Unit Thirteen

Taking Care *of* Yourself: Eating Right

UNIT THIRTEEN:
Taking Care of Yourself: Food & Nutrition
Suggestions for the Instructor

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Pg. 13-12 – 13-17 -- Food Groups

In preparation for this lesson, the teacher can use cut out magazine or internet images of various kinds of food. Ask students to work in small groups to use the pictures to discuss all the ways food can be categorized. Ask them to discuss their feelings, thoughts and attitudes about different foods and to tell why they put them in the categories that they did.

- What you like to eat / what you don't like
- What you have eaten before / what you haven't eaten before
- What you think is healthy / what you think is not healthy
- Foods with added sugar / foods without added sugar
- Foods with added salt / foods without added salt
- Foods containing proteins / carbohydrates / fats / vitamins and minerals / fiber

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Pg. 13-18 – 13-21 -- Food for Thought: Nutrition Matters

With this handout, students are introduced to the basic vocabulary of nutrition. Have students refer to it to help them answer the questions on the **Food for Thought: Nutrition Quiz.**

Have students refer to the handout to find definitions for the following nutrition-related terms. Tell them they can also use their prior knowledge, on-line dictionaries, classroom dictionaries or reference books to help them.

ANSWERS:

WORD	DEFINITION
nutrition	*Nutrition is the way the body uses food to stay healthy.*
nutrients	*Nutrients are the substances in food that are needed for health.*
proteins	*Proteins are fundamental nutrients needed by humans for growth, muscle strength and healing.*
carbohydrates	*Carbohydrates are important nutrients needed by humans for energy.*
fats	*Fats are nutrients needed by humans for energy.*

dietary fiber	*Dietary fiber is a substance in some foods that helps food move through the digestive system.*
vitamins	*Vitamins are organic (living) elements in food needed in very small amounts for growth and for maintaining good health.*
minerals	*Minerals are inorganic (non-living) elements in food needed in very small amounts for growth and for maintaining good health.*
calories	*Calories are units of measurement used to measure the energy we get from food.*
diabetes	*Diabetes is a disease in which the human body doesn't make enough insulin. Insulin is a hormone that controls sugar in the blood.*
sugar	*Sugar is a simple carbohydrate that contains calories but no vitamins or minerals.*
high blood pressure	*High blood pressure, also known as hypertension, is caused when blood pumps with too much pressure through the arteries. It is dangerous because it can cause heart failure and other serious health problems.*
sodium	*Sodium, also known as salt, is a mineral needed by humans -- but only in small amounts.*

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Pg. 13-22 – 13-23 -- Food for Thought: Nutrition Quiz

Ask students how much they think they know about nutrition after having studied the information in the handout **Food for Thought: Nutrition Matters.** Use the handout **Food for Thought: Nutrition Quiz** to evaluate what students have learned and to discuss their ideas and thoughts about good nutrition.

ANSWERS:

1. Do you like to eat?
   Answers will vary.
2. What are your favorite foods?
   Answers will vary.
3. Do you think you eat a nutritious (healthy) diet? Why or why not?
   Answers will vary.
4. What is **nutrition**?
   Nutrition is the way the body uses food to stay healthy.
5. What is a **nutrient**?
   Nutrients are the substances in food that are needed for health.
6. Why is good nutrition important?
   Good nutrition is important because it helps the body grow, stay strong, have energy, and fight sickness and disease.

7. Define these nutrients, then give examples of foods that contain them:
   - **proteins**: **fundamental nutrients needed by humans for growth, muscle strength and healing. Examples: fish, chicken, turkey, beef, pork, seafood, nuts, peanut butter, beans, cheese, yogurt, eggs**
   - **carbohydrates**: **important nutrients needed by humans for energy; <u>simple carbohydrates</u> contain lots of sugar and give quick energy. Examples: donuts, cookies, cakes, pies, ice cream; <u>complex carbohydrates</u> give long-lasting energy: breads. Examples: pasta, rice, whole grain cereals**
   - **fats**: **nutrients needed by humans for energy. Examples: butter, olive oil, canola oil, lard, cheese, fried foods**
8. What foods contain **dietary fiber**? **fruits and vegetables**
9. Why is **dietary fiber** important?
   Fiber helps food move through the digestive system. It helps rid the body of waste. It can prevent some kinds of cancer.
10. What foods contain **vitamins and minerals**?
    Fresh fruits, vegetables, dairy products
11. Why are **vitamins and minerals** important?
    They strengthen the immune system, help the body fight colds and infections, strengthen bones, teeth, skin, and eyes.
12. What are **calories**?
    Calories are units of measurement used to measure the energy we get from food.
13. What mineral can contribute to **high blood pressure** if we eat too much?
    Salt
    What foods contain it?
    potato chips, French fries, soups, spaghetti sauce
14. What simple carbohydrate, which has calories but no nutritional benefit, can contribute to **diabetes and weight gain**? **Sugar**
    What foods contain it? **donuts, cookies, cakes, pies, ice cream**
15. What are four **rules for healthy eating**?
    - **Eat a variety of foods.**
    - **Eat more fruits and vegetables.**
    - **Eat less fat.**
    - **Eat less sugar.**
16. What **questions** do you have about healthy food or eating habits?
    Answers will vary.
17. What **knowledge, information or expertise** about food and nutrition do you have now that you didn't have before? **Answers will vary**.
18. Do you think it is easy or difficult to eat a nutritious diet? Why or why not?
    Answers will vary.

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Pg. 13-24 – Ten Tips for Good Nutrition www.choosemyplate.gov

The USDA has produced one page information sheets about good nutrition that can be printed for use in the classroom. Copy and print these handouts from the Ten Tips Nutrition Education Series. Have students choose one of the following handouts, then read the handout and answer the questions about the information. Ask students to present their information to the class.

