Maintaining good health and wellness takes work, but is worth the effort. What do you do to help maintain good health and wellness?
Eating for Health

In this unit you will learn how choosing and eating the right foods can affect weight, health, and nutrition. In your unit thematic project you will look at your own eating habits and how to choose more healthful foods.

My Journal

My Eating Habits  Write a journal entry about one of the topics below. This will help you prepare for the unit project at the end of the unit.

- Discuss healthful foods that you eat and enjoy.
- Identify unhealthful foods that you eat and enjoy.
- Describe how you might change your eating habits to include more healthful foods.
A Teen’s Perspective A magazine has published an article suggesting that teens make poor dietary choices. Write a letter to the editor of the magazine sharing your perspective. In your letter, explain whether you think this statement is right or wrong, using specific details and examples to support your view.

Writing Tips Follow these steps to write a letter to the editor:
- Include a return-address heading, date, inside address, salutation, closing, and signature.
- Respond to, correct, or elaborate on a previously published statement.
- Since your letter may be published, make it error-free.

Activate Prior Knowledge
Explore the Photo Nutrition experts have categorized foods to help people make nutritious dietary choices. Can you name the five food groups?
Reading Guide

Before You Read

Preview  Examine this chapter’s photos and figures. With a partner, list three facts you can infer about nutrition. Verify your inferences as you read.

Read to Learn

Key Concepts

- Explain the Dietary Guidelines for Americans.
- Describe MyPlate and its recommendations.
- Describe a Nutrition Facts panel, its contents, and how to use it.
- Explain dietary supplements, their different forms, and their pros and cons.
- Discuss the importance of separating nutrition facts from fiction.

Main Idea

Nutrition guidelines are sources of information that help people to make smart dietary choices, stay healthy, and separate fact from fiction.

Content Vocabulary

You will find the definitions to these words in the glossary in the back of the book.

- nutrient density
- dietary supplement
- Nutrition Facts panel
- herbal
- Daily Value
- fraud

Academic Vocabulary

You will find these words in your reading and on your tests. Use the glossary at the back of the book.

- reliable
- moderate

Graphic Organizer

Use a graphic organizer like the one below to take notes about the types, forms, pros, and cons of dietary supplements.

<table>
<thead>
<tr>
<th>DIETARY SUPPLEMENTS</th>
<th>TYPES</th>
<th>FORMS</th>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
</table>

Graphic Organizer  Go to connectED.mcgraw-hill.com to download this graphic organizer.
Dietary Guidelines for Americans

With so much information in the media about health and nutrition, how can you know what is really true? Use sources of information you can trust. Three of the best reliable, or trustworthy, sources of information are the Dietary Guidelines for Americans, MyPlate, and Nutrition Facts panels. These sources come from the U.S. Department of Agriculture (USDA).

The Dietary Guidelines for Americans is a source of science-based advice on nutrition and fitness. Figure 10.1 summarizes key topics in the guidelines.

Following the Dietary Guidelines for Americans can help you stay healthy and avoid chronic disease. The guidelines are updated every five years and are the basis for federal nutrition programs.

Respond When are the Dietary Guidelines for Americans updated?

MyPlate

MyPlate is an easy-to-use food guidance system that can help you make smart choices from every food group, and to find a balance between food and physical activity. MyPlate is shown in Figure 10.2.

MyPlate is organized to look like a dinner plate, with a glass on the side, labeled dairy. The plate is divided into four sections. Each section is labeled with a food group. The size of each section provides guidance in selecting how much food you should eat from each food group. For example, based on MyPlate, your overall diet should contain more vegetables and grains than proteins, fruits, and dairy. When you create a weekly menu, keep in mind that the overall eating plan should contain more vegetables and grains than other foods.

The MyPlate Web site, www.choosemyplate.gov, offers free food and exercise recommendations. The site also provides you with the tools to create an individualized evaluation of your calorie needs based on your age, gender, and physical activity level.

Figure 10.1 Dietary Guidelines for Americans

Key Recommendations The Dietary Guidelines advise Americans to establish a healthy eating pattern that accounts for all foods and beverages within an appropriate calorie level. They also advise Americans to meet the Physical Activity Guidelines for Americans and achieve and maintain a healthy body weight. How much physical activity do teens need daily?

