

16. Eating Healthy and the Food Pyramid

To the Teacher

Understanding the New Food Pyramid

The most recent U.S. Food Guide Pyramid was designed by the U.S. Department of Agriculture (USDA) in response to the rising obesity rate in the United States. New to this pyramid is the focus on daily exercise as part of a healthy lifestyle, and the replacement of “one size fits all” guidelines with recommendations that vary according to individual characteristics.

Other changes include the focus on whole grains (“make half your grains whole”) and the emphasis on darker colored vegetables and fruits, as they contain more vitamins. There is also a focus on eating a variety of fruits and vegetables, as each different fruit or vegetable has a different balance of vitamins.

The Food Groups in the new pyramid are arranged in colored bands. Food from every group should be eaten daily, but the wider the band the more food from that area should be eaten. The website www.MyPyramid.gov can help assess individual needs, while helping to find a balance between food and physical activity for each person.

There are three major components of food: protein, carbohydrates and fat. It is important to note that many foods are a combination of several components. For example, whole wheat contains primarily carbohydrates, along with some protein and a minimal amount of fat.

Protein

Protein is one of three nutrients that provide calories to the body. Nutrients from protein help to build muscle, bone, skin and blood. Protein can be found primarily in meats, fish, poultry, eggs, dairy products, beans, nuts and tofu (a soybean product). Protein has four calories per gram.

Carbohydrates

Carbohydrates are the body’s main source of energy, so it is important to make sure the diet consists primarily of the more healthy carbohydrates.

Carbohydrates to Emphasize

Whole grains, fruits and vegetables all are comprised primarily of carbohydrates. These healthful foods provide the body with vitamins, minerals and fiber.

“Complex” carbohydrates are one type of healthy carbohydrates found in whole grains (including brown rice, wild rice, bulgur, quinoa, triticale, amaranth, millet, barley and sorghum), whole grain breads and cereals, potatoes, sweet potatoes and legumes . It is important to note that many supposed “whole grain” or “whole wheat” flours are not really whole grain – but a mix of whole and refined grains. To see if the food is healthy, check the label for the amount of fiber.

Carbohydrates to Avoid

“Refined” carbohydrates have had their outer portion removed. These foods are not as healthy for the body for several reasons: First, they lack fiber, a necessary dietary component for preventing such conditions as constipation, colon cancer and diverticular disease. Also, many vitamins and minerals are removed in the refining process. While “enriched” foods (such as enriched flour) have some of the vitamins and minerals put back, many micronutrients and fiber are not restored to the “enriched” product.

Carbohydrates have four calories per gram; 40% to 60% of total calories should come from carbohydrates.

Fat Fat is needed by the body to absorb fat-soluble vitamins such as A, D, E and K, and to protect vital organs, insulate the body and maintain healthy hair and skin. Fat also helps produce cell membranes and hormones that help regulate blood pressure, heart rate, blood vessel constriction, blood clotting and the nervous system. It can also be used as a source of energy for the body.

Too much fat can be harmful to a person's health. Excess fat may increase blood cholesterol levels and the risk for coronary heart disease, while increasing the possibility of weight gain.

Consumption of fat should not exceed 35% of a person's daily calories, according to the USDA; but many other sources suggest keeping fat intake below 30%. Fat contains nine calories per gram.

Healthy Fats "Monounsaturated" fats have the ability to reduce the "bad" cholesterol (LDL) in the blood, helping to lower the risk of heart disease. Monounsaturated fats are found in olive, peanut, sesame and canola oils, avocados, and most nuts.

"Polyunsaturated" fats help lower blood pressure, protect against irregular heartbeat and decrease the risk of coronary artery disease. This type of fat can be found in vegetable oils (safflower, corn, sunflower, soy and cottonseed), flaxseed, flax oil and walnuts, and in fatty, cold-water fish. Polyunsaturated fats are divided into several sub-groups, including Omega-3 and Omega-6 fatty acids. Typically, the American diet does not include enough of the Omega-3 fatty acids, which are found in flax oil, walnuts and cold-water fish such as salmon. Typical Western diets place too much emphasis on the Omega-6 fats found in soy, sunflower, cottonseed, canola, peanut and corn oil.

