including saturated fat and especially trans fat—often comes from animal-based foods or from oils that have been partially hydrogenated (a chemical process that turns liquid oil into a solid), and it increases the risk of heart disease.

Explain that many fast foods are high in unhealthy saturated fat and can even contain some unhealthy trans fat. Saturated fat should be limited in a healthy eating plan, and trans fat from partially hydrogenated oils should be avoided.

4. Have each student write down all the foods that make up his or her favorite fast-food meal, including side orders such as french fries, salads and salad dressings, other sauces, drinks, and desserts, if they are usually ordered.
5. Review with students the concept of % Daily Value (% DV). Explain that the % DV lets them find out whether a food is high or low in a nutrient. Regarding saturated fat, if the % DV is 5 or less, then the food is considered low in saturated fat. If the % DV is 20 or more, then that food is considered high in saturated fat. The more foods they choose that have a % DV of 5 or less for fat, the easier it is to maintain a healthy daily diet.
6. The overall daily goal (for all the foods eaten in a day) is to select foods that together contain less than 100% of the DV for saturated fat. For lunch or dinner, a good goal is to keep the total % DV for saturated fat less than 34 (34% is approximately a third of the daily 100% DV—see the note on this page). There is no % DV for trans fat; the goal is to avoid trans fat.
7. Distribute Worksheet 5.1, Adding Up the Saturated and Trans Fat, and have each student determine the total % DV for saturated fat in his or her favorite fast-food meal, along with the total grams of trans fat. Students who cannot find an item from their meal on the list should use the saturated fat and trans fat information from an item very similar to the one they chose. Alternatively, most fast-food restaurants have nutrition information available to those who ask. Such information is also often available on the restaurants' websites.
8. Explain to the students that a healthy lunch or dinner should not (on average) contain more than 34% of the DV for saturated fat, and less is even better. Trans fat should be avoided. Also tell the students that, although fast-food eating places are favorites of many young people, most fast foods are also high in salt and refined carbohydrate as well as low in fiber. This is the opposite of the diet recommended for staying healthy and lowering the risk of diseases such as heart disease, diabetes, and cancer. (Remind them of the Principles of Healthy Living covered in lesson 1.)
9. Ask the students whether their fast-food meals contained less than 34% of the DV for saturated fat and 0 grams of trans fat. If any did, list the items from those meals on the board.
10. Have the students form pairs or small groups. Ask them to create a healthier lunch that is low in saturated fat (less than 34% of the DV) and has 0 grams of trans fat and

The use of 34% as the DV for saturated fat for lunch or dinner is simply an approximation of what someone might eat during those meals. This number was picked to provide a standard for the class activity and is not a recommendation. Remind students that they need to focus on the overall recommendation to select foods throughout the day that together contain less than 100% of the DV for saturated fat and to avoid trans fat.

that most of them would enjoy. Students can create the healthier lunch by selecting foods that are low in saturated fat and have 0 grams of trans fat from the fast-food selections (found in Worksheet 5.1, Adding Up the Saturated and Trans Fat). Note that some items listed in the table on the worksheet have 0 grams of trans fat but still contain small amounts of partially hydrogenated oils; these have been indicated with an asterisk. Students should aim to choose foods with 0 grams of trans fat and no partially hydrogenated oils. Have students write down their choices on large sheets of paper, including each menu choice and the % DV for saturated fat and the grams of trans fat it contains.

11. Post the healthier menus, and ask the groups to share their menus with the class. Encourage the students to think of these foods that are lower in saturated fat and contain 0 grams of trans fat when they eat at a fast-food restaurant.
Optional: Have the class create a histogram that graphs the saturated fat and trans fat content in each group's menu selection.
12. Stress that students should not be fearful of fat. Remind them to enjoy foods with healthy fat, such as olive, canola, and other plant oils; nuts and peanut butter; avocados; and fish. It is OK to occasionally eat a small serving of a food that is high in saturated fat (also known as a "sometimes" food). But on a regular basis, they should choose foods that are low in saturated fat and always avoid trans fat.

Extension Activities

1. Have the students create an advertisement that would appeal to others their age for a healthier meal (one that is low in saturated fat and has 0 grams of trans fat) at a fast-food restaurant. This ad may be designed for a billboard (poster), for television (commercial), or for a post on a social media network.
2. Review the nutrition information provided in Worksheet 5.1, Adding Up the Saturated and Trans Fat, and try to create a menu that meets the healthy living goals (for instance, a meal that includes fruits, vegetables, and whole grains; has limited amounts of saturated fat and avoids trans fat; and limits sugary drinks and added sugar).
3. Have students write a paragraph in their classroom journals about five important things they should consider when choosing foods at a restaurant or fast-food chain.