A healthy eating pattern includes:

- A variety of vegetables from all of the subgroups—dark green, red and orange, legumes, starchy, and other
- Fruits, especially whole fruits
- Grains, at least half of which are whole grains
- Fat-free or low-fat dairy, including milk, yogurt, cheese, and/or fortified soy beverages
- A variety of protein foods, including seafood, lean meats and poultry, eggs, legumes, and nuts, seeds, and soy products
- Oils

A healthy eating pattern limits:

- Saturated fats and trans fats, added sugars, and sodium
- Added sugars to less than 10 percent of calories per day
- Saturated fats to less than 10 percent of calories per day
- Sodium to less than 2,300 milligrams (mg) per day
- Alcohol, if consumed, to no more than one drink per day for women and no more than two drinks per day for men—and only by adults of legal drinking age.
A Visual Tool  MyPlate provides a visual tool that uses shape, color, and words to help people understand the food groups and make smart dietary choices. How can you use MyPlate to help you eat more healthfully?

Food Groups
MyPlate shows the five food groups, which include Protein (or meats and beans), Vegetables, Fruits, Grains, and Dairy. Four of the food groups are shown on my plate. Dairy is shown alongside the plate in a cup. MyPlate does not include oils or fats. Oils and fats are not a food group. They should be consumed in small amounts.

Fruit Group
Any fruit or 100 percent fruit juice is part of the Fruit Group. Common fruits include apples, bananas, strawberries, and oranges. Because fruit juices are high in calories and do not contain fiber, whole fruits are a better choice. Fruits have many of the same benefits as vegetables, including maintaining a healthy heart and blood vessels and helping to control body weight.
Vegetable Group
Any vegetable or 100% vegetable juice counts as a member of the Vegetable Group. Vegetables may be raw or cooked, fresh or frozen, canned or dried. Most vegetables can be eaten raw, while some, like potatoes, are usually only eaten cooked. They can be whole, cut up or mashed. Whenever possible, choose fresh vegetables that are in season. When vegetables are in season, they cost less and taste better because they are likely to be at their peak flavor.

Vegetables are divided into these categories based on the nutrients they contain:
- Dark green vegetables, such as broccoli and spinach
- Orange vegetables, such as carrots and pumpkin
- Dry beans and peas
- Starchy vegetables, such as potatoes and corn
- Other vegetables, such as celery and onions

Grain Group
The Grain Group includes any food made from wheat, rice, cornmeal, barley, or other grains. Examples include bread, pasta, oatmeal, and tortillas. The nutrients in grain reduce the risk of heart disease and keep the digestive system working properly.

Figure 10.3 Daily Food Group Amounts by Calorie Level

Determine Quantities The daily food group amounts shown below are for young people aged 9 to 17. Your total daily calorie requirement can help you determine the quantities of individual foods you should consume. How many ounces of protein foods are recommended for a person who requires 2,200 calories per day?

<table>
<thead>
<tr>
<th></th>
<th>1,600</th>
<th>1,800</th>
<th>2,000</th>
<th>2,200</th>
<th>2,400</th>
<th>2,600</th>
<th>2,800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits</td>
<td>1.5 c</td>
<td>1.5 c</td>
<td>2 c</td>
<td>2 c</td>
<td>2 c</td>
<td>2 c</td>
<td>2.5 c</td>
</tr>
<tr>
<td>Vegetables</td>
<td>2 c</td>
<td>2.5 c</td>
<td>2.5 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3.5 c</td>
<td>3.5 c</td>
</tr>
<tr>
<td>Dark Green</td>
<td>1.5 c/wk</td>
<td>1.5 c/wk</td>
<td>1.5 c/wk</td>
<td>2 c/wk</td>
<td>2 c/wk</td>
<td>2.5 c/wk</td>
<td>2.5 c/wk</td>
</tr>
<tr>
<td>Orange</td>
<td>4 c/wk</td>
<td>5 c/wk</td>
<td>5.5 c/wk</td>
<td>6 c/wk</td>
<td>6 c/wk</td>
<td>7 c/wk</td>
<td>7 c/wk</td>
</tr>
<tr>
<td>Dry beans/peas</td>
<td>1 c/wk</td>
<td>1.5 c/wk</td>
<td>1.5 c/wk</td>
<td>2 c/wk</td>
<td>2 c/wk</td>
<td>2.5 c/wk</td>
<td>2.5 c/wk</td>
</tr>
<tr>
<td>Starchy</td>
<td>4 c/wk</td>
<td>5 c/wk</td>
<td>5 c/wk</td>
<td>6 c/wk</td>
<td>6 c/wk</td>
<td>7 c/wk</td>
<td>7 c/wk</td>
</tr>
<tr>
<td>Other</td>
<td>3.5 c/wk</td>
<td>4 c/wk</td>
<td>4 c/wk</td>
<td>5 c/wk</td>
<td>5 c/wk</td>
<td>5.5 c/wk</td>
<td>5.5 c/wk</td>
</tr>
<tr>
<td>Grains</td>
<td>5 oz</td>
<td>6 oz</td>
<td>6 oz</td>
<td>7 oz</td>
<td>8 oz</td>
<td>9 oz</td>
<td>10 oz</td>
</tr>
<tr>
<td>Whole</td>
<td>3 oz</td>
<td>3 oz</td>
<td>3 oz</td>
<td>3.5 oz</td>
<td>4 oz</td>
<td>4.5 oz</td>
<td>5 oz</td>
</tr>
<tr>
<td>Other</td>
<td>2 oz</td>
<td>3 oz</td>
<td>3 oz</td>
<td>3.5 oz</td>
<td>4 oz</td>
<td>4.5 oz</td>
<td>5 oz</td>
</tr>
<tr>
<td>Meat, poultry, fish, eggs, nuts, and seeds</td>
<td>5 oz</td>
<td>5 oz</td>
<td>5.5 oz</td>
<td>6 oz</td>
<td>6.5 oz</td>
<td>6.5 oz</td>
<td>7 oz</td>
</tr>
<tr>
<td>Milk, yogurt, and cheese</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
</tr>
<tr>
<td>Oils</td>
<td>5 tsp</td>
<td>5 tsp</td>
<td>6 tsp</td>
<td>6 tsp</td>
<td>7 tsp</td>
<td>8 tsp</td>
<td>8 tsp</td>
</tr>
<tr>
<td>Discretionary calorie allowance*</td>
<td>120</td>
<td>160</td>
<td>260</td>
<td>270</td>
<td>330</td>
<td>360</td>
<td>400</td>
</tr>
</tbody>
</table>