Harmful Fats "Saturated" fats can increase the amount of "bad" cholesterol (LDL) in the body, while also increasing blood cholesterol levels and the risk of heart disease. These harmful fats are most often found in animal products and tropical oils.

While minimal amounts of "trans" fats occur in most meat and dairy products, most trans fats in the diet are manmade — when manufacturers add hydrogen to liquid vegetable oil to produce a solid fat. The food industry has relied on trans fats mainly because they do not go rancid, and thus extend product shelf life. If a product label lists "partially hydrogenated fat" among the ingredients, then trans fats are present in the food. Nutrition Facts food labels now include trans fat — but the amount can be listed as "0 grams" if the product contains less than 0.5 gram per serving. Trans fats are common in most commercially baked goods, fried foods, shortenings and some margarines.

Dietary cholesterol is produced naturally by the body, but can also be obtained from animal products such as meat, poultry, seafood, eggs, dairy products, lard and butter. While the body needs some cholesterol to function properly, it is not necessary to consume more of it — as the body can make all it needs.

Guidelines Take Care New York emphasizes that following the Food Pyramid guidelines — by eating a healthy diet and maintaining a healthy weight, increasing physical activity, and knowing your blood pressure and cholesterol numbers — will help ensure a healthy heart, leading to a longer, healthier life.

Sources

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16. Eating Healthy and the Food Pyramid

Objectives

Learners will:

- Understand and name three foods in each category of the new Food Pyramid.
- Be able to identify how their own eating habits compare to the Food Pyramid.
- Understand the three major components of food: protein, fats, carbohydrates.

Materials Needed

Board or chart paper

Markers

Food Pyramid poster

Food Pyramid mini-posters [15 copies]

Audio CD

Handouts: 16a (What did you eat yesterday?), 16b (What do you know about Nutrition?; Answer Key), 16c (Foods chart), 16d (Carla's Food Diary; Carla's Healthy Food Diary), 16e (Nutrition Facts: calories, carbohydrates, protein, fat; Answer Key)

Computers with Internet access (*optional*)

Activity 1 Warm-up

1. Check that learners have brought in their Food Diaries. If not give them time to complete them in class. (They can do this while the rest of the class does Activity 1.)
2. Hand out worksheet 16a, "What did you eat yesterday?"
3. Model a few questions, then ask learners to complete the worksheet with a partner.
4. Ask for a few volunteers to tell one thing about their partner (e.g., "My partner didn't eat broccoli yesterday.").

Activity 2 What do you know about nutrition?

Take the nutrition pre-test (16b, What do you know about Nutrition?). Read the questions out loud, and ask the learners to write True or Not True. *Do not go over it* — you will do this at the end of Session 18. [Note: This pre-test is not one of the research assessments. Rather, it is a class activity.] Collect their quizzes — you will need them in Session 18.

Activity 3 The New Food Pyramid

1. Hand out the Food Pyramid mini-posters. Or, use the full-size Food Pyramid poster. Ask learners to look at the new Food Pyramid and explain what they see.
2. Elicit statements about the Food Pyramid. Write them on the board.
3. Hand out worksheet 16c (Foods chart), which matches the Food Pyramid ("Grains," "Milk," etc.). Either as a class or in small groups, ask learners to fill in foods in each category.

4. Hand out Carla's Food Diary (16d). Ask some questions based on the information (e.g., "Did Carla eat carrots on Monday?" "What did Carla eat for dinner on Tuesday?" etc.).
Ask: "Did Carla eat 5 to 7 servings of vegetables every day?" Ask learners to look at Carla's diet and, as a class, write more statements based on the Food Pyramid (e.g., "Carla should eat more vegetables." "Carla should drink less soda.") on the back of worksheet 16c.
5. Put Carla's Monday foods on the board. As a class, make changes to improve her diet. For example, ask "What could Carla drink instead of coffee?" (e.g., water, non-fat milk, juice). "What could she eat instead of a donut?" (elicit a healthy breakfast choice).
6. Assign each group of 4 to 5 learners one meal of Carla's Tuesday or Wednesday food plan to revise (e.g., Group 1 does Tuesday breakfast, Group 2 does Tuesday lunch, etc.). Ask them to work together to plan a healthier meal. Share their report with the class. Write it on the board. Learners can copy onto Carla's Healthy Food Diary (16d).