- ☐ Choose MyPlate
- ☐ Focus on Fruits
- ☐ Got Your Dairy Today?
- ☐ Build a Healthy Meal
- ☐ Smart Shopping for Veggies and Fruits
- ☐ Liven Up Your Meals With Vegetables and Fruits
- ☐ Add More Vegetables to Your Day
- ☐ Make Half Your Grains Whole
- ☐ With Protein Foods, Variety is Key
- ☐ Healthy Eating for Vegetarians
- ☐ Salt and Sodium

1. What are the ten tips offered by this handout?
2. Which of these tips have you followed in the past? Which ones would you like to try in the future?
3. What are two tips you could follow without changing your lifestyle very much?
4. Do any of these tips seem difficult? Why? What would need to happen in order for you to try this tip?

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Pg. 13-25 – Do You Get Enough Vitamins?

Have students use this chart to learn about vitamins in food and the important functions they play in a healthy diet. Ask students to circle the foods they eat on a regular basis, then write yes or no in answer to the question "Are you getting these vitamins?" After reviewing this chart and **Do You Get Enough Minerals?**, ask students to complete the worksheet, **Vitamins and Minerals Review.**

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Pg. 13-26 – Do You Get Enough Minerals?

Have students use this chart to learn about minerals in food and the important functions they play in a healthy diet. Ask students to circle the foods they eat on a regular basis, then write yes or no in answer to the question "Are you getting these minerals?" After reviewing this chart and **Do You Get Enough Vitamins?**, ask students to complete the worksheet, **Vitamins and Minerals Review.**

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Pg. 13-27 -- Vitamins and Minerals Review

Ask students to answer questions about the importance of vitamins and minerals in our diet by referring to the worksheets "Do You Get Enough Vitamins?" and "Do You Get Enough Minerals?"

ANSWERS:

1. What foods might a pregnant woman eat to help prevent birth defects in pregnancy?
   dark leafy vegetables (containing folic acid)
2. Which vitamins and minerals are important for healthy bone growth?
   vitamins D, K, C; calcium, magnesium, phosphorous, manganese
3. Which mineral is important for transporting oxygen in red blood cells?
   iron
4. Which vitamins and minerals help build immunity against illness?
   vitamins A and C; zinc
5. What vitamins and minerals break down carbohydrates and therefore help control blood sugar levels?
   chromium, manganese
6. What vitamin helps with blood clotting? What foods contain this vitamin?
   vitamin K; spinach, collards, broccoli, cabbage
7. What foods help strengthen vision? What vitamin do these foods contain?
   sweet potato with peel, carrots, spinach, fortified cereals; vitamin A
8. Which mineral should be eaten along with iron if it is to be most effective?
   copper

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Pg. 13-28 – 13-30 -- What's on the Label?

In this activity, students are encouraged to read the labels on the foods they eat. Tell them the Nutrition Facts Label is designed to give consumers information about the nutrients in food so we can take charge of our food intake, make informed food choices and eat a healthier diet.

Tell them to study the sample food label. Ask them to think about what each of the parts of the label means and discuss what information they think they can learn from the label. Have them refer to each of the numbered parts of the label to answer the questions that follow.

ANSWERS:

1. <u>Serving size:</u>

For example, if one serving of the macaroni and cheese is <u>one cup</u>, and one cup contains 250 calories, how many calories will you eat if you all the food in the container?

2 servings x 250 calories = 500

2. Calories (and Calories from Fat)

In this example, almost half of the calories in each serving come from fat. What if you ate the whole package content? Then, you would consume two servings, or 500 calories. How many of those calories would come from fat?

2 servings x 110 = 220 calories from fat

3. 4. Nutrients

Think about the food you eat daily. Do you think you are getting the nutrients you need? What steps could you take to get more of the nutrients that you need?

Answers will vary.

5. 6. Percent of Daily Value

Are you getting enough calories or too many? What steps could you take to get the amount of calories you need -- not too few or too many?

Answers will vary.

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Pg. 13-31 – 13-32 -- Comparison Shopping: What's in Your Food?

Gather labels from various canned and boxed food items and distribute them to students. Ask students to work in pairs or small groups to study the labels to compare the food value of each. Have students identify the following components of each food (per serving):

- Total calories
- Total fat grams (g) and % Daily Value
- Total sodium grams (g) and % Daily Value
- Total carbohydrate grams (g) and % Daily Value / how many grams from sugar
- Total protein grams (g) and % Daily Value
- Vitamins and minerals and % Daily Value for each

Then have them use the chart to answer questions about food choices.

1. Which food contains the ***most* calories** (per serving)?
2. Which food contains the ***most* fat grams** (per serving)?
3. Which food contains the ***most* carbohydrates grams** (per serving)?
4. Which food contains the ***most* protein grams** (per serving)?
5. Based on the nutrition information on the label only (NOT taste), which of the foods that you analyzed would you choose to ***provide energy*** before work or school? Why?
6. Based on the nutrition information on the label, which of the foods that you analyzed would you choose if you were trying to ***limit sugar*** intake? Why?
7. Based on the nutrition information on the label, which of the foods that you analyzed would you choose if you were trying to ***limit salt*** intake? Why?
8. Based on the nutrition information on the label, which of the foods that you analyzed would you choose if you were trying to ***boost your immunity?*** Why?

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Pg. 13-33 – 13-34 -- Calories Are Everywhere, Yet Hard to Track, by Jane E. Brody

http://well.blogs.nytimes.com/2012/03/19/calories-are-everywhere-yet-hard-to-track/

According to Jane Brody, "Americans are having a passionate love affair with . . . calories, billions upon billions of which are consumed every day, often unwittingly, at and between meals." Print the article for students to read. Review and discuss the underlined vocabulary and the content as they read. Ask students to answer the questions on the handout. Paragraphs in which the information can be found are written in bold. (**Questions only pertain to paragraphs 1-20 of the article**, so you may choose to read only those paragraphs or you may read the entire article for extension.)