Note: Food group amounts are shown in cups (c), cups per week (c/wk), and ounces (oz). Oils are shown in teaspoons (tsp).

* This number shows calories that can be eaten in addition to the amounts of nutrient-dense foods in each group. Solid fats and added sugars are counted here.
Grains are divided into whole grains and refined grains. Whole grains, such as whole-wheat flour and oatmeal, contain the entire grain kernel. Refined grains have been milled, causing parts of the grain to be removed. This gives them a finer texture and slows down the rate at which they spoil. However, refining also removes fiber, iron, and some vitamins. Examples of refined grain products include white bread and white rice. Most refined grains are enriched. This means that some vitamins and iron have been added back into them. However, they are still missing the fiber and some of the vitamins of whole grains. Because whole grains are more nutritious than refined grains, it is recommended that at least half of the grains eaten be whole grains.

**Protein Foods Group**

All foods made from meat, poultry, fish, dry beans or peas, eggs, nuts and seeds are considered part of the Protein Foods Group. Include more fish, nuts and seeds, which contain healthy oils, than meat and poultry. Dry beans and peas are part of the Protein Foods Group as well as the Vegetable Group. When you choose meat and poultry, choose lean or low-fat cuts.

**Dairy Group**

The Dairy Group is made up of all liquid milk products and many of the foods made from milk. Foods made from milk that contain little or no calcium, like cream cheese, cream, and butter, are not part of the group. Foods that retain their calcium, like yogurt and many hard cheeses, are part of the group. Yogurt is particularly good because it contains healthful bacteria in addition to the benefits of milk. Most of your choices from the dairy group should be fat-free or low-fat.

**Oils Category**

Oils are fats that are liquid at room temperature. MyPlate recommends choosing oils over solid fats. Solid fats are not recommended because they are higher in saturated fat and may be hydrogenated. Oils that come from plants are preferred because they are low in saturated fats. Also, because they come from plant sources, they have no cholesterol.

**Nutrient Density**

MyPlate recommends foods that are nutrient dense. **Nutrient density** is the relationship between nutrients and calories in a food. Foods with low nutrient density are low in nutrients, but high in calories from fat and added sugars. For example, a candy bar has over 200 calories from fat and sugar but hardly any vitamins, minerals, or phytochemicals.

Foods with high nutrient density offer more nutrients for fewer calories. Nutrient-dense foods are also low in fat and added sugars. For example, a slice of whole-grain bread has only about 100 calories but is rich in complex carbohydrates, B vitamins, and fiber.

Adding fat or sugar to nutrient-dense foods makes them less nutrient dense. For example, spreading a tablespoon of butter on that slice of whole-grain bread doubles its calories.

**How Many Calories Do You Need?**

People have different needs for calories and nutrients depending on their age, gender, body size, and activity level. In general, the more active you are, the more you can eat. Women who are pregnant and breast-feeding may also need more calories. If you want to gain or lose weight, you have to adjust your calories, too.

