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CHAPTER

2 Designing a Healthful Diet

Chapter Summary

A healthful diet provides the proper combination of energy and nutrients and has four characteristics: It is adequate, moderate, balanced, and varied. There are many tools that can be used to help design a healthful diet. The U.S. Food and Drug Administration (FDA) regulates the content of food labels and nutrient or health claims. The Nutrition Facts panel on food labels provides valuable information to assist individuals in choosing more healthful foods. The Dietary Guidelines for Americans are a set of principles developed by the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (HHS) to assist Americans in designing a healthful diet and lifestyle. The USDA has also developed an interactive food guidance system, MyPlate, which is designed to help Americans develop personalized nutrition and wellness goals and assess their current levels of diet and activity and to plan appropriate changes. MyPlate food choices can easily incorporate ethnic, vegetarian, or other lifestyle preferences. Eating out is challenging due to the large portion sizes and high fat and sodium content of many restaurant meals. However, healthful choices can be made by becoming educated, and new FDA labeling requirements for some restaurant menus will help.

Nutrition Myth or Fact asks: Nutrition advice from the U.S government: Is anyone listening?

Learning Objectives

After studying this chapter, the student should be able to:

1. Define the components of a healthful diet (pp. 42–43).
2. Read a food label and use the Nutrition Facts panel to determine the nutritional adequacy of a given food (pp. 44–47).
3. Distinguish among label claims related to nutrient content, health, and body structure or function (pp. 47–49).
4. Explain the concept of nutrient density and identify a variety of nutrient-dense foods (pp. 50-52).
5. Discuss four key messages of the Dietary Guidelines, including choices to make more often and choices to limit (pp. 52–53).
6. Identify the five food groups included in the USDA Food Patterns and the key message for each group (pp. 54–55).
7. Compare MyPlate to the Mediterranean diet (pp. 55–56).

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8. Define *empty* Calories and discuss the role that empty Calories and serving size play in designing a healthful diet (p. 56).
9. Discuss several ways that technology can help you design and maintain a healthful diet (p. 61).
10. List at least four ways to practice moderation and apply healthful dietary guidelines when eating out (pp. 62–63).

Key Terms

adequate diet
balanced diet
Dietary Guidelines for Americans
empty Calories
exchange system
functional foods
healthful diet
moderation
MyPlate
nutrient-dense foods
nutrient density
Nutrition Facts panel
ounce-equivalent
percent daily values
processed foods
variety
whole foods

Chapter Outline

I. What Is a Healthful Diet?

A. A healthful diet provides the proper combination of energy and nutrients.

1. It has four characteristics: it is adequate, moderate, balanced, and varied.

B. A healthful diet is adequate.

1. An adequate diet provides enough energy, nutrients, and fiber to maintain health.

2. A diet may be inadequate in one category and excessive in another.

3. Adequacy of diet is individualized.

C. A healthful diet is moderate.

D. A healthful diet is balanced.

1. A balanced diet contains combinations of foods to provide 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.

2. Variety increases the likelihood of consuming all the nutrients the body needs.

Key Terms: healthful diet, adequate diet, moderation, balanced diet, variety

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

A. Reading food labels can be easy and helpful.

1. Five components must be included on food labels.

a. A statement of identity explains what the product is.

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

c. The ingredient list provides a list of all ingredients in descending order by weight.

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d. The name and address of the food manufacturer, packer, or distributor is useful to get more detailed information about a product.

e. Nutrition information is the primary tool to assist in choosing healthful foods.

2. The Nutrition Facts panel contains FDA-required nutrition information and can be used to learn more about a food or as a guide for comparing foods.

a. Serving size and servings per container are listed in common household measurements based on typical serving sizes established by the FDA.

b. Calories and Calories from fat per serving describe the total number of Calories in larger, bolder print.

c. Percent daily value (DV) is based on a 2,000-Calorie diet for an average adult and helps in selection of foods that are high or low in particular nutrients.

d. The footnote (lower part of the panel) explains the basis of the DV and compares a 2,000- and 2,500-Calorie diet.

3. Food labels can display a variety of claims.

a. The FDA regulates nutrient and health claims on the label.

b. The Daily Values serve as the basis for nutrient claims.

c. Food claims may also display certain FDA-approved claims related to health and disease.

d. Food manufacturers can also make health claims for functional foods (or nutraceuticals), which include whole foods and fortified, enriched, or enhanced processed foods.

e. Structure–function claims, which are generic statements about a food's impact on body structure and function, require no approval but cannot refer to a symptom or disease.