ANSWERS:

1. **Paragraph #1** -- What do you think the word unwittingly means? Use context clues to help you, then look it up in a dictionary is necessary.
   Unwittingly means not knowing, unaware, not intended, unintentional.
2. **Paragraph #2** -- What do you think the word thwart means? Use context clues to help you, then look it up in a dictionary is necessary.
   Thwart means to keep from happening, to prevent the occurrence of, to oppose, to interfere with.
   What percent of adults is obese? **64**%
   What fraction is that? **64/100 = 16/25 (approx 3/5)**
   What fraction of children is obese? **1/3**
   What percent is that? **1/3 = 33/99 (approx 33%)**
3. **Paragraph #4** -- What do you think the word excess means? Use context clues to help you, then look it up in a dictionary is necessary.
   Excess means an extreme or excessive amount, superabundance, going beyond what is considered normal or proper, overdoing it, overeating or drinking too much, etc.
   Why do Dr. Nestle and Dr. Nesheim say "it is much easier to overeat than to stop eating when you are no longer hungry"?
   It is easier to overeat than to stop eating when you're not hungry because the body does a good job of making sure we get enough calories but isn't good at knowing when it gets too many calories.
4. **Paragraph #5** -- What metaphor does the author use to illustrate the idea that people in affluent societies are surrounded by high calorie foods?
   They "swim in a sea of redundant calories."
   Do you agree with the author that food is "everywhere, and it is relatively inexpensive?" Explain your answer.
   Answers will vary.

5. **Paragraph #7** -- What does the author say is the big change that has happened to portion sizes?

   Portion sizes have "mushroomed out of control," which means they have gotten much too big.
6. **Paragraph #10** – If an 8 ounce soda has 100 calories, how would you figure out how many calories are in a 64 ounce Double Gulp soda?

   Multiply 8(x) =64. x=8. Multiply 8 x 100. (8 x 100 = 800 calories.)
7. **Paragraph #12** -- What mistake do people make when they check calorie information on nutrition labels?

   They forget to notice the serving size.
8. **Paragraph #13** -- How many calories does the average woman need in one day?

   2,100 calories

   How many calories would she consume if she ate a "personal-size pizza" and a Double Gulp soda for lunch?

   2,100 + 800 = 2,900

   Why do you think that might be a problem?

   She has eaten more calories than she needs in one meal; she is getting too many calories from a non-nutritious sugar drink; she will be adding more calories for breakfast and dinner and snacks; she will consume too many calories and will probably gain weight.
9. **Paragraph #19** -- Even though Dr. Nestle says Americans eat too many calories, she doesn't recommend counting calories. What does she recommend?

   She recommends eating good food. She says you have to pay attention to eating better and in moderation: plenty of fruits and vegetables, lean meats, whole grains in reasonable portions, and not too much junk food.

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Pg. 13-35 -- How Many Calories Do You Need?

Have students read the chart on this handout to identify the calorie levels needed by males and females according to age and activity level. Ask them to study the chart in order to answer the questions which follow.

ANSWERS:

1. How many calories are needed by an 18 year old woman who runs for an hour a day? **2,400**
2. How many more calories does an 23 year old man who runs twenty five minutes a day need than an 23 year old woman who runs the same amount? **600**
3. How many fewer calories does a 53 year old sedentary woman need than a 19 year old moderately active woman? **400**
4. How many fewer calories does a 45 year old moderately active man need than a 45 year old vigorously active man? **200**
5. Do the number of calories we need generally increase or decrease as we age? **Decrease**

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Pg. 13-36 -- Weekly Food Tracker

Remind students that one of the most important first steps to eating right is to keep track of what we eat. You may challenge students to try for one week to record the food they eat with a focus on trying to limit snacks and sweets and soda, drink a lot of water, and eat fresh, low-fat food. Ask them come back to the class and discuss the experience. Ask them:

- Was it easy or hard to keep track of what they ate every day?
- Was it hard to limit snacks?
- Was it hard to eat fewer sweets?
- Was it hard to drink less soda?
- Were they able to drink eight glasses of water ever day?
- Did they eat much fresh and low fat food?
- How did they feel after a week of eating more carefully and healthfully?

Ask them if they would like to try to track what they eat for one more week and see if they can do an even better job of limiting sods, sweets and snacks.

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Unit Thirteen

Taking Care

of

Yourself:

Eating Right

Student Activities

FOOD GROUPS

Working in small groups, use pictures of food to discuss all the ways food can be categorized, or grouped. Discuss your feelings, thoughts and attitudes about different foods and why you put them in the categories that you did.

What you like to eat	**What you don't like**
What you have eaten before	**What you haven't eaten before**
Healthy foods	**Not healthy foods**
Foods with added sugar	**Foods without added sugar**
Foods with added salt	**Foods without added salt**
Foods containing proteins	**Foods containing carbohydrates**
Foods containing fats	**Foods containing vitamins and minerals**