**Active** You are active if you do moderate or heavy physical activity for at least 60 minutes each day. A very active teen male may need around 3,000 calories or more each day. An active teen female may need around 2,500 or more calories a day.

**Moderately Active** You are moderately active if you do moderate or heavy physical activity for at least 30 to 60 minutes each day. A moderately active teen male may need around 2,700 calories or more each day. A moderately active teen female may need around 2,500 or more calories a day.

**Sedentary** You are sedentary if you do less than 30 minutes of moderate or heavy physical activity each day. A sedentary teen male may need around 2,700 calories a day. A sedentary teen female may need around 2,400 calories a day. A sedentary teen female may need around 1,800 calories per day.
Figure 10.4 How Much Is a Cup? How Much Is an Ounce?

Do the Math Thinking of foods in terms of ounces and cups can help you to make smart food choices. How many nuts equal three ounces?

<table>
<thead>
<tr>
<th>Food Groups</th>
<th>Serving Sizes</th>
</tr>
</thead>
</table>
| Fruits      | • 1 medium fruit  
                  • ½ cup fresh, frozen, or canned fruit  
                  • ¼ cup dried fruit  
                  • 6 oz. fruit juice |
| Vegetables  | • 1 cup raw, leafy vegetable  
                  • ½ cup cooked or chopped raw vegetable  
                  • 6 oz. vegetable juice |
| Grains      | • 1 slice bread (1 oz.)  
                  • 1 cup dry cereal (1 oz.)  
                  • ½ cup cooked rice, pasta, or cereal (1 oz.)  
                  • 1 oz. dry pasta or rice |
| Meat, Poultry, Fish, Dry Beans, Eggs, Nuts, and Seeds | • 3 oz. cooked lean meat, poultry, or fish  
                                                  • ½ cup cooked, dry beans or peas (2 oz.)  
                                                  • 1 egg (1 oz.)  
                                                  • 2 Tbsp. peanut butter (2 oz.)  
                                                  • ½ cup nuts (1 ½ oz.)  
                                                  • 2 Tbsp. seeds (½ oz.) |
| Milk, Yogurt, and Cheese (low fat or fat free) | • 1 cup milk (8 oz.)  
                                                  • 1 cup yogurt  
                                                  • 1 ½ oz. natural cheese  
                                                  • 2 oz. processed cheese |
| Fat and Oils | • 1 tsp. soft margarine  
                       • 1 Tbsp. low-fat mayonnaise  
                       • 2 Tbsp. light salad dressing  
                       • 1 tsp. vegetable oil |

Planning Your Diet

Visit the Choosemyplate.gov site and register to use the SuperTracker to help you plan and analyze your diet and physical activity. The SuperTracker site offers a variety of tools to help you plan, track, and analyze your diet and physical activity. On the site, you can note the foods you eat, track your top five health and fitness goals, research the nutritional value of more than 8,000 foods, create a weight management plan, and even save your favorite recipes. Use Figure 10.3 on page 136 to plan your daily food intake.

MyPlate lists daily amounts of grains and proteins in ounces, and it lists daily amounts of fruits, vegetables, and milk in cups. Figure 10.4 and Figure 10.5 show how much food counts as an ounce or a cup. For example, a large orange equals one cup of fruit, and a slice of toast equals one ounce of grains.

Mixed foods include foods from two or more groups. For example, tacos have food from the grains group (taco shell), protein foods group (meat or bean filling), dairy group (cheese), and vegetable group (lettuce and tomatoes).
**Figure 10.5 How Much Do You Eat?**

**Know Your Portions** These common objects can help you get to know the size of common measures, such as ½ cup, one cup, or one ounce. The column on the right shows the amount of food needed for a 2,000 calorie diet. *How do these common objects compare to your usual portion sizes?*

