# *Personal Nutrition 9th edition Boyle Solutions Manual*

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# Instructor's Manual[1] for *Personal Nutrition* 9e
# Chapter 2 – The Pursuit of a Healthy Diet

## List of Resources in This Document

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|---|---|
| Class preparation materials: | • Student learning objectives<br>• Lecture notes (detailed chapter outline)<br>• Chapter summary<br>• Points to consider<br>• Suggested activities |
| Student assignments/ enrichment: | • Critical thinking questions (with answer key)<br>• Healthy recipes<br>• Review Worksheet for Chapter 2 (with answer key)<br>• Internet Exercise Worksheet for Chapter 2 (with answer key)<br>• Chapter 2 Word Find Puzzle (with answer key) |

## Student Learning Objectives

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|---|---|
| 2.1 | List and describe six characteristic of planning a healthy diet. |
| 2.2 | Describe the purpose of each of the four categories of nutrient intake values that make up the DRI for nutrients. |
| 2.3 | Describe three major goals for building healthy eating patterns as emphasized by the Dietary Guidelines for Americans. |
| 2.4 | Explain how MyPlate/the USDA Food Patterns incorporate the principles of diet planning to help consumers make healthful meal and activity choices. |
| 2.5 | List four nutrients whose intakes are low enough to be of public health concern in the United States. |
| 2.6 | List the information found on food labels that is useful to use when making comparisons between similar products based on health goals. |
| 2.7 | Discuss tips for incorporating ethnic food choices into a healthy eating pattern. |

## Lecture Notes

***Chapter resources:*** PowerPoint lecture presentation and Join In quiz from Power Lecture

- The foods you select can have a profound effect on the quality and possibly even the length of your life.
- The overall diet is what counts, and can be improved by choosing a healthful balance of foods. The ideal diet contains foods that supply adequate nutrients, fiber, and calories without an excess of fat, sugar, sodium, or alcohol.

I. The ABCs of Eating for Health

***Key terms:*** adequacy, balance, calorie control, moderation, variety, nutrient dense
***Resources:*** Points to Consider 2-1; Suggested Activity 2-1

A. When planning a diet, try to make sure it follows these diet planning principles:
B. Adequacy - iron is an essential nutrient that your body loses daily and must replace continually via iron-rich foods.

[1] By Art Gilbert of the University of California, Santa Barbara

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C. Balance - calcium plays a vital role in building a strong frame that can withstand the gradual loss of bone that occurs with age.
D. Calorie Control - to maintain a desirable weight, energy intakes should not exceed energy needs.
E. Moderation - 80/20 rule: eat low-fat, nutrient-dense foods at least 80 percent of the time, and you're not likely to harm your health if you splurge the remaining 20 percent of the time.
F. Variety - our body needs nutrients from food; some sources are better than others. A limited diet can supply excess amounts of undesirable substances.

II. Nutrient Recommendations

***Key terms:*** Dietary Reference Intakes (DRI), requirement, Estimated Average Requirement (EAR), Recommended Dietary Allowance (RDA), Adequate Intake (AI), Tolerable Upper Intake Level (UL), fortified foods, Estimated Energy Requirement (EER), Acceptable Macronutrient Distribution Range (AMDR)
***Resources:*** Points to Consider 2-2

A. Introduction: Knowing that foods have different combinations of nutrients, it is hard to tell if one is getting the right balance.
B. The Dietary Reference Intakes (DRI)
    1. DRIs are a set of daily nutrient standards based on the latest scientific evidence regarding diet and health.
        a. DRIs estimate the energy and nutrient needs of healthy people.
        b. Separate recommendations are made for different groups of people.
        c. The DRIs are recommendations that apply to average daily intakes.
        d. DRIs may evolve over time as new scientific evidence indicates a need for re-evaluation.
C. The DRIs for Nutrients
    1. The aim is to prevent nutrient deficiencies in a population, as well as reduce risk for chronic diseases such as heart disease, cancer, or osteoporosis.
    2. When developing DRIs, a requirement must be determined—the amount of a nutrient that is necessary to prevent deficiency for the average healthy person.
        a. To determine DRIs involves the use of Estimated Average Requirements (EAR), Recommended Dietary Allowances (RDA), Adequate Intakes (AI), or Tolerable Upper Intake Levels (UL).
        b. AI are used when sufficient scientific evidence to set an RDA is lacking.
        c. UL are determined because of increasing use of large doses of nutrient supplements or fortified foods.
D. The DRI for Energy and the Energy Nutrients
    1. Carbohydrate: 45-65 percent of total calories
    2. Fat: 20-35 percent of total calories
    3. Protein: 10-35 percent of total calories
    4. To reduce the risk of chronic disease, spend at least one hour every day doing a moderately intense physical activity or 20-30 minutes four to seven days per week in a high-intensity activity.

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III. The Challenge of Dietary Guidelines

***Key term:*** lifestyle diseases
***Resource:*** Points to Consider 2-5

A. *Dietary Guidelines for Americans* and *Eating Well with Canada's Food Guide* are among recommendations to help people decrease their risk of lifestyle diseases.
B. The *Dietary Guidelines for Americans* 2010 promote healthy lifestyles and diets.
   1. They emphasize:
      a. Variety
      b. Calorie control
      c. Moderation
      d. Nutrient density
   2. The guidelines also emphasize physical activity to help maintain weight
C. The goal of the recommendations is to help people decrease their risk for lifestyle diseases.
D. The guidelines are grouped into four general topics along with their key recommendations.
   1. Balancing calories to manage weight
   2. Foods and food components to reduce
   3. Foods and nutrients to increase
   4. Building healthy eating patterns
E. The guidelines incorporate two general themes:
   1. Maintaining caloric balance over time
   2. Consuming more nutrient-dense foods and beverages
F. The guidelines also emphasize three major goals:
   1. Balance calories with physical activity to manage weight.
   2. Consume more nutrient-dense foods.
   3. Consume fewer foods with sodium (salt), saturated fats, *trans* fats, cholesterol, added sugars, and refines grains.

IV. Nutrition Action: Grazer's Guide to Smart Snacking

***Key term:*** grazing

A. Snacking
   1. Physiologically speaking, the human digestive system is customized for us to eat about every 4 hours to maintain our energy level.
   2. Healthy snacking can fit into any eating plan and is important to everyone's health.
B. Key to healthful snacking: choose foods that are low in fat, high in fiber, and nutrient dense.
   1. A snack with a balance of carbohydrate, some fat, and some protein will satisfy hunger for a longer period of time than food with only carbohydrate or sugars (e.g., candy, soft drinks).
   2. Consider the following tips next time you're in the mood to grab a snack:
      a. Stock your refrigerator and kitchen cupboards with healthy foods. If nutritious choices are easy to get to, chances are that's what you'll eat.
      b. Carry healthy snacks with you to avoid buying items from the vending machine.
      c. Create your own healthy snacks.
      d. Make new versions of old favorites.
      e. Snack with a friend.
      f. Brush teeth or rinse out mouth after snacking.

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V. Introducing the MyPlate Diet-Planning Tool

***Key terms:*** food group plan, servings, solid fats, added sugars
***Resource:*** Points to Consider 2-3

A. Use the "MyPlate" food guidance system to gain a healthier you.
B. MyPlate is designed to help the student:
   1. Make smart choices from every food group.
   2. Find a balance between food and activity.
   3. Maximize food choices by making mostly nutrient-dense choices.
C. Using MyPlate to Achieve a Healthy Lifestyle
   1. MyPlate is designed to help consumers choose foods that supply a good balance of nutrients.
   2. It aims to moderate or limit dietary components often consumed in excess such as:
      a. Saturated fats
      b. *Trans* fats
      c. Sugar
      d. Sodium
      e. Alcohol
   3. The MyPlate includes six key components of a healthy lifestyle.
      a. Activity - regular physical activity
      b. Variety - eat from all food groups and sub-groups.
      c. Proportionality - different food groups should be consumed in different amounts.
      d. Moderation - try to consume less of foods like solid fats and added sugars.
      e. Personalization - choose foods that fit each individual's needs and preferences.
      f. Gradual improvement - take small steps to gradually improve one's overall diet and lifestyle habits.

