Nutrition An Applied Approach 5th edition Thompson Solutions Manual

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CHAPTER

2 Designing a Healthful Diet and In Depth: Healthful Eating Patterns

Chapter Summary

While there is no one right way to eat that is healthful and acceptable for everyone, healthful diets have certain key characteristics: They provide adequate nutrients and energy; include moderate amounts of a wide variety of foods; and are nutrient-dense, meaning that they consist of foods that are high in nutrients and fiber for a relatively low number of Calories.

Food choices that contribute to or detract from a healthful diet are affected by appetite—a psychological desire—often triggered by the sight, smell, and taste of certain foods. Food choices are also influenced by companions, settings, culture, and emotional connections with food. People learn food preferences early in their lives but can learn to like or dislike new foods at any time.

Designing and maintaining a healthful diet is made easier by understanding how to read food labels, which contain information about Calories and nutrients. Also useful are the *2015–2020 Dietary Guidelines for Americans* and the USDA Food Patterns and MyPlate, which can help in assessing one's current diet and plan healthful changes. Ethnic and other diet variations can easily be accommodated.

Even when eating out, understanding what motivates our food choices and the tools we can use to analyze our diets can promote a more healthy relationship with food.

Most Americans do not follow healthful eating patterns. Examples of healthful eating patterns include the Mediterranean-style eating pattern and the exchange system, among others. It is important that Americans also meet the current Physical Activity Guidelines.

Learning Objectives

After studying this chapter, your students should be able to do the following:

1. Identify five characteristics of a healthful diet, pp. 38–40.
2. Discuss the influence of sensory data, sociocultural cues, emotions, and learning on food choices, pp. 40–42.
3. Explain how to read a food label, including the Nutrition Facts panel and label claims, to determine the nutritional profile of a given food, pp. 42–46.
4. Summarize the key messages of the *2015–2020 Dietary Guidelines for Americans*, pp. 47–48.
5. Explain how to use the USDA Food Patterns to design a healthful diet, pp. 48–53.
6. Describe several ways to make healthful meal choices when eating out, pp. 53–55.

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The chapter's **In Depth** essay will additionally enable them to:

1. Identify the components and principles of a healthful eating pattern, pp. 60–61.
2. Describe at least two healthful eating patterns recommended by public health experts, pp. 61–63.

Chapter Outline

I. What Is a Healthful Diet?

A. A healthful diet is adequate.

1. An adequate diet provides enough of the energy, nutrients, and fiber to maintain a person's health.

2. Different individuals may require very different diets.

B. A healthful diet is moderate.

1. A moderate diet has neither too much nor too little of any particular food.

C. A healthful diet is nutrient-dense.

1. *Nutrient density* is the relative amount of nutrients and fiber per amount of energy (or number of Calories); a nutrient-dense diet is therefore made up of foods and beverages that supply the highest level of nutrients for the lowest number of Calories.

D. A healthful diet is balanced.

1. A balanced diet contains the combinations of foods that provide the proper proportions of nutrients.

E. A healthful diet is varied.

1. *Variety* refers to eating many different foods from the different food groups on a regular basis.

Additional Instructor Tools

PPT slides: 2–8

Figure: 2.1 (Meal Focus Figure)

II. What's Behind Our Food Choices?

A. Sensory data influence food choices.

1. *Appetite* is a psychological desire to consume specific foods commonly triggered by data such as the sight, smell, and taste of foods.

a. *Olfaction*, our sense of smell, plays a key role.

b. *Mouthfeel* refers to the tactile sensation of food in the mouth.

B. Sociocultural cues and emotions influence food choices.

1. We are influenced by the people we're with, the setting and activities we're engaged in, and the culture with which we identify.

2. Emotions also play a significant role, especially when we seek "comfort foods" or use food as a "reward."

C. Learning influences food choices.

1. The family and society in which we were raised teach us what foods are appropriate.

2. We can learn to enjoy new foods at any point in our lives.

3. We can also come to dislike foods we once enjoyed.

a. A *conditioned taste aversion* involves avoidance of a food as a result of a negative experience.

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Additional Instructor Tools

PPT slides: 9–12

Figure: 2.2

III. How Can Reading Food Labels Help You Improve Your Diet?

A. Five components must be included on food labels.

1. A statement of identity clearly tells us what the product is.

2. The net contents of the package accurately describes the quantity of food in the entire package.

3. The ingredient list shows all ingredients in descending order by weight.

4. The name and address of the food manufacturer, packer, or distributor is useful for obtaining more detailed information about a product.