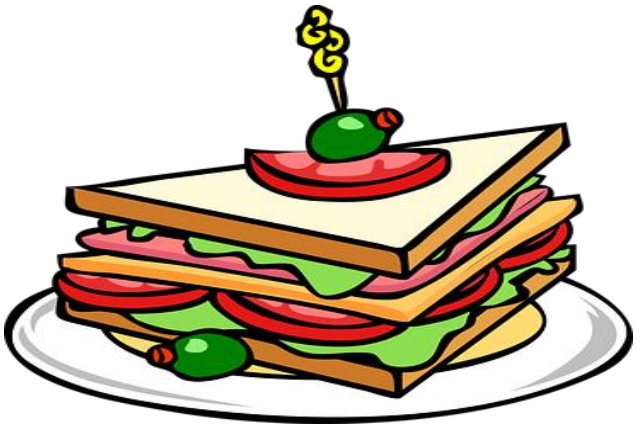


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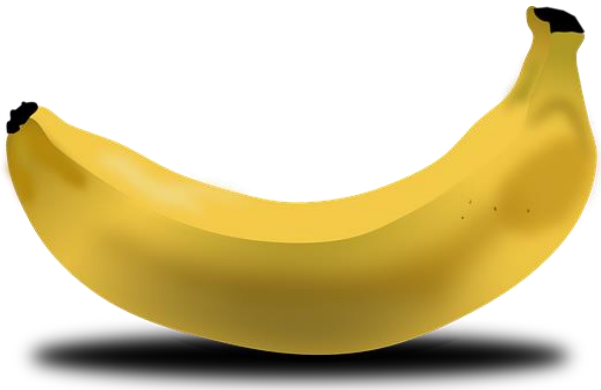

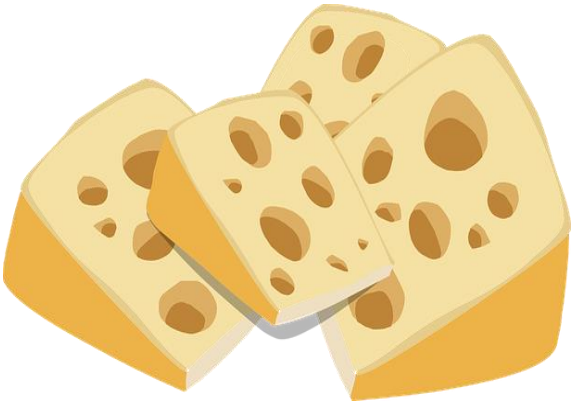

Food for Thought: Nutrition Matters

Do you like to eat? Most people do. Do you eat nutritious food? Many people aren't sure. It's important to know about nutrition so we can make smart choices about what we eat, so we eat food that tastes good and is also good for us.

What is nutrition and why does it matter? Nutrition is the way the body uses food to stay healthy. Good nutrition is important because it helps the body grow, stay strong, have energy, and fight sickness and disease.

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Nutrients are the substances in food that are needed for health. The main nutrients needed are proteins, carbohydrates and fats.

Proteins are fundamental nutrients needed by humans for growth, muscle strength and healing. Sources of protein include meat, fish, eggs, milk, and beans.

Carbohydrates are important nutrients needed by humans for energy. They are the most important source of energy for your body. Your digestive system changes carbohydrates into glucose (blood sugar). Your body uses this sugar for energy for your cells, tissues and organs. It stores any extra sugar in your liver and muscles for when it is needed.

Carbohydrates are called simple or complex, depending on their chemical structure. <u>Simple carbohydrates</u> give quick energy and include sugars found naturally in foods such as fruits, vegetables, milk, and milk products, as well as sugars added during food processing and refining. <u>Complex carbohydrates</u> give more long-lasting energy and include whole grain breads and cereals, starchy vegetables and legumes. Many of the complex carbohydrates are good sources of fiber. For a healthy diet, it is important to limit the amount of added sugar that you eat and choose whole grains over refined grains.

Fats are nutrients needed by humans for energy. The body uses fat as a fuel source, and fat is the major storage form of energy in the body. Fat also has many other important functions in the body, and a moderate amount is needed in the diet for good health. Too much fat or too much of the wrong type of fat can be unhealthy. Foods that contain fats include butter, oil, nuts, meat, fish, and dairy products.

Dietary fiber is a substance in some foods that helps food move through the digestive system. It helps rid the body of waste. It can prevent some kinds of cancer. Certain foods are high in fiber and should be a part of a healthy diet, such as fresh fruits and vegetables.

Vitamins are organic (living) elements in food needed in very small amounts for growth and for maintaining good health. Some vitamins strengthen the immune system and help the body fight colds, flu and infections. Other vitamins strengthen bones, teeth, skin and eyes. Fresh fruits and vegetables are good sources of vitamins.

Minerals are inorganic (non-living) elements in food needed in very small amounts for growth and for maintaining good health. For instance, calcium is a mineral, found in dairy products and leafy green vegetables, which helps keep bones strong.

♦♦

Calories are units of measurement used to measure the energy we get from food. If we do not get enough calories we may weigh too little or be low in energy. If people eat more calories than they need for energy, the extra calories turn to fat and people gain weight. The number of calories each person needs depends on height, age, gender and physical activity.

♦♦

Nutrition and Disease

Good nutrition can help prevent certain chronic diseases. Both Type 2 diabetes and high blood pressure can be caused or worsened by being overweight or eating poorly.

Diabetes

What is diabetes? Diabetes is a disease in which the human body doesn't make enough insulin. Insulin is a hormone that controls glucose (sugar) in the blood. If you have diabetes, your blood sugar level can get too high or too low.

What causes diabetes? Being overweight increases the risk of developing Type 2 diabetes, and a diet high in calories can cause weight gain. People should limit their intake of sugar and sugar-sweetened beverages, like regular soda, fruit punch, fruit drinks, energy drinks, sports drinks, and sweet tea, in order to help prevent diabetes.

Sugar is a simple carbohydrate that contains calories but no vitamins or minerals. Research has shown that drinking sugary drinks is linked to Type 2 diabetes.

High Blood Pressure

What is high blood pressure? High blood pressure is also known as hypertension. Blood pressure is the amount of force exerted against the walls of the arteries as blood flows through them. High blood pressure affects the heart and all the arteries in the body. It can reduce or restrict oxygen delivery to other organs -- such as the brain, the kidneys, and the eyes. This can cause heart disease, stroke, kidney disease, blindness, and other health problems.