D. Use the Simplicity of MyPlate to Build a Healthful Diet

***Key term:*** Estimated Energy Requirement
***Resources:*** Suggested Activity 2-2; Scorecard: Rate Your Plate Using the MyPlate Food Guide

   1. Determine how much to eat in 3 easy steps:
      a. Step 1: Estimate your daily energy needs. Know how many calories you need from food on a daily basis.
      b. Step 2: Build your daily eating plan. Incorporate all five food groups into a diet that meets energy needs.
      c. Step 3: Let MyPlate guide your food choices. Use the MyPlate recommendations to structure a personalized, healthy diet that meets nutrient and caloric requirements and is suited to your individual tastes.
         1. People choose different foods prepared differently.
         2. MyPlate provides a starting point to develop healthful eating patterns while allowing for personal preferences.
         3. Make choices from each of the five major groups.
E. Using MyPlate to Meet Nutrient Needs
   1. MyPlate helps a person get the nutrients they need daily.
   2. Each of the five groups provides specific nutrients needed for a balanced diet.
   3. Additionally, a small amount of (heart-healthy) oil is needed daily.

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F. Using MyPlate to Moderate Energy Intakes
   1. Following the MyPlate guidelines allows you to get enough nutrients without overdoing calories.
   2. Choose the most nutrient-rich foods from each group.
   3. This generally means more whole foods: whole grains, fruits, vegetables, legumes, and low-/fat-free dairy products.

G. Gaining Caloric Control: The Daily Limit for Empty Calories

***Key term:*** daily limit for empty calories

   1. Build your diet from MyPlate choosing nutrient-dense foods, low in solid fats and added sugars.
   2. This strategy may provide empty calories.
   3. Although limits are small (100-300 calories), empty calories, if available, may be used on less nutrient-dense foods like: higher-fat meats, whole milk, and most bakery products.
   4. However, they may also be used on other healthful food choices (in which case, they wouldn't be empty calories).

H. Rules of Thumb For Portion Sizes—It's All in Your Hands

***Resource:*** Points to Consider 2-4, Suggested Activity 2-3

   1. Energy balance between food intake and energy expenditure is getting more difficult.
   2. In the United States today portion sizes are growing.
   3. A serving is the standard amount of a given food. It is a consistent quantity.
   4. A portion is the amount of food you choose to eat and may vary from meal to meal.

VI. How Well Do We Eat?

***Resource:*** Points to Consider 2-6

A. Introduction: Are American consumers following the nutrition recommendations presented in this chapter?
B. The answer is "needs improvement."
   1. We eat too many calories, too much solid fat, too much added sugars, too many refined grains, and too much sodium.
   2. We consume too few vegetables, fruits, whole grains, and fat-free or low-fat dairy products.
C. Overall health can be improved by a diet that is:
   1. Energy balanced, limited in total calories, and portion controlled.
   2. Nutrient dense and includes:
      a. Vegetables, fruits, high-fiber whole grains
      b. Fat-free or low-fat dairy products
      c. Seafood, lean meats and poultry, eggs, soy products, nuts, seeds, and oils
      d. Very few solid fats and added sugars and little sodium

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VII. Color Your Plate for Health with a Variety of Fruits and Vegetables

***Key terms:*** phytochemicals, antioxidant nutrients

A. Color your plate with health-protective foods.
B. Be adventurous: select from as wide a variety of fruits and vegetables as possible.
C. Make it easy on yourself! (Keep healthful fruits/vegetables on hand in a convenient form.)

VIII. More Tools for Diet Planning

A. Food Labels

***Key terms:*** ingredients list, Nutrition Facts panel, Daily Values, nutrient content claims, health claim
***Resources:*** Suggested Activities 2-3, 2-4, 2-5

1. The Nutrition Labeling and Education Act (NLEA) ensures that food companies provide nutrition information that best allows people to select foods that fit into a healthful eating plan.
2. By law, labels must contain: name of food, name of manufacturer, net quantity, ingredient list, and Nutrition Facts panel.
3. The ingredient list lists items in descending order of weight.

B. Using the Nutrition Facts Panel
- It must indicate amounts of certain mandatory nutrients that one serving of the food contains.

1. The FDA has set forth a list of serving sizes for more than 100 food categories. This ensures that consumers can easily compare one brand to another.
2. Notice total calories.
3. The required nutrients are calories, calories from fat, total fat, saturated fat, *trans* fat, cholesterol, sodium, total carbohydrate, dietary fiber, sugars, protein, vitamin A, vitamin C, calcium, and iron (in that order).
   a. Ranking of required nutrients ensures that the label reflects the government's dietary priorities for the public.
   b. Most Americans eat too much saturated fat and *trans* fat, raising the risk of many chronic diseases for millions.
   c. Only certain vitamins and minerals appear on the food label unless the manufacturer makes a nutrient or health claim about a particular nutrient. Then the amount must appear on the label as well.
4. Daily Values
   a. Daily Values for fats, sodium, carbohydrates, and fiber are calculated according to what's deemed a healthful diet for adults.
   b. Percent Daily Value tells you the percentage of nutrient that a serving contributes to a 2,000-calorie diet; the label also shows values for a 2,500-calorie diet.

C. Using the Percent Daily Values (% DV)
1. You can use the % DV to get a good idea of how various foods fit into a healthful diet, regardless of the number of calories eaten.
2. Percent Daily Values can give you an idea of how different foods fit into the overall diet.
3. Daily Values can be used to comparison shop.
   a. Two products can be compared for calories and nutrients.
   b. This allows people to make more nutrient-dense choices.
4. Percent Daily Values for vitamins (on labels) represent the highest of all the values to ensure that virtually everyone in the population is covered.

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D. Nutrient Content Claims
   1. Foods carrying nutrient content claims like “low-fat,” “low-calorie,” etc. must adhere to specific definitions spelled out by the FDA.

E. Health Claims
   1. Are statements that link the nutritional profile of food to a reduced risk of a particular disease
   2. The FDA has set forth very strict rules governing the use of such health claims.
   3. Manufacturers are allowed to imply only that the food “may” or “might” reduce risk of disease.
   4. They must also note other factors that play a role in prevention of the disease.
   5. Lastly, they must phrase the claim so that the consumer can understand the relationship between the nutrient and the disease.

F. Exchange Lists

***Key term:*** exchange lists

   1. List of categories of food with portions specified that shows foods to be mixed and matched or exchanged with another in the diet
   2. Portion sizes within groups are determined by considering the calorie, protein, carbohydrate, and fat content of the food.
   3. Exchange lists are also useful for people who are following calorie-controlled diets to lose weight.

IX. Spotlight: A Tapestry of Cultures and Cuisines

***Key term:*** fusion cuisine
***Resource:*** Suggested Activity 2-6

A. Introduction: This feature examines some prevalent ethnic and regional food practices, how they originated, and how they fit into a healthy eating plan.
B. Mexican – Is it true that it is loaded with fat? Do the Mexican people eat a lot of high-fat food?

***Mexican American food terms:*** amaranth, agave, bolillo, burritos, cassava, cherimoya, chilaquiles, chiles relleños, chorizo, guava, jicama, plantain, purslane, queso blanco/ queso fresco/ queso Mexicano, sopa, zapote

   1. Yes, most U.S. “Mexican food” is high in fat, much of it saturated.
   2. High in complex carbohydrates, vitamin A- and C-rich fruits, and vegetables, making it particularly healthful.
   3. Downside - most foods fried rather than baked or broiled, and frequent consumption of high-fat meats.
   4. Healthier options can be substituted for the high-fat counterparts.

