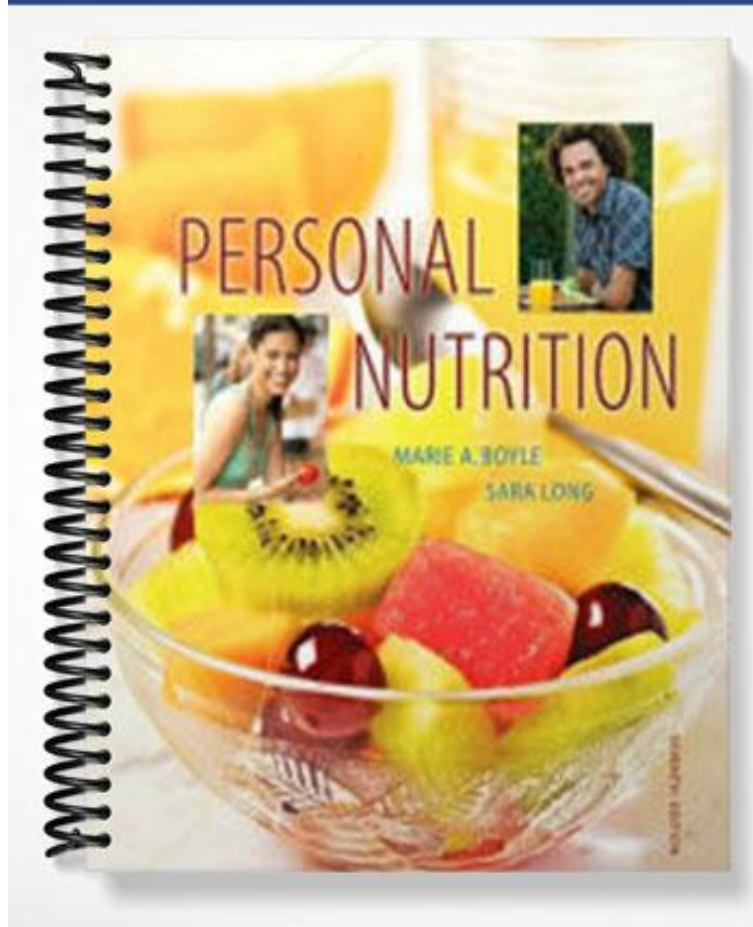


SOLUTIONS MANUAL



Instructor's Manual¹ for *Personal Nutrition 7e*

Chapter 2 – The Pursuit of a Healthy Diet

Student Learning Objectives

1. Apply the principles adequacy, balance, calorie control, moderation, and variety in basic diet planning.
2. Distinguish among the EAR, RDA, AI, and UL.
3. List the *Dietary Guidelines for Americans* that make suggestions specifically about food choices.
4. Explain how the MyPyramid/the USDA Food Guide incorporate the principles of diet planning to help consumers make healthful meal and activity choices.
5. Recognize that fats and refined sugars can be obtained from almost any food group and that both the types and amounts of fats should be carefully controlled in order to eat a healthful diet.
6. Explain how you would determine the percent Daily Value for carbohydrates, fats and protein for a person on a 3000-calories-a-day diet.
7. Distinguish between a nutritional claim and a health claim on a food product label.
8. Use the food composition tables in the appendix to determine: calories and grams of carbohydrates, fats, and protein for a serving of a particular meal (e.g., 3 oz. cooked kidney beans, one half cup brown rice, one cup of broccoli, 12-oz. glass non-fat milk, and 4 oz. skinless chicken breast).

Chapter Summary

The ABCs of Eating for Health

Six concepts to remember when planning a healthy diet include 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:

- Adequate nutrients within energy needs
- Weight management
- Physical activity
- Food groups to encourage – fruits, vegetables, whole grains, and nonfat/low-fat dairy

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

- Fats – moderate fat intake from polyunsaturated and monounsaturated sources; restriction of saturated fat, *trans* fat, and cholesterol
- Carbohydrates – high fiber and low added sugars intakes
- Sodium and potassium – low sodium and high potassium intakes
- Alcoholic beverages – moderation
- Food safety

Introducing the MyPyramid Diet-Planning Tool

USDA's MyPyramid incorporates the principles of wise diet planning—adequacy, balance, 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.