Activity 4 **How's your diet?**

1. Ask learners to look at their Food Diaries (homework sheet 15c) and circle the healthy foods they ate.
2. Write on the board: "I should eat more..."; "I should eat less..." Ask learners to use these phrases to talk about their food diary with a partner.

Activity 5 **Food Group Nutrients**

Return to the new Food Pyramid. Review each section of the Food Pyramid. Talk about the nutrients we get from each group.

- Grains: Whole grains provide: fiber (reduce constipation and help prevent colon cancer), B vitamins (for energy), vitamin E (for healthy skin and cancer protection).

[Note: The new Food Pyramid emphasizes whole grains such as brown rice, oatmeal, whole wheat bread and whole grain pastas. A minimum of half of all daily grains should be whole grains. Emphasize this fact with the class.]

- Fruits and vegetables (many vitamins for a healthy body, including immune function and cancer protection)
- Meat, beans, eggs (protein to build and repair the body's structures)
- Milk and calcium-rich foods (for strong bones and osteoporosis prevention)



Activity 6 **Learning Nutrition Facts**

1. Hand out the Nutrition Facts sheets (16e).
2. Read the first section, on "calories," and discuss it. [Note: This reading is also on the audio CD. You can also play the CD.]
3. Ask learners to work with a partner to answer the question, "Who needs more calories, Jo or May? Tell why."
4. Look at the calorie chart. Ask learners to determine their own calorie needs. Stress that this is approximate.

5. Ask learners to look at the two Nutrition Facts worksheets on carbohydrates, protein and fat. Play the audio CD for protein and/or read as a class. Using the Food Pyramid as a reference, go over the second category (protein), then ask learners to work in a small group to complete the protein question. Check as a class. Repeat for each section.

Technology If you have a computer with Internet access, go to www.mcedservices.com/medex2/medex2.htm. Take Nutrition Quiz 2. Skip the first quiz, unless your class is more advanced.

Homework Ask each learner to bring in one or two canned or packaged foods from their home. Explain that we will just be looking at labels — *not* eating the food! Also, ask them to bring measuring cups and measuring spoons, if they have any.

Resources Food Pyramid posters may be ordered from www.mypyramid.gov.

What did you eat yesterday?

Ask your classmate:

1. Did you eat broccoli yesterday?
2. Did you eat chicken yesterday?
3. Did you drink milk yesterday?
4. Did you eat beans yesterday?
5. Did you eat eggs yesterday?
6. Did you drink coffee yesterday?
7. Did you eat pizza yesterday?
8. Did you eat a banana yesterday?
9. Did you eat yogurt yesterday?
10. Did you eat rice yesterday?
11. Did you eat bread yesterday?
12. Did you eat salad yesterday?
13. Did you eat fish yesterday?
14. Did you eat an apple yesterday?

Name _____

Date _____

What do you know about Nutrition?????

Read the questions. Write "True" or "Not true."

1. Women should have 800 calories every day. **Not true**
2. Fat is ALWAYS bad. Try not to eat it. **Not true**
3. Nuts can be a healthy food. **True**
4. Protein is a good energy food. **Not true**
5. Spinach has a lot of protein. **Not true**
6. Milk has a lot of calcium. **True**
7. Beans have a lot of protein. **True**
8. Some fruits have a lot of vitamin C. **True**
9. White rice and brown rice are the same for your health.
Only the color is different. **Not true**
10. We don't need to eat fiber. **Not true**
11. Apples have a lot of calcium. **Not true**
12. Baked potatoes are better than French fries. **True**
13. People with diabetes should not eat sugar. **True**
14. Milk has a lot of vitamin C. **Not true**



Healthy Eating

Work with a partner. Write foods for each group.