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C. Chinese – Are foods served in Chinese restaurants in the U.S. traditional Chinese foods?

***Chinese American food terms:*** bing, bok choy, cellophane noodles, Chinese broccoli, choy sum, dim sum, glutinous rice, jujube, litchi, longan, mantou, Oriental radish, rice sticks, rice vermicelli, taro, yard-long beans

1. Generally not; real Chinese food is mostly vegetables and rice with a small amount of meat (usually pork or chicken) and not much fat.
2. 80 percent of calories come from grains, legumes, and vegetables, while the other 20 percent comes from animal meats, fruits, and fat.
2. Cantonese food tends to be the least fatty style Americans are familiar with.
3. Chinese food served in restaurants is very different than that eaten by rural Chinese people.

D. Italian – How does Italian food rate?
1. Like most American choices, it is usually high in fat and refined carbohydrates.
   a. In fact, a choice like fettuccini Alfredo gets about 60 percent or more of its calories from fat, most of that saturated.
   b. Additionally, there's usually lots of red meat in American "Italian" meals.
2. Though most in the U.S. runs high in fat and calories, with a little modification it can fit into a healthy diet.
3. Mediterranean region's overall dietary pattern includes:
   a. An abundance of fruits and vegetables
   b. Breads/other grains
   c. Beans, nuts, seeds
   d. Low-moderate amounts of cheese, yogurt, fish, and poultry
   e. Small amounts of red meat
   f. Moderate consumption of wine
   g. Liberal use of olive oil
4. Historically, people living within this region have enjoyed long lives and low rates of chronic disease; advocates suggest that you consider adopting aspects of the Mediterranean diet.

E. Indian – I have heard that the traditional Indian diet is vegetarian; is that true?

***Indian food terms:*** chapatti, ghee, lassi, roti

1. Yes, although not exclusively (coastal residents often eat fish; northern Indians tend to eat more meat). The majority is legumes and grains with a reasonable amount of vegetables.
2. Indian cuisine is highly varied according to region, religious beliefs, and availability of foods.
3. The long history of vegetarianism in India is thought to be related to beliefs regarding the sanctity of life among Buddhists and Jainists.
4. Overall, traditional Indian diets are high in complex carbohydrates and fiber-rich vegetables and fruits, but the Americanized versions are not.

F. "Southern" or "Soul food" – Do most African Americans eat lots of it?

***African American food terms:*** chitterlings (chitlins), grits, hominy

1. Probably not any more. More African Americans come from areas outside the south and therefore don't eat the "traditional" southern diet.
2. Very-high-fat, corn-based dishes, greens, pork and pork products, and ham hocks
3. Soul food has its origins in foods eaten by West African slaves living in the South.

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G. Kosher foods – Are kosher foods better for health than regular food items?

***Jewish American food terms:*** bialy, challah, gefilte fish, kasha, knish, kosher, lox, matzoh, schmaltz

1. Sometimes; *kosher* refers to how the food was handled and processed, but is not necessarily concerned with nutritional content. So some are but some are not… so it's back to food labels just like with other foods.
2. "Jewish" foods, symbolism, and traditions of religion - adhere to biblical ordinances that specify which foods are kosher, or fit to eat
3. Jewish dietary laws are considered divine commandments set forth to maintain spiritual, not physical, health.

## Chapter Summary

**The ABCs of Eating for Health**

Six concepts to remember when planning a healthy diet are adequacy, balance, calorie control, moderation, variety, and nutrient density.

Diet Planning Principles:

- Adequacy – enough of each type of food
- Balance – not too much of any type of food
- Calorie control – not too many or too few calories
- Moderation – not too much fat, salt, or sugar
- Variety – as many different foods as possible

**Nutrient Recommendations**

The DRI (Dietary Reference Intakes) represent suggested nutrient intakes for healthy people in the United States and Canada. Other nations have their own similar standards. The DRI include the RDA (Recommended Dietary Allowances), AI (Adequate Intakes), EAR (Estimated Average Requirements), UL (Tolerable Upper Intake Levels), EER (Estimated Energy Requirements), and AMDR (Acceptable Macronutrient Distribution Ranges). The AMDR provide acceptable ranges for energy composition for a balanced diet.

**The Challenge of Dietary Guidelines**

The dietary guidelines provide information for leading a healthy lifestyle that includes a nutritious diet and adequate activity. The key recommendations include:

- Balancing calories to manage weight
- Foods and food components to reduce – sodium (<2300 mg/day; <1500 mg for those at risk for hypertension), saturated fat (<10 percent calories), cholesterol (<300 mg/day), *trans* fat (low as possible), empty calories (from solid fats/added sugars), refined grains, alcohol
- Foods and nutrients to increase – vegetables (especially dark green, red, orange, beans, peas), fruits, whole grains (≥50 percent of grain intake), fat-free/low-fat dairy, seafood, oils (in place of solid fats), potassium, fiber, calcium, vitamin D
- Building healthy eating patterns – proper calorie intake, food safety

**Introducing the MyPlate Diet-Planning Tool**

USDA's MyPlate incorporates the principles of wise diet planning—adequacy, balance, calorie control, moderation, and variety—and is flexible enough to allow for individual preferences. By using guidelines that help distinguish nutritious foods from their less nutritious counterparts and being mindful about portion sizes, you can be a savvy diner in almost any situation.

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**Using MyPlate to Achieve a Healthy Lifestyle.** The new MyPlate emphasizes healthful choices designed to fit more easily into the personal dietary choices of all people who use the USDA's website, www.ChooseMyPlate.gov. Unlike the previous graphic, MyPlate represents the proportions of food groups to eat in a way that is easy for consumers to visualize. MyPlate emphasizes six components of health and diet. These include:

- Activity
- Variety – be sure to include a variety of groups as well as a variety of choices within each group
- Proportionality – vegetables and fruits should fill up at least half the plate at each meal
- Moderation – emphasizes the need to limit empty calories from solid fats and added sugars
- Personalization – allows each person to figure out how much of each food group to eat to obtain the right amounts of energy (calories) and nutrients
- Gradual Improvement – provides steps to help each person make better choices to improve the diet

**Use the Simplicity of MyPlate to Build a Healthful Diet.** To determine how much to eat to maintain weight:

- Step 1: Estimate your daily energy needs using Table 2-3 or the online tool
- Step 2: Build your daily eating plan using the MyPlate plan for your calorie level (Table 2-4)
- Step 3: Let MyPlate guide your food choices on a daily basis

You must learn to recognize appropriate portion sizes in order to follow the eating plan. You should choose primarily nutrient-dense foods from each group and include heart-healthy oils (while avoiding solid fats) in order to ensure nutritional adequacy of the diet without exceeding calorie needs.

**Using MyPlate to Meet Nutrient Needs.** Vitamins, minerals, and fiber come mainly from grains, fruits, vegetables, and dairy (non- or low-fat) groups. Nutrient-dense, low-saturated fat protein foods provide protein, iron, and zinc. Heart-healthy oils provide vitamin E and essential fats.

**Using MyPlate to Moderate Energy Intakes.** Figure 2-8 includes tips for choosing nutrient-dense—rather than energy-dense—foods from each group, such as whole foods, especially plant foods and non-fat dairy.

**Gaining Calorie Control: The Daily Limit for Empty Calories.** If you are able to obtain all essential nutrients without meeting your energy needs, the remnant of your calorie budget is termed the daily limit for empty calories, and may be "spent" on either nutritious foods or empty calories, such as those from added sugars, added fats, foods that are not in their most nutrient-dense form (such as whole milk rather than non-fat milk or sweetened rather than non-sweetened applesauce), or alcohol.