Use the Power of the Pyramid to Achieve a Healthy Lifestyle

The new MyPyramid emphasizes healthful choices designed to fit more easily into the personal dietary choices of all people who use the pyramid. Unlike the previous pyramid, the MyPyramid emphasizes six components of health and diet. These include:

- Activity (previously not included at all in the pyramid),
- Variety – be sure to include a variety of groups as well as a variety of choices within each group,
- Proportionality – some groups should provide more foods to the diet than others,
- Moderation – tries to delineate between more and less nutrient-dense choices within each group,
- Personalization – allows each person to figure out what choices within each group fit his/her personal tastes, and
- Gradual Improvement – provides steps to help each person make better choices to improve the diet.

Use the Power of the Pyramid to Build a Healthy Diet

To determine how much to eat to maintain weight:

- Step 1: Estimate your daily energy needs using Table 2-4 or the online tool
- Step 2: Build your daily eating plan using the MyPyramid plan for your calorie level (Table 2-5)
- Step 3: Let the pyramid 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.

If you are able to obtain all essential nutrients without meeting your energy needs, the remnant of your calorie budget is termed the discretionary calorie allowance, and may be "spent" on either nutritious foods, 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 rules governing the use of such claims.

Exchange Lists. The food exchange (originally designed for diabetics) provides a method for use in making choices within a particular food group. The list describes what a standard

serving is and how many servings are contained in the food a person is choosing. The exchange list allows 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.

Food Composition Tables. In the rear of the book (Appendix) are several tables of food composition including amounts, calories, nutrients, and grams of carbohydrates (and fiber), fats, protein, etc. These tables enable students to calculate the calories and nutrients in the food they consume in order to help determine if their diets meet the guidelines for a nutritious diet or if the choices they are making are the most healthful.

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.

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: 5th ed. TRA 6; PTC 2-1; Suggested Activity 2-1

- A. When planning a diet, try to make sure it follows these diet planning principles:
 1. Adequacy - iron is an essential nutrient that your body loses daily and must replace continually via iron-rich foods.
 2. Balance - calcium plays a vital role in building a strong frame that can withstand the gradual loss of bone that occurs with age.
 3. Calorie control - to maintain a desirable weight, energy intakes should not exceed energy needs.
 4. Moderation - 80/20 rule: eat low-fat, nutrient-dense foods at least 80% of the time, and you're not likely to harm your health if you splurge the remaining 20% of the time.
 5. 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: 5th ed. TRA 8-11; PTC 2-2

- Knowing that foods have different combinations of nutrients, it is hard to tell if one is getting the right balance.
 - A. The Dietary Reference Intakes (DRI)
 - 1. DRI are a set of daily nutrient standards based on the latest scientific evidence regarding diet and health.
 - a. DRI estimate the energy and nutrient needs of healthy people.
 - b. Separate recommendations are made for different groups of people.
 - c. The DRI are recommendations that apply to average daily intakes.
 - d. DRI may evolve over time as new scientific evidence indicates a need for re-evaluation.
 - B. The DRI 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 DRI, a requirement must be determined—the amount of a nutrient that is necessary to prevent deficiency for the average healthy person.
 - a. To determine DRI 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.
 - C. The DRI for Energy and the Energy Nutrients
 - 1. Carbohydrate: 45%-65% of total calories.
 - 2. Fat: 20%-35% of total calories.
 - 3. Protein: 10%-35% 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.

III. The Challenge of Dietary Guidelines

Key term: lifestyle diseases

Resource: 6th ed. TRA 1

- A. *Dietary Guidelines for Americans* or *Nutrition Recommendations for Canadians* are among recommendations to help people decrease their risk of lifestyle diseases.
- B. The *Dietary Guidelines for Americans* promote healthy lifestyles and diets.
- C. The goal of the recommendations is to help people decrease their risk for lifestyle diseases.

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

Key term: grazing

Resource: ABC video clip on Power Lecture: "Choosing Nutrient-Dense Snacks"

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.
3. Key to healthful snacking: choose foods that are low in fat, high in fiber, and nutrient dense.
4. 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).
5. 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.