5. Nutrition information on the Nutrition Facts panel is the primary tool to assist an individual in choosing healthful foods.

B. Use the Nutrition Facts panel to evaluate and compare foods.

1. Serving size and servings per container are listed.

2. Calories per serving and Calories from fat per serving are listed.

3. Percent Daily Values (%DV) are included, stating how much a serving of food contributes to an average individual's overall intake of the nutrient indicated.

4. A footnote (lower part of the panel) explains that the %DV is based on a 2,000-calorie diet.

C. Food labels can display a variety of claims.

1. The % Daily Values on the food labels serve as the basis for nutrient claims, which are regulated by the FDA.

2. The FDA also allows certain other claims related to health and disease.

3. Structure–function claims such as "builds stronger bones" can be made without approval from the U.S. Food and Drug Administration (FDA).

Additional Instructor Tools

PPT slides: 13–25

Animation: Reading Labels

Figures: 2.3, 2.4 (Focus Figure)

Tables: 2.1, 2.2

IV. How Do the Dietary Guidelines for Americans Promote a Healthful Diet?

A. The *2015–2020 Dietary Guidelines for Americans* are a set of five principles developed by the USDA and HHS to assist Americans in designing a healthful diet and lifestyle.

1. Follow a healthful eating pattern across the lifespan.

2. Focus on variety, nutrient density, and amount.

3. Limit Calories from added sugars and saturated fats, and reduce your sodium intake.

a. Added sugars are any sweeteners that do not occur naturally in foods.

b. Saturated fats are abundant in meats and other animal-based foods and are associated with increased risk of cardiovascular disease.

c. High intake of sodium is linked to increased risk for high blood pressure.

4. Shift to more healthful food and beverage choices.

5. Support healthful eating patterns for everyone.

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Additional Instructor Tools

PPT slides: 27–28

V. How Can the USDA Food Patterns Help You Design a Healthful Diet?

A. Log onto MyPlate.

1. MyPlate, the visual representation of the USDA Food Patterns, provides a web-based, interactive, personalized guide to diet and physical activity.

B. Limit empty Calories.

1. Empty Calories come from solid fats or added sugars and provide few or no nutrients.

C. Watch your serving sizes.

1. The USDA Food Patterns help decide how much of each food to eat, based on your age, gender, and activity level.

a. Serving sizes are identified in cups or ounce-equivalents (oz-equivalents).

b. Challenges include the fact that a serving size as defined in the USDA Food Patterns may not be equal to a serving size identified on a food label.

c. Serving sizes in the USDA Food Patterns are also typically much smaller than items we are accustomed to consuming individually, such as muffins and bottled juices.

D. Consider ethnic variations and other eating plans.

1. MyPlate easily accommodates foods that we may consider part of an ethnic diet, along with foods that match a vegetarian diet and other lifestyle preferences.

2. MyPlate incorporates many features of the Mediterranean diet, a healthful eating plan associated with a reduced risk for cardiovascular disease.

a. The DASH diet ("Dietary Approaches to Stop Hypertension") is another healthful eating plan.

E. Get some high-tech help.

1. The web-based MyPlate Supertracker helps analyze your current dietary intake and physical activity and to create personalized plans.

2. Students using this textbook also have access to MyDietAnalysis, which features a database of foods and multiple report options.

3. Anyone can access the USDA's Nutrient Database for Standard Reference, which is updated annually.

4. Numerous cell phone apps can help you plan and keep track of dietary changes.

Additional Instructor Tools

PPT slides: 29–41

Figures: 2.5, 2.6, 2.7, 2.8, 2.9

VI. Can Eating Out Be Part of a Healthful Diet?

A. Avoid large portions.

1. Many restaurants serve large meals; but most also offer smaller menu items, and meals can be split with a friend or portions taken home for another meal.

B. Use nutrition information.

1. Beginning in 2016, Calorie information must be posted for standard menu items on menus and menu boards in chain restaurants and many other retail food outlets.

2. In most cases restaurant foods still exceed the levels of Calories, added sugars, saturated fat, and sodium recommended for promoting health.

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3. Look for "lite" menu items; avoid fried meats; ask for whole-grain breads; and have salad as a side.

Additional Instructor Tools

PPT slides: 42–45

Table: 2.3

VII. Nutrition Debate: Nutrition Advice from the U.S. Government: Is Anyone Listening?

A. The *Dietary Guidelines for Americans* (DGAs) can help consumers make healthful food choices—if consumers actually use them.