## More Tools for Diet Planning

**Food Labels.** The Nutrition Facts panel of food labels is another important tool you can use to eat healthfully. Food labels help you easily compare similar products. The label provides information about nutrients, addressing present health concerns: calories, calories from fat, total fat, saturated fat, *trans* fat, cholesterol, sodium, total carbohydrate, dietary fiber, sugars, protein, vitamin A, vitamin C, calcium, and iron. Foods carrying nutrient content or health claims must meet strict requirements governing the use of such claims.

**Exchange Lists.** The food exchange lists (originally designed for diabetics) provide a method for making choices within a particular good group. The list describes what a standard serving is and how many servings are contained in the food a person is choosing. The exchange lists allow people to determine how many servings from a group are contained in the food they eat if it does not fit easily into an exact serving size. It is particularly useful for people who are concerned with diet adequacy and caloric content.

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**A Tapestry of Cultures and Cuisines**

The Spotlight feature examines some of the more prevalent food practices in mainstream America to see how they originated and how they fit into a healthful eating plan. Among these cultures and cuisines are Mexican, Chinese, Italian, Indian, African American, and Jewish American.

Many nutrition experts advocate adopting aspects of the Mediterranean diet, in particular: Get daily physical activity and eat an abundance of fruits, vegetables, whole grains, and legumes combined with moderate amounts of dairy products and relatively smaller amounts of meat, poultry, and fish.

## Critical Thinking Questions/Answers[2]

1. Try the healthy snack tips suggested in the Nutrition Action feature. Eat healthy snacks for 3 days and write a meaty paragraph about your experience.

   Answer section: Nutrition Action: Grazer's Guide to Smart Snacking
   Answer should include the types, timing, and amount of snacks eaten and a description of how the person felt—more energy, less hunger, etc.

2. Go to the www.choosemyplate.gov web site and write an evaluation of your diet according to one of the "six key components" that can help you achieve a healthy lifestyle.

   Answer section: Using MyPlate to Achieve a Healthy Lifestyle
   Answer should include data from the evaluator's food consumption and activity log.

3. What are the Institute of Medicine's macronutrient goals for carbohydrate, fat, and protein? Figure out the minimum and maximum grams of each nutrient that would fall within the guidelines for someone on a 2300-calorie diet. Hint: 50 percent would equal 0.5 as a decimal. Show your work.

   Answer section: Figure 2-5: Recommended Dietary Intake Ranges for Energy Nutrients and Figure 1-1: Caloric Values of Carbohydrate, Protein, Fat, and Alcohol

   2300 x 0.45 = 1035 / 4 calories per gram of carbohydrate = 259 grams
   2300 x 0.65 = 1495 / 4 calories per gram of carbohydrate = 374 grams

   2300 x 0.20 = 460 / 9 calories per gram of fat = 51 grams
   2300 x 0.35 = 805 / 9 calories per gram of fat = 89 grams

   2300 x 0.10 = 230 / 4 calories per gram of protein = 57 grams
   2300 x 0.35 = 805 / 4 calories per gram of protein = 201 grams

[2] Contributed by Mary G. Puccini of Houston Community College; revised by Tania Rivera of Florida International University

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4. Go to Appendix E: Table of Food Composition and use milligrams of calcium per calorie data to find the most nutrient-dense selection among the following half-cup servings: 1% cottage cheese, chocolate ice cream, vanilla pudding, and low-fat yogurt. Note: Nutrient density is the ratio of the amount of a nutrient over the number of calories in a portion of food. Answer section: Figure 2-2: Nutrient Density of Selected Beverages and Appendix E: Table of Food Composition

   Calcium mg/ half-cup serving

| | | |
|---|---|---|
| 1% cottage cheese | 69 mg/81 calories = 0.85 | #3 |
| Chocolate ice cream | 72 mg/143 calories = 0.50 | #4 |
| Vanilla pudding | 133 mg/116 calories = 1.14 | #2 |
| Low-fat yogurt | 224 mg/77 calories = 2.91 | #1 |

5. Go to the www.choosemyplate.gov website and select the "Tips & Resources" link under the left "Subjects" menu. Go through the various tips, determine which ones you could easily implement in your own diet, and explain how.

   Answer section: Introducing the MyPlate Diet-Planning Tool and www.choosemyplate.gov website
   Answers will vary. An example would be: I could substitute whole-grain bread for white bread.

6. Take a detailed look at Figure 2-10 Making the Most of Your Personal Food Plan and create a healthy one-day menu.

   Answers will vary. Students should choose the healthier options (bright green vegetables, non-fat milk products, etc.) from each group.

7. How can you increase your daily limit for empty calories?

   Answer section: Gaining Calorie Control: The Daily Limit for Empty Calories
   The daily limit for empty calories is a small percentage of one's total calorie need, generally less than 15 percent. To increase your limit, you could increase your total calorie needs, most likely by exercising more. In this way, the 15 percent of the now higher total calories would yield a higher empty calorie number.

8. Why can eating healthfully be as simple as eating a colorful diet?

   Answer Section: Eat Well Be Well: Color Your Plate for Health with a Variety of Fruits and Vegetables
   The most colorful foods in the diet are those from the plant kingdom, namely fruits and vegetables. Plant foods tend to be nutrient dense and provide many nutrients—vitamins and minerals—for few calories. Plant foods also have the bonus of containing non-nutrient phytochemicals that have beneficial health effects. The more colorful and pungent the food, the greater the benefits that are offered.

9. Is it appropriate for you to use the percent Daily Value information on food labels to determine if you, personally, are receiving enough of a particular nutrient?

   Answer Section: Using the Percent Daily Values (% DV)
   No; the Daily Value (DV) is based on a 2000-calorie reference diet. Your personal calorie needs are likely to be different from the 2000 calorie reference. Nutrient standards used for the DVs use the highest of all values listed in the DRIs. The DV is also used to compare similar food products for nutrient content.

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10. Low-fat 2% milk is 98 percent fat-free. Does this mean that 2 percent of the calories in a cup of milk come from fat?

    Answer Section: Table 2-7: Definitions of Nutrient Content Claims
    No; the 2% indicates that 2 percent of the weight of that product (2 grams out of 100) comes from fat, not 2 percent of the calories.

11. Considering that grains naturally contain vitamins and minerals, why are specific vitamins and minerals listed in the ingredient section on a box of cereal?

    Answer Section: Food Labels and Using the Nutrition Facts Panel
    The ingredients section lists all ingredients added to the product. The vitamins and minerals listed must come from the fortified grains used in the cereal.

## Points to Consider

**PTC 2-1: Nutrient Density**

Most Americans think of nutritional imbalance in terms of deficiencies. However, in America, over-abundance is much more often associated with nutritional problems (imbalance). This is especially true for calories and certain classes of nutrients (e.g., fats, simple carbohydrates, and some vitamins). The concept of nutrient density is a key factor for maintaining proper, overall nutritional balance.

Additionally, it is vital for weight control. Perhaps one of the most important concepts for students to understand is nutrient density and how it provides adequacy to the diet while helping to control calories. If students are presented (and understand) the information on how to make the most nutrient-dense choices, their diets are very likely to improve and weight control becomes much easier (especially as they age).

**PTC 2-2: Individuality in Nutritional Needs**

Dietary recommendations from both the MyPlate and the five basic food groups fit the majority of people following the guidelines. However, not everyone's response will be the same. Therefore, although most people will do well following the guidelines' advice, some experimentation on the part of each person should be encouraged.

Some people may do better by consuming more fat or protein than is generally recommended. Conversely, some people should eat considerably less than is normally recommended. Students should be encouraged to be aware of how they are feeling (tired or energetic), whether they are gaining or losing weight, and how things like blood cholesterol, blood pressure, etc., are responding to their diet.