Grains	Vegetables	Fruits	Milk (and other calcium food)	Meat & Beans (and other protein food)
<i>Brown rice</i>	<i>Carrots</i>	<i>Apples</i>	<i>Yogurt</i>	<i>Chicken</i>
Eat 6 oz. every day	Eat 2.5 cups every day	Eat 2 cups every day	Get 3 cups every day	Eat 5.5 oz. every day

Carla's Food Diary

Monday	Tuesday	Wednesday
Breakfast Coffee Donut	Breakfast Coffee Donut	Breakfast Bagel with Butter Coffee
Lunch Hamburger French Fries Diet Coke	Lunch Grilled Cheese Sandwich (White Bread) Apple Pie Coke	Lunch Cheese Burrito Coke
Snack Apple	Snack Candy	Snack Chocolate
Dinner Fried Fish White Rice Broccoli Ice Cream	Dinner Pizza Orange Juice	Dinner Sautéed mixed vegetables with chicken White Rice Cookies Apple Juice

1. Circle the Healthy foods that Carla ate.
2. Look at the Food Pyramid. Talk about Carla's food diary with your teacher and classmates.

Carla eats too much *white bread and white rice, soda, candy, sugar, sweets, fried food, junk food* [possible answers].

Carla should eat more *whole grains, brown rice, whole grain bread, vegetables fruits*.

Carla's *Healthy* Food Diary

Monday	Tuesday	Wednesday
Breakfast	Breakfast	Breakfast
Lunch	Lunch	Lunch
Dinner	Dinner	Dinner

What do our bodies need?

Our bodies need many things to be healthy.

We need **calories**. Calories give us energy. All food has calories. Only water, coffee and tea have no calories.

If we eat too many calories we will get fat. If we don't eat many calories, we will lose weight.

Our bodies use calories all the time. Even when we are sleeping, we are using calories. Exercise or physical activity uses more calories than sleeping.



Jo is a postal worker. She walks all day.



May works in an office. She sits all day.

Who needs more calories (Jo or May)? Why?

Look at the chart. How many calories do you need?*

	Age	Not Active I do not exercise.	Moderately Active I exercise 30 minutes every day.	Active I exercise more than 30 minutes every day.
Women	14–18	1,800 calories	2,000 calories	2,400 calories
	19–30	2,000 calories	2,000–2,200 calories	2,400 calories
	31–50	1,800 calories	2,000 calories	2,200 calories
	51+	1,600 calories	1,800 calories	2,000–2,200 calories
Men	14–18	2,200 calories	2,400–2,800 calories	2,800–3,200 calories
	19–30	2,400 calories	2,600–2,800 calories	3,000 calories
	31–50	2,200 calories	2,400–2,600 calories	2,800–3,000 calories
	51+	2,000 calories	2,200–2,400 calories	2,400–2,800 calories

*This is a guide. Talk to your doctor or health care worker about what is right for you.

Carbohydrates give our bodies energy. We need some carbohydrates every day.

Meat has no carbohydrates. What foods have a lot of carbohydrates?

- | | |
|--------------------|------------------|
| 1. <i>Potatoes</i> | 4. <i>Rice</i> |
| 2. <i>Bread</i> | 5. <i>Cake</i> |
| 3. <i>Pasta</i> | 6. <i>Cereal</i> |



Some carbohydrates are not healthy. We shouldn't eat too many "refined" carbohydrates. For example, foods made from white flour are not very healthy. What foods have white flour?

- | | |
|------------------------|-------------------------|
| 1. <i>White bread</i> | 4. <i>Most pasta</i> |
| 2. <i>Most cakes</i> | 5. <i>Most crackers</i> |
| 3. <i>Most cookies</i> | 6. <i>Bagels</i> |



Sugar is also a carbohydrate. We shouldn't eat too much sugar. What foods have a lot of sugar?

- | | |
|-----------------|------------------------|
| 1. <i>Cake</i> | 4. <i>Fruit drinks</i> |
| 2. <i>Candy</i> | 5. <i>Cookies</i> |
| 3. <i>Soda</i> | 6. <i>Ice cream</i> |



Healthy carbohydrates are called "complex carbohydrates." What are some healthy carbohydrates?