<table>
<thead>
<tr>
<th>Food</th>
<th>Comparison</th>
<th>Equivalent Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>½ cup of fruit juice</td>
<td>= size of a 4-oz juice box</td>
<td></td>
</tr>
<tr>
<td>1 small apple</td>
<td>= size of a baseball</td>
<td></td>
</tr>
<tr>
<td>½ cup of sliced fruit</td>
<td>= size of a small computer mouse</td>
<td></td>
</tr>
<tr>
<td>½ cup of carrots or other vegetables</td>
<td>= size of a small computer mouse</td>
<td></td>
</tr>
<tr>
<td>10 medium fries</td>
<td>count as ½ cup = size of a deck of cards</td>
<td></td>
</tr>
<tr>
<td>1 cup of raw vegetables</td>
<td>= size of a baseball</td>
<td></td>
</tr>
<tr>
<td>1 cup of milk</td>
<td>= an 8-oz carton of milk</td>
<td></td>
</tr>
<tr>
<td>1 cup of yogurt</td>
<td>= size of a baseball</td>
<td></td>
</tr>
<tr>
<td>½ oz. of low-fat natural cheese*</td>
<td>= size of two 9-volt batteries</td>
<td></td>
</tr>
<tr>
<td>2-3 oz of meat, poultry, or fish</td>
<td>= size of a deck of cards</td>
<td></td>
</tr>
<tr>
<td>1 tablespoon of peanut butter</td>
<td>counts as 1 oz = size of one 9-volt battery</td>
<td></td>
</tr>
<tr>
<td>½ cup of beans</td>
<td>counts as 2 oz = size of a small computer mouse</td>
<td></td>
</tr>
<tr>
<td>1 cup of dry cereal</td>
<td>= size of a baseball</td>
<td></td>
</tr>
<tr>
<td>1 slice of bread</td>
<td>counts as 1 oz = size of a CD* About the thickness of 10 CDs (1/2 inch)</td>
<td></td>
</tr>
<tr>
<td>½ cup of cooked pasta</td>
<td>= size of a small computer mouse</td>
<td></td>
</tr>
</tbody>
</table>

*Counts as one cup

*About the thickness of 10 CDs (1/2 inch)
Portion Sizes

Portion sizes have increased dramatically in recent years. Today’s bananas and apples are much more than one cup. A bagel can contain as many calories as five slices of bread. A half-pound burger is nearly three standard portions.

It is easy to eat too much and gain weight. An extra 100 calories a day without added exercise can increase your weight by 10 pounds in a year.

At home, measure a recommended serving size of food and put it on a plate. Make a mental note of how much of the plate it covers. You can also compare the size of the food to the size of a familiar object, such as your palm, your fingertip, or a deck of cards. Figure 10.5 on page 139 shows some common objects you can use to measure portions.

Tracking What You Eat and How Much You Eat

Do you eat the right amount? Keep track of what you eat from each food group for several days. Add up the totals. Then compare the totals to the amounts shown in Figure 10.3. Are you on target?

If you need to make changes, be specific and realistic. For example, you might say, “I’ll eat two more fruits each day, one at breakfast and one for a snack.” Make one change at a time. Move from success to success.

According to a recent study, keeping a log of what you eat makes you twice as likely to adhere to a diet. Keeping a food log might also help you to make better food choices.

Building Healthy Eating Habits

Three principles of healthy eating can help you develop healthy food habits.

Aim for Balance Choose foods from all of the food groups. Each group has nutrient strengths. If you miss a group on one day, you can make it up on the next.

Choose Variety Even within a food group, different foods have different nutrients. Eat many different foods in each group. Eat small amounts of many different foods rather than large amounts of a few favorites.

Eat in Moderation Include all types of foods, but in reasonable amounts. There are no “good” and “bad” foods. You can eat foods with fat and added sugars, but in moderation.

Identify What is an example of a food with a high nutrient density and why does it qualify as nutrient dense?

Nutrition Facts Panel

The Dietary Guidelines for Americans and MyPlate are two reliable nutrition sources. A third reliable source is the Nutrition Facts panel. A Nutrition Facts panel is a label with easy-to-read information about the calories and nutrients of foods sold in containers. The federal Nutrition Labeling and Education Act of 1990 requires all packaged foods to have Nutrition Facts panels. Nutrition Facts panels show information in a standardized format.

What’s on the Panel?

The top of the Nutrition Facts panel shows “Serving Size” and “Servings Per Container.” A container with 3 servings of ½ cup each has 1½ in the container.

The rest of the label is based on the single-serving amount. The label shows total calories per serving, number of calories from fat per serving. Use this information to keep track of the calories you eat throughout the day.

The nutrition label also gives per-serving information about some nutrients. Look for total fat, saturated fat, trans fat, cholesterol, sodium, total carbohydrates, dietary fiber, sugars, and protein.

For most nutrients and for certain vitamins and minerals, the label also lists “% Daily Value.” Daily Value (DV) is the needed amount of a nutrient based on current nutrition recommendations for a 2,000-calorie diet.
Using the Panel

The Nutrition Facts panel and other resources can help you evaluate your nutrient intake.

When you eat from packages that have more than one serving, adjust the information on the label to the amount you really eat. Suppose the label on a jar of vegetable juice lists 50 calories and 1 gram of protein per 8-ounce serving. If you drink 12 ounces (1½ servings) you are taking in 75 calories and 1.5 grams of protein.