The diet, of course, must insure adequacy for all the essential nutrients. However, that can be accomplished in many different ways. The DRI macronutrients recommendations (45-65 percent carbohydrates, 20-35 percent fat, and 10-35 percent protein) provide a tremendously wide range for variability. Therefore, some experimentation to find the "best" diet for that individual should be encouraged. This is especially true if students are trying to initiate some changes (e.g., lose weight, lower cholesterol, etc.).

**PTC 2-3: The MyPlate Diet Planning Tool**

The MyPlate diet planning tool is a return to the basic five group plan put onto a plate in respective amounts. The new idea is to give consumers a more realistic "vision" of the eating recommendations. It should be easier to explain than its predecessor, MyPyramid.

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**PTC 2-4: Portion Sizes Within Each Food Group** (Coupled with SA 2-2)
Many (most) students are aware of the recommended quantities of food from each food group. However, whenever recommendations are stated in terms of "servings," a frequent problem arises: What exactly is a "serving"?

Careful attention should be paid to insuring that students understand that most recommended "servings" are probably much smaller than a standard portion. For instance, when students realize that one average bagel represents 3 or even 4 grain servings (and not "one"), they are almost always surprised and sometimes shocked. If they are truly made to appreciate what a recommended serving is (e.g., 3 ounces of meat), it helps them understand that the recommended number of servings from each group is really not all that difficult or daunting a task to achieve.

Fortunately, the current USDA Food Guide/MyPlate states recommended quantities in terms of common measures such as cups and ounces rather than servings. Students should be encouraged to pay attention to the weights or volumes on food packages and to use measuring cups and spoons when trying to track their diets to help them better visualize and assess portion sizes. This is especially important when attempting to practice calorie control.

**PTC 2-5: Changes to *Dietary Guidelines for Americans* 2010 (Compared to 2005)**
The new emphasis for 2010 places weight management at the top of the list (consistent with chapter emphasis). Additionally, the recommendations take on a new look—talking about foods to reduce and others to encourage. Lastly, they include a recommendation on *Building Healthy Eating Patterns*, again with the main emphasis on caloric balancing.

**PTC 2-6: Meeting Dietary Recommendations** (Positive connection to SA 2-2)
Figure 2-12 presents a very impactful teaching moment. The bar graph shows how well (in reality not well) Americans are doing in meeting the dietary recommendations. When addressing students and their diets, this chart makes an excellent starting point for suggesting changes to the average diet. It shows how poorly we are doing in terms of both the dietary components we need to increase and those we need to reduce. This figure makes an excellent tool for recommendations for positive dietary changes. Students can easily see how poorly the average American eats compared to the "better" recommended diet.

## Suggested Activities

**Suggested Activity 2-1: Nutrient Density**
The concept of nutrient density sometimes eludes students, yet it is critical for an adequate, calorically-balanced diet. A good way to demonstrate nutrient density is to provide examples of foods with similar caloric value but different nutrient density. (Excellent examples include: a whole potato vs. potato chips, whole vs. non-fat milk, soda vs. orange juice, shredded wheat vs. frosted flakes.) This will graphically demonstrate size (portion) differences for similar calories. This usually works best when comparing less-nutrient-dense to more-nutrient-dense foods (e.g., 200 calories of potato chips vs. 200 calories from a whole potato). Table 2-2: "Snack Ideas from Each Food Group" provides examples of a variety of snacks from different food groups.

**Suggested Activity 2-2: Dietary Analysis**
It is well known that during a three- or even one-day dietary recall, many inaccuracies or omissions occur (either deliberately or accidentally). Additionally, when people are asked to write down what they eat, knowing that they (or someone) will be analyzing those choices, they often make "better" choices to avoid embarrassment or criticism (especially students in a nutrition class). However, doing a self-dietary analysis is more likely to produce an accurate picture of a person's usual food choices.

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**Activity:** (This is a great before and after activity - beginning vs. end of the class)

Have each student write down, as accurately as possible, what foods they consumed (both type and portion sizes) for three days.

Have them either use software provided with the text or some online database to analyze their diet for calories, amount, and percent macro- and micronutrients, etc.

Inform them that they will be the only ones to see this information. This is more likely to produce accurate reporting.

Suggest that they hang on to the results so that (when the exercise is repeated toward the end of the term) they can see if they have made changes (when necessary) as a result of what they learned in the class.

**Suggested Activity 2-3: Nutrition Labels, Serving Sizes**

Ask each student to bring to class three or four nutrition labels from foods they regularly consume. Have them compare a serving size from the label to what they normally consume.

1. Do the suggested serving sizes match their serving (the portion size they normally eat)?
2. Do they consume more or less than the manufacturer "suggests"?
3. After this exercise, ask the students on their opinions concerning the manufacturer's serving size. Do they feel that it is accurate, reasonable, misleading?
4. Why do they think the manufacturer picked that particular serving size?

In most cases, the FDA determines what a serving size is. However, the intent of this exercise is to see if students are making the same serving size choices. For instance, a serving of ready-to-eat breakfast cereal is one ounce (as stated on the label). However, most people have a "bowl" of cereal, which may range from one to four ounces, but consider it "one" serving. Another good example is ice cream. A "serving" is stated at ½ cup on the label, but the average portion size in America is almost one and a half cups—nearly three servings!!!

**Suggested Activity 2-4: Fat-Free Foods**

Many students think that fat-free foods are also low-calorie foods. This is especially true for snack foods and desserts. Have each student find at least one example of a fat-free snack or dessert and a "regular"–fat, similar product. Have them compare serving size, calories, and nutrients from each product to see if the fat-free choice is actually "better," more nutritious, and/or lower in calories (some foods may actually be much better while others just have less fat but even more calories). This is an excellent time to talk about reading nutrition labels and how to use the information to make the best choice based on overall nutrient and calorie needs.

**Suggested Activity 2-5: Nutrient Content Food Claims**

More and more food packages are (legally) making nutrient content claims (low in fat, high in fiber, etc.). However, one nutrient content claim doesn't necessarily make that food a healthful choice.

Have each student find at least three food packages (they can write the information down rather than having to purchase them) with nutrient content claims, using Table 2-7 as a guide. They should have all the package's included nutrition information available for class discussion (i.e., amount and type of fat, sugar, fiber, sodium, etc.).

Have the class discuss the relative merits of a particular nutrient claim compared to the other nutritional information on the label.

For instance, a food may claim to be low or very low fat but provide 900 to 1,000 mg of sodium per serving.

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**Questions:**
1. Does a nutrition content claim guarantee that this particular food is a healthful choice?
2. Would this particular nutrient content claim influence them to buy this product? Why or why not?
3. Are health claims (which relate dietary choices with disease risk) more or less useful when making food choices, as compared with nutrient content claims?

**Suggested Activity 2-6: Ethnic Cuisine**

Assign each student randomly to a group that will discuss a separate "ethnic" diet (like Asian, Mexican, kosher, etc.). Have them discuss their own experiences with this type of food.

1. Have them (try to) identify some nutrient-dense choices and some less-healthful choices.
2. Have them discuss which choices they like and why.
3. Are they adverse to trying the more healthful choices? Why or why not?
4. If they more often choose the less healthful choices, have them discuss why.

This is a good time to discuss restaurant dining.

## Recipes[3]

**Recipe 2-1: Chunky Salsa**

5 large tomatoes, diced
1 large onion, chopped
1 garlic head, minced
1 bunch cilantro, chopped
8 jalapeño peppers, seeded and minced
8 yellow chili peppers, seeded and minced
1 can (15 oz.) tomato sauce
2 tablespoons lime juice
¼ cup white vinegar
Salt to taste

Mix all ingredients well, cover, and chill for several hours. Serves 36.