Key Terms: Nutrition Facts panel, percent daily values (%DV), functional foods, whole foods, processed foods

Figures and Tables:

Figure 2.1: The five primary components that are required for food labels.

Figure 2.2: The Nutrition Facts Panel

Figure 2.3: The U.S. Food and Drug Administration's Health Claims Report Card.

Table 2.1: U.S. Food and Drug Administration (FDA)—Approved Nutrient-Related Terms and Definitions

Table 2.2: U.S. Food and Drug Administration—Approved Health Claims on Labels

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

A. The *Dietary Guidelines for Americans* are a set of principles developed by the USDA and HHS to promote health, reduce the risk of chronic diseases, and reduce the risk of overweight and obesity through improved nutrition and physical activity.

1. The guidelines promote adequate nutrient intake while staying within energy needs.

a. Maintain a healthy body weight through balance of Calories consumed and Calories expended.

b. Increase physical activity and decrease sedentary behaviors.

c. An important strategy for balancing Calories is choosing nutrient-dense foods.

2. The guidelines suggest that we limit sodium, fat, sugars, and alcohol.

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a. Keep sodium intake to less than 2,300 mg a day, less if you are African American, or have high blood pressure, diabetes, or chronic kidney disease.

b. Less than 7% to 10% of your total daily Calories should come from saturated fat, and you should consume less than 300 mg a day of cholesterol.

3. Limit food and beverages that are high in added sugars.

4. The guidelines encourage moderate intake of healthy fats while limiting saturated fat, *trans* fat, and cholesterol.

5. The recommendation is to drink alcohol in moderation and highlights those people who should refrain from drinking.

B. People should increase their consumption of healthful foods and nutrients while keeping their Calorie intake within their daily needs.

1. Increase intake of fruits and vegetables.

2. Make sure half of all grain foods come from whole grains.

3. Choose fat-free or low-fat milk products.

4. Choose lean protein sources.

5. Pick foods with an adequate level of dietary fiber and nutrients like potassium, calcium, and vitamin D.

C. Follow a healthful eating pattern.

1. Follow food safety recommendations to reduce your risk of foodborne illness.

Key Terms: *Dietary Guidelines for Americans*, nutrient-dense foods, nutrient density

Figure and Table:

Figure 2.4: Optimizing Nutrient Density

Table 2.3: Ways to Incorporate the *Dietary Guidelines for Americans* into Your Daily Life

IV. How Can The USDA Food Patterns Help You Design a Healthful Diet?

A. The USDA Food Patterns were developed to help Americans incorporate the *Dietary Guidelines* into their everyday lives.

1. The food groups in the USDA Food Patterns are grains, vegetables, fruits, dairy foods, and protein foods.

2. The foods are represented in the MyPlate graphic with segments of five different colors.

B. MyPlate incorporates many features of the Mediterranean diet, which has been associated with reduced risk of cardiovascular disease.

1. Empty calories should be limited.

a. Empty Calories are those derived from solid fats and/or added sugars that provide few or no nutrients.

2. You need to pay attention to serving sizes.

a. Ounce-equivalent (oz-equivalent) is a serving size that is 1 ounce or equivalent to an ounce.

b. Problems arise because there is no nationally standardized definition of serving size and for individually consumed items the USDA Food Pattern serving sizes are typically much smaller.

C. There are ethnic variations to MyPlate and other helpful eating plans like the DASH diet and the exchange system, which was designed for people with diabetes.

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D. There are many diet analysis programs that can help you evaluate the quality of your diet.

1. Examples include MyPlate Supertracker, MyDietAnalysis, and the USDAs Nutrient Database for Standard Reference.

Key Terms: MyPlate, empty Calories, ounce-equivalent (oz-equivalent), exchange system

Figures:

Figure 2.5: Food Groups of the USDA Food Patterns.

Figure 2.6: The USDA MyPlate graphic is an interactive food guidance system.

Figure 2.7: MyPlate can be easily used to design a Mediterranean-style eating plan.

Figure 2.8: Examples of serving sizes in each food group of MyPlate for a 2,000-kcal food intake pattern.

Figure 2.9: Examples in food portion sizes over the past 30 years.

Figure 2.10: MiPlato is the Spanish language version of MyPlate.