B. Concerns have been expressed about the failure of the 2015–2020 DGAs to include all the recommendations put forth by the Dietary Guidelines Advisory Committee.

1. Specifically, the DGAs do not include a recommendation to reduce consumption of red and processed meat; nor do they include a recommendation to reduce consumption of sugar-sweetened beverages.
2. There is potential for conflicts of interest to arise within the USDA when developing the guidelines.

C. The primary assumption is that people will use the DGAs and MyPlate to design their diets; but evidence suggests few people are even aware the tools exist.

VIII. In Depth: Healthful Eating Patterns

A. What is a healthful eating pattern?

1. The *2015–2020 Dietary Guidelines for Americans* identify the following components: a variety of vegetables; fruits, particularly whole fruits; whole grains and cereals; low-fat and fat-free dairy products or alternatives; a variety of protein foods; and oils.
2. A healthful eating pattern is founded on three dietary principles:
   a. Everything you consume "counts" and needs to be considered.
   b. Nutrient needs should be met primarily from nutrient-dense foods.
   c. Healthful eating patterns can be adapted to different sociocultural environments, budgets, and personal preferences.
3. Most Americans do not follow a healthful eating pattern.

B. What are some healthful eating patterns?

1. A Mediterranean-style eating pattern is healthful.
   a. With this eating pattern, you'd consume beans, other legumes, and nuts as daily sources of protein; fish, poultry, and eggs weekly; red meat only about once a month; cheese and yogurt in moderation; and water or wine (in moderation).
   b. Studies indicate this type of eating plan reduces the risk for cardiovascular disease and may also reduce the risks for cognitive decline and Alzheimer's disease.
2. The exchange system can help you follow a healthful eating pattern.
   a. With the exchange system, exchanges or portions of food are organized into six lists according to the amount of carbohydrate, protein, fat, and Calories.
3. The Healthy Eating Plate and Power Plate are also healthful eating patterns.
   a. The Healthy Eating Plate emphasizes plant oils, whole grains, vegetables, lean protein sources, little or no added sugar, and daily physical activity.
   b. The Power Plate emphasizes fruits, legumes, other vegetables, and whole grains; allows nuts and seeds; is low in added sugars, saturated fats, and sodium; and is high in fiber.

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4. Include regular physical activity.
    a. The Physical Activity Guidelines for Americans state that adults should engage in at least 150 minutes per week of moderate intensity physical activity and should perform muscle-strengthening exercises on 2 or more days per week.

Additional Instructor Tools

PPT slides: 46–49

Figures: Figure 1, Figure 2, Figure 3

Key Terms

appetite
conditioned taste aversion
Dietary Guidelines for Americans
empty Calories
exchange system
healthful diet
mouthfeel
MyPlate
nutrient density
Nutrition Facts panel
olfaction
ounce-equivalent (oz-equivalent)
USDA Food Patterns

ABC NEWS Lecture Launcher Videos

Discussion of the following video clips, located in the PowerPoint slides for this chapter and in the Teaching Toolkit, can be used to promote critical thinking on chapter-related topics:

1. **Mediterranean Diet Could Help Reduce Heart Disease**
2. **Calorie Count: Eat by the Numbers**
3. **Changes Coming to Nutrition Labels**
4. **Coconut: How Health Is the Superfood?**
5. **GMA Investigates Baby Food Labels**

In-Class Discussion Questions

1. Examine your diet with regard to the five characteristics of a healthful diet: adequacy, moderation, nutrient density, balance, and variety. Do your dietary choices reflect these characteristics? What changes could you make to incorporate these features more often?
2. Do you use the information on food labels to help you choose the products you buy? If so, what criteria on the food label do you find most useful?
3. Think about three or four foods that you commonly consume. Discuss how you might replace these foods with more nutrient-dense alternatives.
4. Discuss the health messages associated with MyPlate. Do you think the messages are clear?
5. What are limitations of MyPlate? Can you suggest how to overcome these limitations?
6. Discuss some of the strategies you can put into practice when eating out that can make your diet more healthful.

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7. In what ways is a Mediterranean-style eating pattern distinctly different from the typical U.S. diet? What simple changes could you make to your current eating habits that would bring your daily food consumption closer to the Mediterranean style?