**Recipe 2-2: Health Slaw**

4 cups green cabbage, finely shredded
2 cups red cabbage, finely shredded
¾ cup carrots, shredded
3 tablespoons green onions, sliced
¼ cup low-fat mayonnaise
¼ cup plain yogurt
2 tablespoons white vinegar
2 teaspoons sugar
1 teaspoon celery seed
½ teaspoon pepper

Combine the first four ingredients and set aside. Combine the remaining ingredients, and add to the shredded vegetables, mixing well. Cover and chill for several hours before serving. Serves 6.

[3] Contributed by Elizabeth Morton of the University of South Carolina

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**Recipe 2-3: Tropical Chicken**

2 teaspoons low-fat margarine, melted
¼ cup honey
¼ cup lime juice
¼ teaspoon ground nutmeg
1/8 teaspoon ground cinnamon
Dash of ground allspice
Dash of ground ginger
4 chicken breasts, skinless and boneless
1 fresh papaya, peeled, seeded, and sliced

In a bowl, mix margarine and next 6 ingredients. Place chicken in a non-metal pan and cover with the honey mixture.

**Oven:** Preheat oven to 350° F. Cover pan with foil and bake for 35 minutes or until the chicken is tender. Remove foil and place papaya strips over the top of the chicken. Return the foil cover and bake for an additional 5 minutes.

**Microwave:** Cover pan with plastic wrap (fold back one corner). Microwave at high for 5 minutes, turn the dish, and cook for 5 more minutes, or until the chicken is tender. Add the papaya strips over the top of the chicken, cover with plastic wrap, and microwave at high for 2 minutes. Serves 4.

**Recipe 2-4: Marinated Asparagus**

1 pound fresh asparagus
2 green onions, finely chopped
1/3 cup fat-free Italian salad dressing
1 jar diced pimentos, drained
¼ teaspoon salt
¼ teaspoon pepper

Remove tough ends of asparagus and clean the outer skin using a vegetable peeler. Place asparagus in a small amount of boiling water for 5 minutes or until crisp-tender; drain. Plunge the asparagus into ice water; drain and place in a container. Combine the remaining ingredients and pour over the asparagus. Cover the container, place in the refrigerator, and chill for 3 hours or more. Serves 4.

**Recipe 2-5: Kiwifruit Salad**

8 kiwifruits, peeled and sliced
1 cup seedless red grapes
½ cup strawberries, sliced
1 can (15 oz.) Mandarin oranges, drained
1 cup vanilla yogurt
1 tablespoon frozen orange juice concentrate
1 tablespoon honey
1 teaspoon vanilla extract

Combine all fruit in one bowl; in a separate bowl, whisk together the remaining ingredients. Spoon yogurt mixture over fruit and serve immediately. Serves 6.

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# Review Worksheet[4] for *Personal Nutrition* 9e
# Chapter 2 – The Pursuit of a Healthy Diet

| The ABCs of Eating for Health | |
|---|---|
| Identify the **five** diet planning principles also known as the ABCs of eating for health. | 1.<br>2.<br>3.<br>4.<br>5. |
| Identify **three** nutrient-dense foods: | 1.<br>2.<br>3. |
| **The Dietary Reference Intakes (DRI)** | |
| Use the **Dietary Reference Intake (DRI)** tables from your textbook (inside front cover) to determine nutrient needs for the following: | A 19-year old male needs _____ mg/day of vitamin C.<br>A 19-year old female needs _____ mg/day of vitamin C.<br>A 31-year-old male needs _____ mg/day of iron.<br>A 31-year-old female needs _____ mg/day of iron.<br>At 25 years of age, both males and females need _____ mg/day of calcium. |
| Discuss the differences between the **Recommended Dietary Allowance (RDA)** and the **Tolerable Upper Intake Level (UL)**. | |
| The **Dietary Reference Intakes (DRI)** allows ranges for the energy nutrients. Identify the ranges: | Carbohydrate: _____ to _____ percent of total calories.<br>Fats: _____ to _____ percent of total calories.<br>Protein: _____ to _____ percent of total calories. |

[4] By Charalee Allen of Cincinnati State Technical and Community College

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| Dietary Guidelines | |
|---|---|
| The ***Dietary Guidelines for Americans*** provide science-based advice to promote health and reduce risk for chronic diseases through diet and physical activity. Discuss **four** topics (or focus areas) from the *Dietary Guidelines*. | 1.<br>2.<br>3.<br>4. |
| **MyPlate Food Guidance System** | |
| Identify **six** key components of health and diet emphasized in **MyPlate**. | 1.<br>2.<br>3.<br>4.<br>5.<br>6. |
| Use the food groups from **MyPlate** to determine the correct food group for each food listed. | Spaghetti belongs in the _____ group.<br>Peanuts belong in the _____ group.<br>Yogurt belongs in the _____ group.<br>Low-fat mayonnaise belongs in the _____ group.<br>Watermelon belongs in the _____ group.<br>Eggs belong in the _____ group.<br>Raw carrots belong in the _____ group. |

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<table>
<tr><td>Use MyPlate to determine the correct equivalent amounts for the foods listed:</td><td><u>Given Menu</u>:<br>1 cup orange juice (100%)<br>½ English muffin<br>1 tsp soft margarine<br>1 medium banana<br>1 poached egg</td><td><u>Identify Food Groups Consumed</u>:<br>_____ Grains Group (oz.)<br>_____ Vegetables Group (c.)<br>_____ Fruits Group (c.)<br>_____ Dairy Group (c.)<br>_____ Protein Foods Group (oz.)<br>_____ Oils Group (tsp.)</td></tr>
<tr><td>Use MyPlate to determine the correct equivalent amounts for the foods listed:</td><td><u>Given Menu</u>:<br>2 cups raw leafy greens<br>1 cup vegetables (tomato, cucumber, radish, celery)<br>1/3 cup shredded cheese<br>2 ounces diced ham<br>4 Tbsp. light salad dressing<br>1 mini bagel<br>1 medium banana</td><td><u>Identify Food Groups Consumed</u>:<br>_____ Grains Group (oz.)<br>_____ Vegetables Group (c.)<br>_____ Fruits Group (c.)<br>_____ Dairy Group (c.)<br>_____ Protein Foods Group (oz.)<br>_____ Oils Group (tsp.)</td></tr>
<tr><td>How may your daily limit for empty calories be used? Give examples of foods that would contribute empty calories.</td><td colspan="2"></td></tr>
<tr><td colspan="3">Food Labels</td></tr>
<tr><td>An ingredients list provides a listing of ingredients in descending order by weight. Please explain what this means. How can this be useful?</td><td colspan="2"></td></tr>
</table>

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| | |
|---|---|
| What are **Daily Values (DV)**? How can they be used in a healthful diet? | |
| What are **nutrient content claims**? Give **three** examples: | Examples include:<br>1.<br>2.<br>3. |
| What are **health claims** on food labels? Give **three** examples: | Examples include:<br>1.<br>2.<br>3. |
| Find the **food composition tables** in the appendix of your textbook. Review the food categories. Look up a few foods or beverages that you regularly consume. | How can the **food composition tables** be used to provide information that would be useful to you? |