What causes high blood pressure? There are many causes of high blood pressure, but some of the causes are under our control. For example, being obese or overweight can lead to high blood pressure. Smoking cigarettes and drinking alcohol can increase the risk of high blood pressure. Diets high in fat and high in sodium can also contribute to high blood pressure. **Sodium,** also known as salt, is a mineral needed by humans -- but only in small amounts. To help prevent high blood pressure, try to:

- eat a better diet, which may include reducing salt
- enjoy regular physical activity
- maintain a healthy weight
- manage stress
- avoid tobacco smoke
- limit alcohol

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Rules for Healthy Eating

It can be confusing to know how to eat to stay healthy. If you follow these four rules, you will be on track to a more nutritious diet:

1. **Eat a variety of foods.** The more different kinds of foods you eat, including new foods, the more likely that you will get the nutrients and fiber that you need.
2. **Eat more fruits and vegetables.** Fruits and vegetables contain fiber and are high in vitamins. Try to include raw or lightly steamed vegetables and fruits at every meal every day.
3. **Eat less fat.** Do not eat too much fat. Excessive fat can lead to health problems like obesity, high blood pressure and heart disease. Instead of frying foods, bake or broil them.
4. **Eat less sugar.** Many foods contain refined sugar, so be careful not too consume too much! Too much sugar can lead to health problems like obesity, diabetes and dental problems, so limit candy and sweets. Drink water instead of soda.

NUTRITION VOCABULARY

Using the information in the handout, find definitions for the following nutrition-related terms. You may also use your prior knowledge, on-line dictionaries, classroom dictionaries or reference books to help you.

WORD	DEFINITION
nutrition	
nutrients	
proteins	
carbohydrates	
fats	
dietary fiber	
vitamins	
minerals	
calories	
diabetes	
sugar	
high blood pressure	
sodium	

Food for Thought: Nutrition Quiz

After studying the information in the handout ***Food for Thought: Nutrition Matters,*** *answer the following questions:*

1. Do you like to eat? _____

_____

2. What are your favorite foods? _____

_____

3. Do you think you eat a nutritious (healthy) diet? _____Why or why not?

_____

4. What is **nutrition**?_____

5. What is a **nutrient**? _____

6. Why is good nutrition important?_____

_____

7. Define these nutrients, then give examples of foods that contain them:

   proteins:_____

   _____ _____ _____ _____

   simple carbohydrate:_____

   _____ _____ _____ _____

   complex carbohydrate:_____

   _____ _____ _____ _____

   - **fats**: _____

   _____ _____ _____ _____

8. What foods contain **dietary fiber**?_____

_____

9. Why is dietary fiber important? _____

_____

10. What foods contain **vitamins and minerals**? _____

_____ _____

11. Why are **vitamins and minerals** important? _____

_____

12. What are **calories**?_____

_____

13. What mineral can contribute to **high blood pressure** if we eat too much? _____

What foods contain it? _____

14. What carbohydrate, which has *calories but no nutritional benefit,* can contribute to **diabetes and weight gain**? _____

What foods contain it? _____ _____

_____ _____

15. What are **four rules for healthy eating**?_____

_____ _____ _____

16. What **questions** do you have about healthy food or eating habits? _____

_____

17. What **knowledge, information or expertise** about food and nutrition do you have have now that you didn't have before? _____

_____

_____

18. Do you think it is easy or difficult to eat a nutritious diet? Why or why not?

_____

Ten Tips for Good Nutrition

www.choosemyplate.gov

The USDA has produced one page information sheets about good nutrition in its Ten Tips Nutrition Education Series. Choose one of the following handouts to learn ten useful tips for improving your nutrition. Individually or in small groups, read the handout and answer the questions about the information and your evaluation of it. Present your information to the class.

- ☐ Choose MyPlate
- ☐ Add More Vegetables to Your Day
- ☐ Focus on Fruits
- ☐ Make Half Your Grains Whole
- ☐ Got Your Dairy Today?
- ☐ With Protein Foods, Variety is Key
- ☐ Build a Healthy Meal
- ☐ Healthy Eating for Vegetarians
- ☐ Smart Shopping for Veggies and Fruits
- ☐ Liven Up Your Meals With Vegetables and Fruits
- ☐ Salt and Sodium

1. What are the ten tips offered by this handout?

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2. Which of these tips have you followed in the past? Which ones would you like to try in the future?

3. What are two tips you could follow without changing your lifestyle very much?

4. Do any of these tips seem difficult? Why? What would need to happen in order for you to try this tip?

Do You Get Enough Vitamins?

Use this chart to learn about the vitamins in food and the important functions they play in a healthy diet. Circle the foods you eat on a regular basis. Write yes or no in answer the question "Are you getting these vitamins?"

VITAMINS	FUNCTION	FOOD SOURCES	Are you getting these vitamins?
Vitamin A	aids in vision, immune function, reproduction	sweet potato with peel, carrots, spinach, fortified cereals	
Vitamin D	aids calcium in growth & formation of bones and teeth	fish liver oils, fatty fish, fortified milk products, fortified cereals; also, formed naturally as a result of sunlight exposure	
Vitamin E	protects cells against damage	fortified cereals, sunflower seeds, almonds, peanut butter, vegetable oils	
Vitamin K	helps with blood clotting and bone health	spinach, collards, broccoli, cabbage	
Thiamin (B_1)	allows the body to break down carbohydrates and some protein	whole grain, enriched, fortified products; bread; cereals	
Riboflavin (B_2)	helps convert food into energy; helps produce red blood cells	milk, bread products, fortified cereals	
Niacin (B_3)	helps digestion; helps convert food into energy	meat, fish, poultry, enriched and whole grain breads, fortified cereals	
Folic Acid	helps develop cells and metabolize (use) protein; helps prevent birth defects in pregnant women	dark, leafy vegetables; enriched and whole grain breads; fortified cereals	
Vitamin (B_{12})	important in the production of red blood cells	fish, poultry, meat, fortified cereals	
Vitamin (B_6)	helps develop cells and metabolize protein	milk, liver, eggs, peanuts	
Biotin	helps break down proteins, fats and sugar so the body can use them for energy	liver, fruits, meats	
Pantothenic Acid	helps metabolize (use) carbohydrates, fats, protein	chicken, beef, potatoes, oats, cereals, tomatoes	
Vitamin C	helps protect bones, cells and teeth; boosts the immune system	red and green peppers, kiwis, oranges, strawberries, broccoli	

Do You Get Enough Minerals?