The serving size on a label may differ from the recommended portion in MyPlate. A label on a six-ounce juice can may say that it has one serving, even though MyPlate says that 8 ounces is a typical portion.

Define What is Daily Value?

Dietary Supplements

Dietary supplements such as vitamin tablets are not good replacements for real food. A **dietary supplement** is a nutrient substance taken to supplement, or add to, nutrients in the food you eat. Common dietary supplements include vitamins, minerals, amino acids, and herbals. They are available as tablets, capsules, liquids, and powders.

Dietary supplements may be useful for some people. They are sometimes helpful for people taking certain types of medication, for pregnant and nursing women, for people recovering from illness, and for infants, the elderly, and people with special nutrition needs.

Most people do not need supplements, because they can get all the nutrients they need through a balanced diet. Supplements lack the great variety of compounds in foods. No one should eat a poor diet and then rely on supplements to fix the problem.

**Nutrient Megadoses**

Some people take megadoses (ˌme-gə-ˌdōs-əs) of dietary supplements. A megadose is a very large amount of a supplement. Such supplements are sometimes called high-potency.
Use caution with vitamin supplements. Excess amounts of some nutrients can accumulate in the body and cause harm. The water-soluble vitamins that are not stored simply pass out of the body unused. Fat-soluble vitamins are stored in your body, so they can build up to dangerous levels. If a health professional advises you to take supplements, avoid megadoses. They could be harmful to your health.

Herbals

A plant used for medicinal purposes is called an **herbal**. Many herbals have been used for centuries. Aloe is used for lotions to keep skin moist. Many modern medicines are made from plants. One is digitalis (ˌdi-ja-ˈta-ləs), which is used to treat heart failure.

Some herbal products are safe and effective. Other herbals may be poisonous or may interfere with medications. Still other herbals are ineffective. Few long-term studies have been done to determine the safety of herbals.

Buying Dietary Supplements

Check with a reliable health professional before taking any supplement, If you need to buy supplements, read the “Supplement Facts” label on the container. It shows the serving size, number of servings, and the amount of each ingredient. Look for the expiration date as well.

Health experts recommend that people avoid supplements with more than 100 percent of the DV. Never take a supplement that has ingredients you do not understand.

True or False

Herbals are always safe to use because they are natural.

Separating Fact from Fiction

Information about nutrition is everywhere—television, radio, magazines, books, the Internet. Advertisements promote supplements. Web sites offer health advice. Television news reports findings of nutrition studies. How do you know what to believe? To separate fact from fiction, learn about different types of food information and how to evaluate them.

Food Myths

A food myth is a mistaken belief about food. For example, some people say that brown eggs are more nutritious than white eggs. In fact, the color of the shell depends on the breed of hen. Shell color has no effect on nutrition. Another common myth claims that sea salt is more nutritious than regular salt. In truth, both have the same amount of sodium chloride, but table salt comes from salt mines and sea salt comes from evaporated seawater. Sea salt has a few minerals found in the ocean, but not enough to make a difference.

Advertising

The purpose of advertising is to sell. Food ads usually emphasize the pleasure of eating. The nutrition information in ads is often missing or misleading.
Companies use many techniques to promote products. Food companies pay to have their products shown in movies. Coupons and store displays encourage you to buy. Even product packages are a form of advertising.

Advertisers try to convince you to buy through strategies like these:

**Limited Information** Advertisements give only the facts that encourage you to buy. A snack food is praised for its flavor and crispiness, but nothing is said about the high amount of fat.

**Positive Images** Some advertisers use positive images, such as attractiveness and social status, to convince you that their product will make you feel or look better. You associate positive images and feelings with the product, which makes you more likely to buy it.

**Celebrity Endorsement** Some ads show popular performers or athletes promoting a product. The endorsement may not mean that the product is worth buying.

**Scare Tactics** Advertisers sometimes play on people’s fears of aging or disease. They claim or imply that their products can prevent or relieve problems.

**Studies** Advertisers sometimes use findings from nutrition studies to support product claims. Such ads rarely tell you who funded the study. Studies are often biased in favor of the organization funding the study.

**Infomercials** These ads look like regular consumer programs on television or ordinary stories in a magazine or newspaper. These ads can trick you into believing that you are getting unbiased information. However, these are just commercials paid for by advertisers.

**False Claims** Be alert for statements that sound unrealistic. “Fast results guaranteed!” “Eat all the desserts you want and still lose weight!” Look out for claims that sound too good to be true.