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**Key to Review Worksheet[5] for *Personal Nutrition* 9e**
**Chapter 2 – The Pursuit of a Healthy Diet**

| **The ABCs of Eating for Health** | |
|---|---|
| Identify the **five** diet planning principles also known as the ABCs of eating for health. | 1. Adequacy<br>2. Balance<br>3. Calorie control<br>4. Moderation<br>5. Variety |
| Identify **three** nutrient-dense foods: | 1. Low-fat milk<br>2. Orange juice<br>3. Egg<br><br>*Note: A wide variety of answers can be expected here.* |
| **The Dietary Reference Intakes (DRI)** | |
| Use the **Dietary Reference Intake (DRI)** tables from your textbook (inside front cover) to determine nutrient needs for the following: | A 19-year old male needs 90 mg/day of vitamin C.<br>A 19-year old female needs 75 mg/day of vitamin C.<br>A 31-year-old male needs 8 mg/day of iron.<br>A 31-year-old female needs 18 mg/day of iron.<br>At 25 years of age, both males and females need 1000 mg/day of calcium. |
| Discuss the differences between the **Recommended Dietary Allowance (RDA)** and the **Tolerable Upper Intake Level (UL)**. | RDA: The average daily amount of a nutrient that is sufficient to meet the nutrient needs of nearly all healthy individuals of a specific age and gender.<br><br>UL: The maximum amount of a nutrient that is unlikely to pose any risk of adverse health effects to most healthy people.<br><br>The RDA is a target for nutritional intake, while the UL is not intended to be a recommended level of intake. |
| The **Dietary Reference Intakes (DRI)** allow ranges for the energy nutrients. Identify the ranges: | Carbohydrate: 45 to 65 percent of total calories.<br>Fats: 20 to 35 percent of total calories.<br>Protein: 10 to 35 percent of total calories. |
| **Dietary Guidelines** | |
| The ***Dietary Guidelines for Americans*** provide science-based advice to promote health and reduce risk for chronic diseases through diet and physical activity. Discuss **four** topics (or focus areas) from the *Dietary Guidelines*. | 1. Balancing calories to manage weight<br>2. Foods and food components to reduce<br>3. Foods and nutrients to increase<br>4. Building healthy eating patterns<br><br>*Note: Discussions shall relate to the recommendations provided in Table 2-1, Key Recommendations of the Dietary Guidelines for Americans.* |
| **MyPlate Food Guidance System** | |
| Identify **six** key components of health and diet emphasized in **MyPlate** | 1. Activity<br>2. Variety<br>3. Proportionality<br>4. Moderation<br>5. Personalization<br>6. Gradual improvement |

[5] By Charalee Allen of Cincinnati State Technical and Community College

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<table>
<tr><td>Use the food groups from MyPlate to determine the correct food group for each food listed.</td><td colspan="2">Spaghetti belongs in the <u>grains</u> group.<br>Peanuts belong in the <u>protein foods</u> group.<br>Yogurt belongs in the <u>dairy</u> group.<br>Low-fat mayonnaise belongs in the <u>oils</u> group.<br>Watermelon belongs in the <u>fruits</u> group.<br>Eggs belong in the <u>protein foods</u> group.<br>Raw carrots belong in the <u>vegetables</u> group.</td></tr>
<tr><td>Use MyPlate to determine the correct equivalent amounts for the foods listed:</td><td><u>Given Menu</u>:<br>1 cup orange juice (100%)<br>½ English muffin<br>1 tsp soft margarine<br>1 medium banana<br>1 poached egg</td><td><u>Identify Food Groups Consumed</u>:<br><u>1</u> Grains Group (oz.)<br><u>0</u> Vegetables Group (c.)<br><u>1 ½</u> Fruits Group (c.)<br><u>1</u> Dairy Group (c.)<br><u>1</u> Protein Foods Group (oz.)<br><u>1</u> Oils Group (tsp.)</td></tr>
<tr><td>Use MyPlate to determine the correct equivalent amounts for the foods listed:</td><td><u>Given Menu</u>:<br>2 cups raw leafy greens<br>1 cup vegetables (tomato, cucumber, radish, celery)<br>1/3 cup shredded cheese<br>2 ounces diced ham<br>4 Tbsp. light salad dressing<br>1 mini bagel<br>1 medium banana</td><td><u>Identify Food Groups Consumed</u>:<br><u>1</u> Grains Group (oz.)<br><u>2</u> Vegetables Group (c.)<br><u>½</u> Fruits Group (c.)<br><u>1</u> Dairy Group (c.)<br><u>2</u> Protein Foods Group (oz.)<br><u>2</u> Oils Group (tsp.)</td></tr>
<tr><td>How may your daily limit for empty calories be used? Give examples of foods that would contribute empty calories.</td><td colspan="2">In a 2000-calorie diet, there is a 260-calorie daily limit for empty calories. These calories may be used to increase intake from basic food groups, to select foods that contain solid fats and/or added sugars, to add fats or sugars to foods, or to consume foods providing only fats, sugars, or alcohol. Examples are:<br>• Full-fat cheese<br>• Sweetened cereals<br>• Wine<br>• Syrup</td></tr>
<tr><td colspan="3">Food Labels</td></tr>
<tr><td>An ingredients list provides a listing of ingredients in descending order by weight. Please explain what this means. How can this be useful?</td><td colspan="2">The first ingredient listed makes up the largest proportion of all ingredients listed. The second ingredient contains the second-greatest amount, and so forth.<br>• The ingredients list can be used to identify added sugars and fats in a food (to avoid them).<br>• The ingredients list can be used to identify ingredients that a person may wish to add to their diet (e.g., whole grains).<br>• A person with a food allergy or other medical concern can use the food label to find all the ingredients that may cause them adverse reactions.</td></tr>
<tr><td>What are Daily Values (DV)? How can they be used in a healthful diet?</td><td colspan="2">Daily Value: The amount of fat, sodium, fiber, and other nutrients that health experts say should make up a healthful diet.<br>• Use the Daily Values (DV) to get a good idea of how various foods fit into a healthful diet.<br>• Use the Daily Values (DV) to comparison shop.</td></tr>
</table>

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| | |
|---|---|
| What are **nutrient content claims**? Give **three** examples: | A statement on a food label about the food's nutritional profile. By law, foods must adhere to specific definitions as specified by the Food and Drug Administration.<br><br>Examples include:<br>1. Low fat<br>2. High or excellent source of a nutrient<br>3. Healthy<br><br>*Note: A wide variety of responses are possible. Please see Table 2-7, Definitions of Nutrient Content Claims.* |
| What are **health claims** on food labels? Give **three** examples: | A statement on the food label linking the nutritional profile of a food to reduced risk of a particular disease.<br><br>Examples include:<br>1. Calcium-rich food and reduced risk of osteoporosis<br>2. Low-fat foods and reduced risk of cancer<br>3. Soy protein and reduced risk of heart disease<br><br>*Note: A wide variety of responses are possible. Please see Table 2-8, Health Claims on Food Labels.* |
| Find the **food composition tables** in the appendix of your textbook. Review the food categories. Look up a few foods or beverages that you regularly consume. | How can the **food composition tables** be used to provide information that would be useful to you?<br><br>• Find amounts of specific nutrients in the foods consumed<br>• Find content of nutrients by cooking methods<br>• Compare nutrient content of various foods<br>• Generate a list of nutrients consumed per day<br>• Generate lists of foods that are high or low in certain specified nutrients (e.g., calcium and sodium) |

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# Internet Exercise Worksheet for *Personal Nutrition* 9e
# Chapter 2 – The Pursuit of a Healthy Diet

| Name: | Point Value: |
|---|---|
| Due Date: | Points Earned: |

**Overview:**

ChooseMyPlate.gov is an interactive website that includes resources and tools to assist people in making healthier food choices. In this exercise, you will explore this site and consider what you might choose as a healthy eating plan.

**Part 1**

**Directions:**

1. Access the web site at: www.ChooseMyPlate.gov.
2. Answer the questions below while reviewing the various pages on the site.