Use this chart to learn about the minerals in food and the important functions they play in a healthy diet. Circle the foods you eat on a regular basis. Write yes or no in answer the question "Are you getting these minerals?"

MINERALS	FUNCTION	FOOD SOURCES	Are you getting these minerals?
Calcium	aids in bones, teeth, blood clotting, nerve & muscle function	milk, yogurt, hard cheeses, fortified cereals, spinach	
Magnesium	aids in bone growth & nerve, muscle & enzyme function	green leafy vegetables, Brazil nuts, almonds, soybeans, halibut, quinoa	
Phosphorus	aids in bone growth; allows cells to function normally; helps the body produce energy	milk and other dairy products, peas, meat, eggs, some cereals and breads	
Potassium	aids in nerve and muscle function	sweet potato, bananas, yogurt, yellowfin tuna, soybeans	
Sodium	aids in nerve and muscle function & water balance	foods to which sodium chloride (salt) has been added, like salted meats, nuts, butter, and processed foods	
Chromium	helps control blood sugar levels by helping the body metabolize (use) glucose	vegetable oils, liver, brewer's yeast, whole grains, cheese, nuts	
Copper	aids in energy production, helps the body use iron	seafood, nuts, seeds, wheat bran cereals, whole grains	
Iodine	aids in thyroid hormone formation to regulate metabolism	processed foods and iodized salt	
Iron	helps transport oxygen in red blood cells and helps brain function	fortified cereals, beans, lentils, beef, eggs	
Manganese	helps form bones and connective tissue; helps metabolize fats and carbohydrates; helps regulate blood sugar	nuts, beans and other legumes, tea, whole grains	
Zinc	supports the body's immunity and nerve function; important in reproduction	red meats, some seafood, fortified cereals	

Vitamins and Minerals Review

*Use the worksheets **Do You Get Enough Vitamins?** and **Do You Get Enough Minerals?** to help you answer these questions about the importance of vitamins and minerals in our diet:*

1. What foods might a pregnant woman eat to help prevent birth defects in pregnancy?

2. Which vitamins and minerals are important for healthy bone growth?

3. Which mineral is important for transporting oxygen in red blood cells?

4. Which vitamins and minerals help build immunity against illness?

5. What vitamins and minerals break down carbohydrates and therefore help control blood sugar levels?

6. What vitamin helps with blood clotting? What foods contain this vitamin?

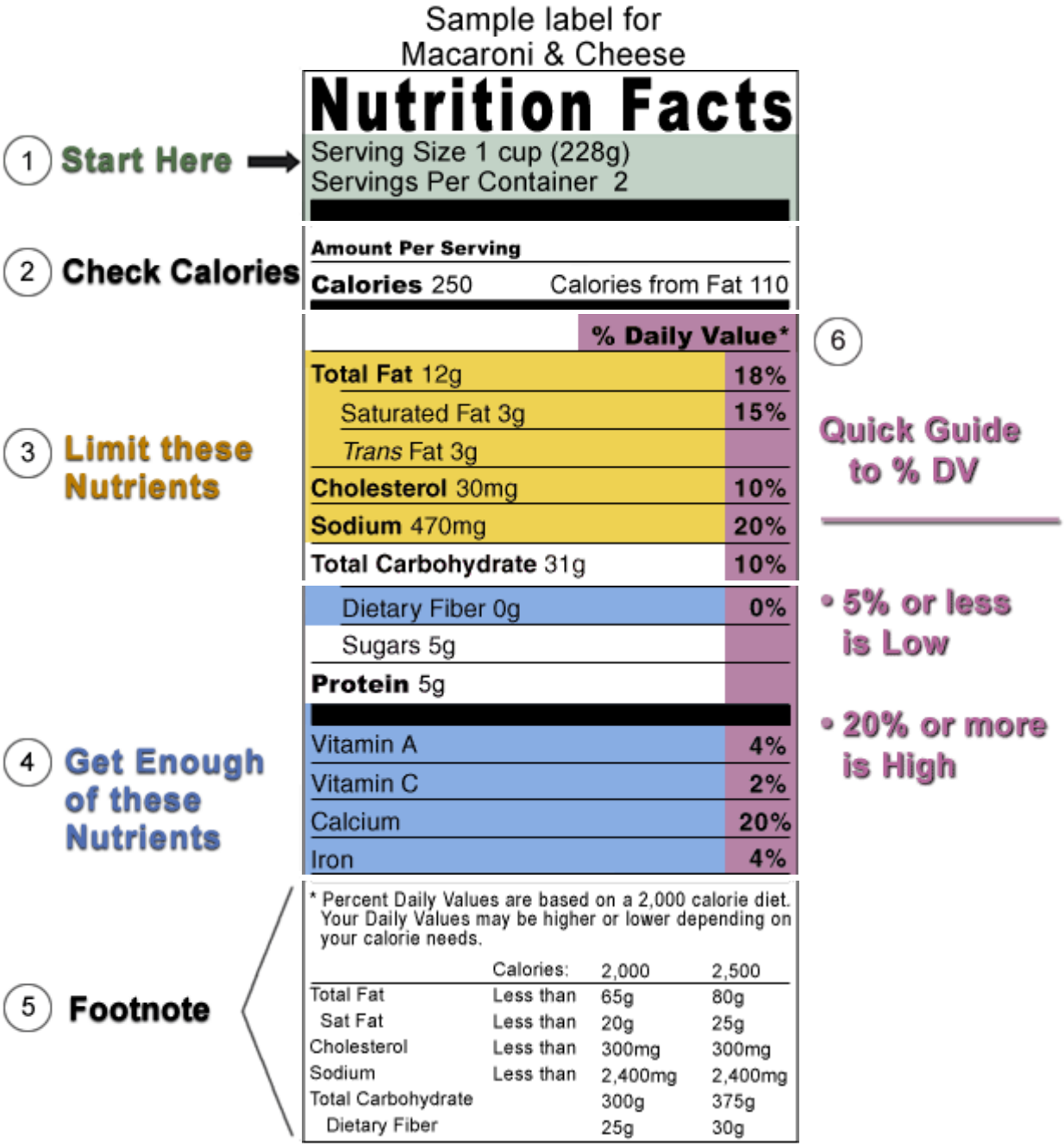
7. What foods help strengthen vision? What vitamin do these foods contain?