**The Internet**

The Internet is a great information source. However, some Web sites have incorrect, even deceptive, information. Check who runs a Web site before you believe what you read. Is it a reliable organization, such as the Mayo Clinic or the National Institutes of Health? Or is it a company that is trying to sell something?

---

**Assess Advertisements**

Food companies spend several billion dollars each year to promote their foods. Effective advertising persuades consumers to buy their products. Many products do not live up to the expectations that their clever advertising evokes. Can a particular brand of food make you attractive, popular, and happy? Food companies hope their ads will convince you to believe so, and to open your wallet.

**Challenge** Bring a food advertisement to class that you believe may be misleading. Give a five-minute oral report in which you analyze the ad and make suggestions to improve it.
Nutrition Fraud

Fraud occurs when people gain something of value, often money, by deceiving others. Fraudulent nutrition and health claims often appear in advertising and on the Internet. For example, people may promote a useless supplement or an ineffective cure. To stop fraud, you can file a complaint with the Food and Drug Administration (FDA) or the Federal Trade Commission (FTC).

Evaluating Information

Evaluating information is a skill that you can learn with practice. This skill can save you time and money and help you avoid harm. Use these steps to evaluate information:

Look for the source. When you hear or read a health claim, find the source of the information. Is the source trustworthy? Most food producers have a toll-free number for their consumer service department, or you can contact them on their Web site.

Identify Web sites. Beware of nutrition information on Web sites operated by companies. Be skeptical if a claim seems too good to be true. Conduct your own research to verify or disprove it. Look for sites operated by governments, universities, and hospitals and other health organizations.

Read carefully. As you read, ask yourself whether statements are opinions or are facts backed by science and research. Check dates to find current information. Read more than one reliable source of information.

Identify funding. Companies and industries fund many scientific research studies. Some studies omit findings that do not support the funder’s objectives. Sometimes this funding influences the results.

Choose experts. When you need information, go to an expert. Expert sources include registered dietitians (RDs) and licensed dietitians (LDs), nutritionists, health care professionals, family and consumer sciences teachers, and professional organizations, such as the American Dietetic Association.

Fruit and Nut Oatmeal

Ingredients

- 3 cups Water
- 1½ cups Quick rolled oats
- 1 cup Raisins
- ¼ cup Chopped walnuts
- 2 Tbsp. Brown sugar

Directions

1. Pour the water into a pot and begin heating it.
2. While you wait for the water to boil, blend the oats, raisins, walnuts and sugar in a mixing bowl.
3. When the water boils, carefully add the mixture to the pot. Cook the oatmeal, stirring constantly, for one minute.
4. Turn off the heat and let the mixture sit 1–3 minutes.
5. Serve in bowls.

---

Oats and raisins are nutrient-dense foods. Raisins are high in fiber, folate and calcium.
Chapter 10
Review & Applications

After You Read

Chapter Summary
People need reliable sources of information to make smart dietary choices. Dietary Guidelines for Americans is a source of science-based advice on nutrition and fitness. MyPlate is a guidance system that categorizes foods into groups. Nutrition Facts panels are labels with information about the calories and nutrients and Daily Values of foods sold in containers. Dietary supplements can be useful additions to a healthful diet for some people. It is important to separate fact from fiction when making choices about diet and nutrition.

Content and Academic Vocabulary Review

1. Write each of the content and academic vocabulary terms on an index card. Write the definition for each term on another index card. Then work with a partner to match each term to its definition.

<table>
<thead>
<tr>
<th>Content Vocabulary</th>
<th>Academic Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>nutrient density (p. 137)</td>
<td>reliable (p. 134)</td>
</tr>
<tr>
<td>Nutrition Facts panel (p. 140)</td>
<td>moderate (p. 137)</td>
</tr>
<tr>
<td>Daily Value (p. 140)</td>
<td></td>
</tr>
<tr>
<td>dietary supplement (p. 141)</td>
<td></td>
</tr>
<tr>
<td>herbal (p. 142)</td>
<td></td>
</tr>
<tr>
<td>fraud (p. 144)</td>
<td></td>
</tr>
</tbody>
</table>

Review Key Concepts

2. **Explain** the Dietary Guidelines for Americans.
3. **Describe** MyPlate and its recommendations.
4. **Describe** a Nutrition Facts panel, its contents, and how to use it.
5. **Explain** dietary supplements, their different forms, their pros and cons.
6. **Discuss** the importance of separating nutrition facts from fiction.