**Multiple Choice**

1) The MyPlate website contains information about _____.
   a) the food industry
   b) cancer and heart disease
   c) medical nutrition therapy
   d) nutrition education and physical activity

2) The MyPlate model recommends that fruits and vegetables should comprise _____ of the plate at mealtimes.
   a) one-quarter
   b) one-third
   c) one-half
   d) three-fourths

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3) Visit the page, Physical Activity > Why is Physical Activity Important (http://www.choosemyplate.gov/physical-activity/why.html). Which activity is most likely to enhance physical stability and flexibility?
a) martial arts
b) push-ups
c) lifting weights
d) jumping

4) When participating in _____ activities, you can only say a few words without stopping to catch your breath.
a) balance and stretching
b) bone-strengthening
c) vigorous aerobic
d) moderate aerobic

5) Check out the Portion Distortion II Interactive Quiz (http://hp2010.nhlbihin.net/portion/portion2.cgi?action=question&number=2). Compare a blueberry muffin (1.5 ounces) 20 years ago to today's serving portion of a blueberry muffin. How many additional calories are in today's blueberry muffin?
a) 250 calories
b) 320 calories
c) 400 calories
d) 425 calories

**Part 2**

**Directions:** Return to the home page: www.ChooseMyPlate.gov.

**True/False**

6) MyPlate lacks information for vegetarians.
True
False

7) MyPlate provides nutrition education, but no recipes or cookbooks.
True
False

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**Part 3**

**Directions:**

From the home page, click on SuperTracker and click Create Your Profile (https://www.supertracker.usda.gov/createprofile.aspx). Complete step 1 (Personalize Your Profile) and step 2 (Register to Save Your Profile). (Note: An email address entry is not required.) Click the Submit button (Step 3) to obtain your results. You may be asked to choose a plan to maintain your weight or to move to a healthier weight.

**Multiple Choice**

8) Within SuperTracker, which of these tools are you most interested in trying first?
a. My Weight Manager
b. Food Tracker
c. Physical Activity Tracker
d. My Top 5 Goals

9) Visit the My Plan web page (https://www.supertracker.usda.gov/myplan.aspx).
Do you think you can maintain the plan that was recommended for you?
Yes
No

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**Key to Internet Exercise Worksheet for *Personal Nutrition* 9e**
**Chapter 2 – The Pursuit of a Healthy Diet**

1) d
2) c
3) a
4) c
5) b
6) False
7) False
8) all answers are correct
9) all answers are correct

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# Chapter 2 Word Find Puzzle[6] for *Personal Nutrition* 9e

A W H I N L E M Y P G U I T S A B R G
I E N T L U Y L W R P E V L E R A T S
E D I N V E T O N O O O I N T E L A A
L L R M O D E R A T I O N T R E A D T
J A G U R S B T I E I S T I A L N L U
M T G U T I T N A I R M I S N T C A R
S O D I U M S O T N T S U R S E E L A
K T U W D M U C Y F B C E L E A R N T
I R N G I A O E V O L E O T P H E V E
F B E E R E I I T O L E E N O S T A D
W E H N I D A R T D N A C E T W I R H
M H E A L T H O Y S K R A K A E E I T
H E S E A I T L F E E L M F S R N E E
E R H A P P I A N E S S D I S S A T W
A A D E Q U A C Y R M G R A I N S Y P
U P P A Y T O L L U L B R I U D G E H
V E G E T A B L E S D Y N C M I L K J
R A N U T R I E N T C O N T E N T H V

**Instructions:** In the grid above, find the following words or phrases, and then write them beside each clue.

- Five key healthy diet principles:
- Six sets of values included in the Dietary Reference Intakes (abbreviations):
- Two minerals specifically addressed by the *Dietary Guidelines for Americans*:
- Five types of foods represented by different colors in MyPlate:
- Three types of fat values that must appear in the Nutrition Facts panel, stated in grams:
- Two types of claims that may legally appear on food labels:

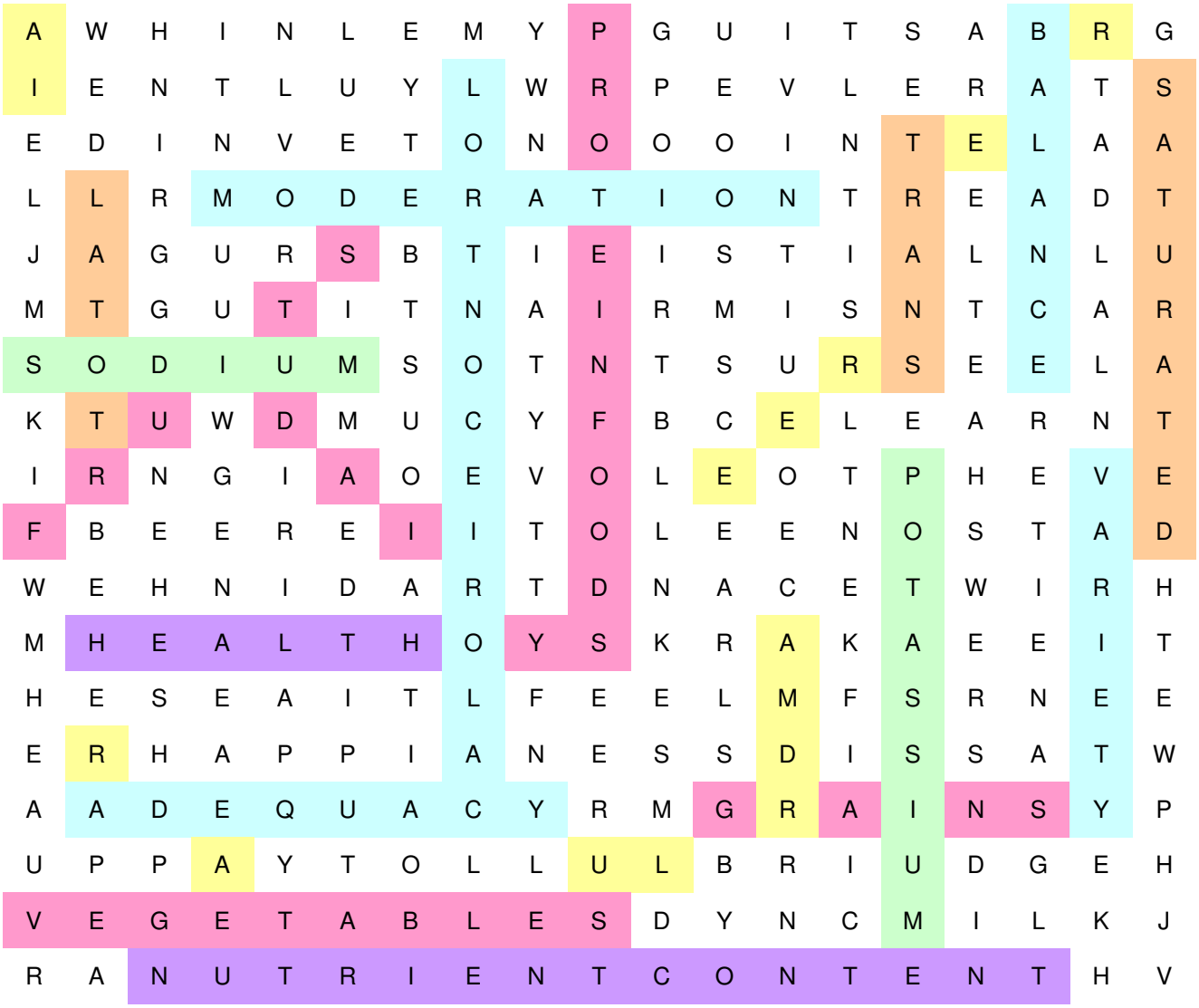
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[6] Contributed by Elesha Feldman

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# Key to Chapter 2 Word Find Puzzle for *Personal Nutrition* 9e




- Five key healthy diet principles: adequacy, balance, calorie control, moderation, variety
- Six sets of values included in the Dietary Reference Intakes (abbreviations): EAR, RDA, AI, UL, EER, AMDR
- Two minerals specifically addressed by the *Dietary Guidelines for Americans*: sodium, potassium
- Five types of foods represented by different colors in MyPlate: grains, vegetables, fruits, dairy, protein foods
- Three types of fat values that must appear in the Nutrition Facts panel, stated in grams: total, saturated, *trans*
- Two types of claims that may legally appear on food labels: nutrient content, health

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