8. Which mineral should be eaten along with iron if it is to be most effective?

What's on the Label?

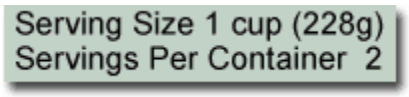
Read the label on food! The Nutrition Facts Label is designed to give you information about the nutrients in food so you can take charge of your food intake, make informed food choices and eat a healthier diet.

Study the following food label. What do you think each of the parts means? Discuss what information you think you can learn from the label, then read about each of the numbered parts to answer questions.



What's on the Label? Questions

①Serving Size



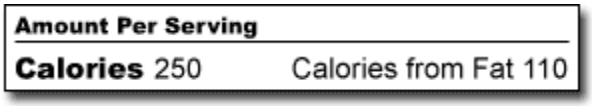
What is a serving size? When you read the food label, look at the serving size. You will notice that it is provided in standard sizes (cups or pieces, followed by a metric unit like grams) in order to make it easier to compare foods.

The size of the serving affects the number of calories you will consume if you eat this food. Be careful! Sometimes a food product will contain more than one serving and you will have to do the math to figure out how many calories you'll be eating.

For example, if one serving of the macaroni and cheese above is <u>one cup</u>, and one cup contains 250 calories, how many calories will you eat if you all the food in the container?

_____

②Calories (and Calories from Fat)



Calories are a measurement of energy you get from a serving of this food. If we eat more calories than we burn (through activity and exercise) we gain weight -- so it's important to pay attention to the number of calories in the food we eat.

Most adults need about 2,000 calories a day -- large men and women may need more; people who are trying to lose weight may need less.

In addition to looking at calories, it is also important to look at calories from fat.

In this example, almost half of the calories in each serving come from fat. What if you ate the whole package content? Then, you would consume two servings, or 500 calories. How many of those calories would come from fat?

_____

③④Nutrients

Don't Eat Too Much of These Nutrients:

Eating too much fat, saturated fat, *trans* fat, cholesterol, or sodium may increase your risk of certain chronic diseases, like heart disease, some cancers, or high blood pressure. Pay attention to this part of the food label. Avoid foods that contain too many of these nutrients. The nutrients listed first are the ones Americans generally eat in adequate amounts, or even too much.

Make Sure You Eat Enough of These Nutrients:

Most Americans don't get enough dietary fiber, vitamin A, vitamin C, calcium, and iron in their diets. Eating enough of these nutrients can improve your overall health and can help reduce the risk of some diseases and conditions.

For example, it's important to eat enough calcium! Getting enough calcium may reduce your risk of brittle bones disease (osteoporosis.) Eating enough dietary fiber helps digestion and bowel functions. Eating a diet full of fruits and vegetables and low in saturated fats provides vitamins the body needs to fight infection and disease and may reduce the risk of heart disease.

Think about the food you eat daily. Do you think you are getting the nutrients you need? What steps could you take to get more of the nutrients that you need?

_____

_____

⑤⑥ Percent of Daily Value

Note the * used after the heading "% Daily Value" on the Nutrition Facts label. It refers to the Footnote in the lower part of the nutrition label, which tells you "**%DVs are based on a 2,000 calorie diet**". This is because most adults need about 2,000 calories a day, even though some large men and women may need more and people who are trying to lose weight may need less.

Are you getting enough calories or too many? What steps could you take to get the amount of calories you need -- not too few or too many?

_____

_____

Comparison Shopping: What's in Your Food?

Compare the labels from different foods to compare the food value of each. ***Write the nutrients PER SERVING.*** *Use the chart to help you answer the questions about food value.*

Name of food & size of serving	Total calories	Total fat grams (g) and % Daily Value	Total sodium grams (g) and % Daily Value	Total carbohydrate grams (g) and % Daily Value: how many grams from sugar?	Total protein grams (g) and % Daily Value	Vitamins and minerals and % Daily Value for <u>each</u>
1. ***Sample*** Two chocolate hazelnut cookies	100	3 g. 11% DV	30 mg. 1% DV	15 g. 5% DV ********** 7 g. from sugar	1 g 0%	Vit. A 0% Vit. C 0% Calcium 0% Iron 2%
2.						
3.						
4.						
5.						

Comparison Shopping, cont.

Use the food label chart to answer the following questions about food choices.