Critical Thinking

7. **Compare and contrast** various ways to determine appropriate portion sizes.
8. **Determine** what Annie is forgetting about the Nutrition Facts label on the large package of her favorite snack. She eats the whole package of crackers, saying, “Only 100 calories—great!”
9. **Evaluate** this scenario. Lena’s doctor has prescribed a medication for a minor health problem. In addition, Lena plans to use an herbal remedy. She says, “It will not do any harm because it is all-natural.” Do you agree? Why or why not?
10. **Evaluate** this television ad: A famous and fit athlete says that a certain supplement improves her strength and endurance. What criticisms, if any, would you have of such an ad?
11. **Food Group Combo**

MyPlate encourages a daily diet that combines foods from all the groups and limits fats and sugars. Can you follow this recommendation in just one meal?

**Procedure** Create a dish, such as a sandwich or salad, that combines foods from all the MyPlate groups. Use two grain servings as a base, adding other foods from each group. Consider appeal and nutrition.

**Analysis** Write a one-page report summarizing the specific nutrients in each food you chose, how you limited fats and sugars in choosing foods, and how you would improve this recipe.

12. **Smart Sweetening** Jackson is preparing an oatmeal cookie recipe. The recipe provides two options for sweetening the cookie batter: fruit juice or brown sugar. If Jackson wants to follow the recommendations of MyPlate, which sweetening option should he choose and why? What are the consequences of choosing not to follow the MyPlate recommendations?

13. **Web Assessment** Under your teacher’s supervision, use the Internet to find a Web site that is devoted to a particular dietary supplement. Use the suggestions for evaluating information that are presented in this chapter. Look for the techniques listed in the chapter and note their use on the site you are evaluating. Write a one-page report analyzing the reliability of the information and your opinion on whether the site can be trusted.

---

### Real-World Skills

#### Problem-Solving Skills

14. **A MyPlate-Friendly Menu** Using the MyPlate dietary recommendations, analyze a restaurant menu. Would the food choices on the menu allow people to follow MyPlate’s recommendations? Why or why not? How could you alter the food items to better follow the recommendations?

#### Interpersonal and Collaborative Skills

15. **Advertising Analysis** Work together to find seven advertisements. Each should illustrate one of the seven tactics used in food and nutrition advertising. Label and write a one-paragraph analysis of each advertisement. Compile the advertisements and your analyses of them in a booklet to educate consumers about misleading advertising.

#### Financial Literacy Skills

16. **Actual Serving Size** Find the amount of servings in a box of cereal to calculate the cost per serving. Then pour the amount you typically eat into a bowl. Measure and record the amount. Then pour the recommended serving size. Measure and record that amount. Compare the two amounts. What is the actual serving size and cost per serving for you?
Academic Skills

Food Science

17. **Comparing Nutrition** Different kinds of a certain product can have different levels of nutrition. A bowl of one kind of cereal might have more protein and fiber than another.

**Procedure** Obtain Nutrition Facts labels from two similar, but different foods. You might use two different types of breakfast cereal or two different kinds of canned tomato soup. Make a chart listing the amounts of calories, fat, cholesterol, sodium, dietary fiber, sugars and protein in each of the two foods.

**Analysis** When you have completed your chart, write a paragraph explaining which of the two foods is the more nutritious choice and why you believe this is the case. Use the data you have collected to support your analysis.

Mathematics

18. **Evaluate Survey Data** Infomercials are long commercials that look like informational shows on television. Of 191 infomercials broadcast during one month, 73 sold a weight-loss or health care product. What percent of infomercials does this represent?

**Math Concept** **Percent** A fraction can be expressed as a percent by first converting the fraction to a decimal and then converting the decimal to a percent by moving the decimal point two places to the right.

**Starting Hint** Set up a ratio, with the number of health care infomercials as the numerator and the total number of infomercials as the denominator.

English Language Arts

19. **Role Play** Imagine you are an advertising copywriter in charge of promoting vegetables. Write an advertisement that encourages teens to buy and eat vegetables in season. Be sure to make all the relevant points about the savings consumers can get by buying what is in season.

**READING COMPREHENSION**

Re-read the section about portion sizes on page 140. Then read the question and select the best answer:

20. Why do increased portion sizes contribute to weight gain?

a. An extra 10 calories a day without added exercise can increase your weight by 100 pounds in a year.

b. One of today’s large slices of bread can contain as many calories as a bagel.

c. An extra 100 calories a day without added exercise can increase your weight by 10 pounds in a year.

d. An average burger today is twice as large as an average burger 20 years ago.

**Test-Taking Tip** Closely read the text to which the question refers. Then read the question and each of the answer choices. Re-read the text to confirm which answer is correct. Some answers may seem identical, but they contain subtle differences. Pay attention to every word.