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

A. There are hidden costs to eating out.

1. Many restaurants, both fast-food and sit-down, serve large portions.

2. Beginning in 2016, the FDA will require nutrition labelling in chain restaurants and retail food outlets.

B. There are healthful ways to eat out.

1. Choose more nutrient-dense, lower-fat menu items.

2. Choose smaller portions, whole grains, and leaner meat options.

3. At sit-down restaurants choose "lite" menu items if available and practice wise selection of restaurants and healthier choices.

Table:

Table 2.4: Nutritional Value of Selected Fast Foods

Activities

1. Students should use the food intake journal they previously completed and enter their foods for one or more days on the SuperTracker at www.supertracker.usda.gov to determine whether or not their intake conforms to the Dietary Guidelines. They will need to register and provide their age, height, weight, and activity level. This assignment can be used as a comparison to the Nutrition Analysis software program.

Students 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 recommendations? (See the tips on the site.)
c. How could SuperTracker be used with clients?

2. Print the ingredient panels from three to five different food products on a sheet of paper, and do not include the names of the foods. For instance, you might include ingredients from a granola bar, a "healthy" frozen dinner, and dog food. Tell students to select the food they would want to have with them if they were stranded on a desert island (if they had plenty of water) solely by reading the ingredients. Assure them that there is no one

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correct answer. Discuss why they chose as they did, relating the discussion to the limitations of the ingredient panel, nutrient density, and discretionary calories. Point out that the choice is based on personal goals for the situation. Either allow students to guess or disclose the foods that correspond with each ingredient panel. Note: If you choose to use dog food, simplify the names of the ingredients. (It is usually the most selected item.)

3. Have students bring to class three food products that contain a Nutrition Facts panel. Instruct them to examine and discuss the Nutrition Facts panels in small groups. Have them answer the following questions for each label:
   - **a.** Compare the foods in terms of serving size, Calories, fat, fiber, and daily values for vitamins and minerals.
   - **b.** Is the stated serving size the amount you would normally eat?
   - **c.** For each food product, discuss whether this would be considered a nutrient-dense food. Students should give reasons for their answer.
   - **d.** Select the most nutrient-dense food, and explain your choice.
   - **e.** Do the claims on the front of the package reflect the Nutrition Facts panel?
   - **f.** Why do some labels contain only two vitamins and two minerals and others contain more?
4. Have students visit a restaurant that provides nutrition facts for its meals. As an alternative, this information can 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?
5. Have students survey five different people to determine how healthily people believe they eat and what the barriers are to eating a healthy diet. Develop a list of reasons that people find it difficult to eat healthy food, along with "excuses" for not eating healthy choices. This may be turned into a future assignment by giving pairs or groups of students one barrier each to explore and having them briefly present solutions to the barriers.

Diet Analysis Activity

6. If students are using MyDietAnalysis, they can use the nutritional assessment previously completed. If students are using EvaluEat, they will need to enter their food intake journal on the SuperTracker at www.supertracker.usda.gov. Students should note the MyPlate information provided by the diet analysis software and answer the following questions:
   - **a.** Do your intakes meet recommendations for each food group?
   - **b.** What food groups do you eat more than recommended amounts?
   - **c.** What food groups do you eat less than recommended amounts?
   - **d.** What changes can you make in your diet to more closely meet the recommendations of the Dietary Guidelines?

Nutrition Debate Activity

7. Many believe that we are living in a "toxic" environment that makes living a healthful life extremely difficult. One of the largest contributors to this "toxic" environment is believed to be options for dining out. Students should debate whether or not they believe restaurant food should be regulated by the government in some way. Those who believe

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it should be regulated should state what type of regulation they believe would be most appropriate. Possible options might include a tax, nutritional information on all restaurant menus, or stricter regulation of the types of foods sold or the types of ingredients used. You may have to assign sides if too many students are in agreement on the solution.

Web Resources

US Food and Drug Administration
www.fda.gov

2010 Dietary Guidelines for Americans
www.cnpp.usda.gov/dietaryguidelines

United States Department of Agriculture
www.choosemyplate.gov

National Institutes of Health Portion Distortion

www.nhlbi.nih.gov/health/educational/wecan/eat-right/portion-distortion.htm

American Diabetes Association
www.diabetes.org

Academy of Nutrition and Dietetics
www.eatright.org

U.S. Department of Agriculture National Nutrient Databases
ndb.nal.usda.gov/

Harvard School of Public Health
www.hsph.harvard.edu/nutritionsource

Physicians' Committee for Responsible Medicine
www.pcrm.org/health

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