- | | |
|-----------------------------|---|
| 1. <i>Brown rice</i> | 4. <i>Yams</i> |
| 2. <i>Whole grain bread</i> | 5. <i>Whole wheat pasta</i> |
| 3. <i>Barley</i> | 6. <i>Oatmeal, bulgar (tabouli), millet</i> |



Our bodies also need **protein** every day. Protein helps our bodies grow. Babies and children need protein to grow tall. Everybody needs protein to build and repair body tissues and organs. For example, your brain needs protein. Your hair needs protein, too.

Vegetables have a little protein. What foods have a lot of protein?

- | | |
|-------------------|--|
| 1. <i>Fish</i> | 4. <i>Dairy (milk, yogurt, cheese)</i> |
| 2. <i>Beans</i> | 5. <i>Eggs</i> |
| 3. <i>Chicken</i> | 6. <i>Nuts, Beef</i> |



Our bodies need some **fat** every day. Fats help us to use some vitamins. But we shouldn't eat too much fat.

Fruit doesn't have any fat. What foods have a lot of fat?

- | | |
|-------------------------|--|
| 1. <i>Ice cream</i> | 4. <i>Fried foods</i> |
| 2. <i>Peanut butter</i> | 5. <i>Donuts, chocolate, cookies, brownies</i> |
| 3. <i>Cheese</i> | 6. <i>Bacon</i> |



Some fats are healthier for our body. What are some healthy fats?

- | | |
|---------------------------------|---------------------------------------|
| 1. <i>Olive oil</i> | 4. <i>Sesame seed, sunflower seed</i> |
| 2. <i>Avacado</i> | 5. <i>Flax seed</i> |
| 3. <i>Walnuts and most nuts</i> | 6. <i>Peanut butter</i> |



MyPyramid

STEPS TO A HEALTHIER YOU


MyPyramid.gov



GRAINS Make half your grains whole	VEGETABLES Vary your veggies	FRUITS Focus on fruits	MILK Get your calcium-rich foods	MEAT & BEANS Go lean with protein
<p>Eat at least 3 oz. of whole-grain cereals, breads, crackers, rice, or pasta every day</p> <p>1 oz. is about 1 slice of bread, about 1 cup of breakfast cereal, or 1/2 cup of cooked rice, cereal, or pasta</p>	<p>Eat more dark-green veggies like broccoli, spinach, and other dark leafy greens</p> <p>Eat more orange vegetables like carrots and sweetpotatoes</p> <p>Eat more dry beans and peas like pinto beans, kidney beans, and lentils</p>	<p>Eat a variety of fruit</p> <p>Choose fresh, frozen, canned, or dried fruit</p> <p>Go easy on fruit juices</p>	<p>Go low-fat or fat-free when you choose milk, yogurt, and other milk products</p> <p>If you don't or can't consume milk, choose lactose-free products or other calcium sources such as fortified foods and beverages</p>	<p>Choose low-fat or lean meats and poultry</p> <p>Bake it, broil it, or grill it</p> <p>Vary your protein routine – choose more fish, beans, peas, nuts, and seeds</p>
<p>For a 2,000-calorie diet, you need the amounts below from each food group. To find the amounts that are right for you, go to MyPyramid.gov.</p>				
<p>Eat 6 oz. every day</p>	<p>Eat 2 1/2 cups every day</p>	<p>Eat 2 cups every day</p>	<p>Get 3 cups every day; for kids aged 2 to 8, it's 2</p>	<p>Eat 5 1/2 oz. every day</p>


Find your balance between food and physical activity

- Be sure to stay within your daily calorie needs.
- Be physically active for at least 30 minutes most days of the week.
- About 60 minutes a day of physical activity may be needed to prevent weight gain.
- For sustaining weight loss, at least 60 to 90 minutes a day of physical activity may be required.
- Children and teenagers should be physically active for 60 minutes every day, or most days.



Know the limits on fats, sugars, and salt (sodium)

- Make most of your fat sources from fish, nuts, and vegetable oils.
- Limit solid fats like butter, stick margarine, shortening, and lard, as well as foods that contain these.
- Check the Nutrition Facts label to keep saturated fats, *trans* fats, and sodium low.
- Choose food and beverages low in added sugars. Added sugars contribute calories with few, if any, nutrients.




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