1. Which food contains the ***most* calories** (per serving)? _____

2. Which food contains the ***most* fat grams** (per serving)? _____

3. Which food contains the ***most* carbohydrates grams** (per serving)? _____

_____

4. Which food contains the ***most* protein grams** (per serving)? _____

_____

5. Based on the nutrition information on the label only (NOT taste), which of the foods that you analyzed would you choose to ***provide energy*** before work or school?

_____

Why? _____

6. Based on the nutrition information on the label, which of the foods that you analyzed would you choose if you were trying to ***limit sugar*** intake?

_____

Why? _____

7. Based on the nutrition information on the label, which of the foods that you analyzed would you choose if you were trying to ***limit salt*** intake?

_____

Why? _____

8. Based on the nutrition information on the label, which of the foods that you analyzed would you choose if you were trying to ***boost your immunity?***

_____

Why? _____

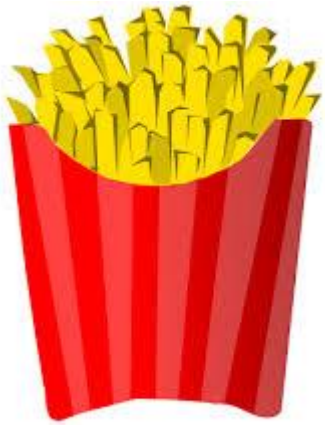
Calories Are Everywhere, Yet Hard to Track

By Jane E. Brody

http://well.blogs.nytimes.com/2012/03/19/calories-are-everywhere-yet-hard-to-track/

Jane Brody writes, "Americans are having a passionate love affair with something they cannot see, hear, feel, touch or taste. That something is calories, billions upon billions of which are consumed every day, often unwittingly, at and between meals." Read the article "Calories Are Everywhere, Yet Hard to Track" in order to answer the following questions. Paragraphs in which the information can be found are written in bold.

QUESTIONS



1. **Paragraph #1** -- What do you think the word unwittingly means? Use context clues to help you, then look it up in a dictionary if necessary.

2. **Paragraph #2** -- What do you think the word thwart means? Use context clues to help you, then look it up if necessary.

   What percent of adults is obese?_____What fraction is that?_____

   What fraction of children is obese?_____What percent is that?_____

3. **Paragraph #4** -- What do you think the word excess means? Use context clues to help you, then look it up in a dictionary if necessary.

   Why do Dr. Nestle and Dr. Nesheim say "it is much easier to overeat than to stop eating when you are no longer hungry"?

4. **Paragraph #5** -- What metaphor does the author use to illustrate the idea that people in affluent societies are surrounded by high calorie foods?

Calories Are Everywhere, Yet Hard to Track, cont.

5. **Paragraph #5** -- Do you agree with the author that food is "everywhere, and it is relatively inexpensive?" Explain your answer.

6. **Paragraph #7** -- What does the author say is the big change that has happened to portion sizes?

7. **Paragraph #10** -- If an 8 ounce soda has 100 calories, how would you figure out how many calories are in a 64 ounce Double Gulp soda?

8. **Paragraph #12** -- What mistake do people make when they check calorie information on nutrition labels?

9. **Paragraph #13** -- How many calories does the average woman need in one day?

_____

How many calories would she consume if she ate a "personal-size pizza" and a Double Gulp soda for lunch?

_____

Why do you think that might be a problem?

10. **Paragraph #19** -- Even though Dr. Nestle says Americans eat too many calories, she doesn't recommend counting calories. What does she recommend?

Images from https://en.wikipedia.org/wiki/File:French_fries_juliane_kr_r.svg and https://commons.wikimedia.org/wiki/File:Double_big_gulp.jpg

How Many Calories Do You Need?

The chart below identifies the calorie levels for males and females by age and activity level. Study the chart in order to answer the questions which follow.

Sedentary activity level = less than 30 minutes a day of moderate physical exercise per day

Moderate activity level = between 30 and 60 minutes of moderate physical exercise per day

Vigorous activity level = 60 or more minutes of moderate physical exercise per day

		MALES				**FEMALES**	
Activity Level	**Sedentary**	**Moderate**	**Vigorous**	**Activity Level**	**Sedentary**	**Moderate**	**Vigorous**
AGE				**AGE**			
16-18	2400	2800	3200	16-18	1800	2000	2400
19-20	2600	2800	3000	19-20	2000	2200	2400
21-25	2400	2800	3000	21-25	2000	2200	2400
26-30	2400	2600	3000	26-30	1800	2000	2400
31-35	2400	2600	3000	31-35	1800	2000	2200
36-40	2400	2600	2800	36-40	1800	2000	2200
41-45	2200	2600	2800	41-45	1800	2000	2200
46-50	2200	2400	2800	46-50	1800	2000	2200
51-55	2200	2400	2800	51-55	1600	1800	2200
56-60	2200	2400	2600	56-60	1600	1800	2200
61-65	2000	2200	2600	61-65	1600	1800	2000
66-70	2000	2200	2600	66-70	1600	1800	2000

1. How many calories are needed by an 18 year old woman who runs for an hour a day?

2. How many more calories does an 23 year old man who runs twenty five minutes a day need than an 23 year old woman who runs the same amount?

3. How many fewer calories does a 53 year old sedentary woman need than a 19 year old moderately active woman

4. How many fewer calories does a 45 year old moderately active man need than a 45 year old vigorously active man?

5. Do the number of calories we need generally increase or decrease as we age?

Weekly Food Tracker

The first step in eating right is to keep track of what you eat. Try – for one week – to limit snacks and sweets and soda, drink a lot of water, and eat fresh, low-fat food. How do you feel?

Foods	Sun	Mon	Tues	Weds	Thurs	Fri	Sat
Breakfast							
Lunch							
Snacks (Try to limit snacks!)							
Sweets (Try to limit sweets to once a week!)							
Sodas (Can you avoid soda for a week?)							
Dinner							
Water (8 cups per day)							