In-Class Activities

1. Students should use the food intake journal they previously completed to determine whether their intake conforms to the Dietary Guidelines for Americans. They should answer the following questions:
   - **a.** How many Dietary Guidelines do you meet?
   - **b.** How might you change your diet or lifestyle to more closely meet the recommendations?
2. Have students bring to class three food products that contain a food label. Instruct them to examine and discuss the ingredients list and the Nutrition Facts panel in small groups. Have them answer the following questions for each label:
   - **a.** What is the ingredient present in the largest amount?
   - **b.** What is the serving size for the product?
   - **c.** Is the stated serving size the amount you would normally eat?
   - **d.** What is the number of calories per serving?
   - **e.** What is the amount of fat (in grams) per serving?
   - **f.** For each food product, discuss whether this would be considered a nutrient-dense food. Students should give reasons for their answer.
3. Have students visit a restaurant that provides nutrition facts for its meals. This information can also be accessed online for many restaurants. Students should try to plan a healthful meal from the restaurant's menu. Discussion in class can address whether or not it was possible to find healthy options. Students should also state if they would order the healthy option if they were eating at this restaurant. Why or why not?
4. Have students work in small groups to demonstrate the connections among taste, smell, and food texture. Bring small samples of various foods to class. Each student in the group can take a turn tasting a food item using no other senses. To do this, the student taster should close his or her eyes and pinch nostrils closed. Another student in the group should gently place the food on the taster's tongue. The taster should try to identify the food without chewing or moving the food in the mouth. The taster should then chew the food to see if that aids in identification. Finally, the taster can un-pinch the nose to see if that helps to identify the food. Some food suggestions include small pieces of fruit or vegetables, onion, nuts, or chocolate. Important notes:
   - **a.** Make sure you check for any students with food allergies before beginning this activity.
   - **b.** Make sure you are working in a clean environment.
   - **c.** Encourage students to wear sterile gloves when handling the food items.

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MyDietAnalysis Activity

1. Using the nutritional assessment previously completed, students should note the information provided by their diet analysis software and answer the following questions:
   - **a.** Do your intakes meet recommendations for each food group?
   - **b.** What food groups are you high in?
   - **c.** What food groups are you low in?
   - **d.** What changes can you make in your diet to more closely meet the recommendations of MyPlate?

Web Resources

Main Chapter

www.eatright.org
Academy of Nutrition and Dietetics
Visit the food and nutrition information section of this website for additional resources to help you achieve a healthy lifestyle.

www.diabetes.org
American Diabetes Association
Find out more about the nutritional needs of people living with diabetes as well as meal-planning exchange lists.

www.hsph.harvard.edu
Harvard School of Public Health
Search for the "Nutrition Source" on this site to learn more about the Healthy Eating Plate, an alternative to the USDA MyPlate.

www.nhlbi.nih.gov
National Heart, Lung, and Blood Institute
Search for the "Portion Distortion Quiz" on this site to find out how changing portion sizes influences body weight.

www.oldwayspt.org
Oldways Preservation Trust
Find different variations of ethnic and cultural food pyramids.

www.thepowerplate.org
Physicians Committee for Responsible Medicine: The Power Plate
Visit this site to view the Power Plate, a vegetarian alternative to the USDA MyPlate.

www.fda.gov
U.S. Food and Drug Administration (FDA)
Learn more about the government agency that regulates our food and first established regulations for nutrition information on food labels.

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www.cnpp.usda.gov
USDA Center for Nutrition Policy and Promotion
Use the Dietary Guidelines for Americans to make changes in your food choices and physical activity habits to help reduce your risk for chronic disease.

www.chooseMyPlate.gov
USDA MyPlate Home Page
Use the SuperTracker on this Website to assess the overall quality of your diet and level of physical activity based on the USDA MyPlate.

In Depth: Healthful Eating Patterns

www.eatright.org
Academy of Nutrition and Dietetics
Explore a range of tips to help you eat more healthfully during holidays.

www.thecenterformindfuleating.org
Center for Mindful Eating
Learn more about the principles, practices, and potential benefits of mindful eating.

www.chooseMyPlate.gov
USDA MyPlate Home Page
Use the SuperTracker tool to develop a personalized food and physical activity plan, analyze your current nutrient intake, and get tips to support healthy food choices. Search on "SuperTracker" once you get to the home page.

www.usda.gov
USDA Nutrient Data
Search for "Nutrient Data" on this site for the link to the Nutrient Data Laboratory and USDA National Nutrient Database for Standard Reference, where you can examine the nutrient content of over 8,000 foods.

Digital Transparency Masters

To enhance instruction in your class, we have provided transparency masters of all the key figures in PDF format, available in the Teaching Toolkit for this chapter. This selection of images and tables can be downloaded and printed to create transparency acetates.

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