V. Introducing the MyPyramid Diet-Planning Tool

Key terms: food group plan, servings

Resources: 6th ed. TRA 2, PTC 2-3; ABC video clips on Power Lecture: "Food Pyramid: New Dietary Guidelines," "New Food Pyramid: How to Shop"

- A. Use "My Pyramid" to gain a healthier you.
- B. My Pyramid 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. Use the Power of the Pyramid to Achieve a Healthy Lifestyle
 1. The pyramid aims to help people reduce often over-consumed nutrients like saturated and *trans* fats, sugar, sodium, and alcohol.
 2. The MyPyramid 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 fats and 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 Power of the Pyramid to Build a Healthful Diet

Key term: Estimated Energy Requirement

Resources: 6th ed. TRA 3, 4; 5th ed. TRA 15; Suggested Activity 2-2; Scorecard: Rate Your Plate

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 the pyramid guide your food choices. Use the pyramid 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. The pyramid provides a starting point to develop healthful eating patterns while allowing for personal preferences.
 - 3. Make choices from each group in the pyramid.
- E. Using the Pyramid to Meet Nutrient Needs
- F. Using the Pyramid to Moderate Energy Intake
 - 1. Following the pyramid 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 Discretionary Calorie Allowance
 - 1. Build your diet from the pyramid choosing nutrient-dense foods, low in fat and sugar.
 - 2. This strategy may provide discretionary calories.
 - 3. Although small (100-300 calories), discretionary 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.

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

Resource: 5th ed. TRA 15, PTC 2-4

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

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

Key terms: phytochemicals, antioxidant nutrients

Resource: 5th ed. TRA 78

- 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: 5th ed. TA 19; Suggested Activities 2-3, 2-4, 2-5; ABC video clip on Power Lecture: "Are Food Labels Accurate?"

- 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.
 - By law, labels must contain: name of food, name of manufacturer, net quantity, ingredient list, and Nutrition Facts panel.
 - The ingredient list lists items in descending order of weight.
1. Nutrition Facts Panel
 - a. It must indicate amounts of certain mandatory nutrients that one serving of the food contains.
 - b. 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.
 - c. 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).
 - d. Ranking of required nutrients ensures that the label reflects the government's dietary priorities for the public.
 - e. Most Americans eat too much fat, raising the risk of many chronic diseases for millions.
 - f. 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.
 2. 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 % of nutrient that a serving contributes to a 2,000-calorie diet; it also shows values for a 2,500-calorie diet.
 3. Nutrient Content Claims
 - a. Foods carrying nutrient content claims like "low-fat," "low-calorie," etc. must adhere to specific definitions spelled out by the FDA.
 4. Health Claims
 - a. Are statements that link the nutritional profile of food to a reduced risk of a particular disease.
 - b. The FDA has set forth very strict rules governing the use of such health claims.
 - c. Manufacturers are allowed to imply only that the food "may" or "might" reduce risk of disease.
 - d. They must also note other factors that play a role in prevention of the disease.
 - e. Lastly, they must phrase the claim so that the consumer can understand the relationship between the nutrient and the disease.

B. 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 terms: amaranth, guava, chorizo, chiles relleños, burritos, chilaquiles, jicama, dim sum, grits, hominy, chitterlings, kosher, schmaltz, knishes

Resources: 5th ed. TRA 43, Suggested Activity 2-6

- This feature examines some prevalent ethnic and regional food practices, how they originated, and how they fit into a healthy eating plan.
- A. Mexican – Is it true that it is loaded with fat?
 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.
 - B. Chinese – Are foods served in Chinese restaurants in the U.S. traditional Chinese foods?
 1. Generally not; real Chinese food is mostly vegetables and rice with a small amount of meat (usually chicken) and not much fat.
 2. 80% of calories comes from grains, legumes, and vegetables, while the other 20% 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.
 - C. 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% 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 little modification it can fit into a high-carbohydrate, low-fat 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.
 - D. Indian – I have heard that the traditional Indian diet is vegetarian; is that true?
 1. Yes, although not exclusively (not a lot of beef). 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.
- E. "Southern" or "Soul food" – Do most African Americans eat lots of it?
 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.
- F. Kosher foods – Are kosher foods better for health than regular food items?
 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.

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 MyPyramid 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% carbohydrates, 20%-35% fat, and 10%-35% 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 Newest Pyramid

The current food pyramid actually consists of several pyramids. This can cause confusion on the part of students. Choosing the "right" one may be difficult. Understanding the underlying concepts that dictate food choices with both the food groups and sub-groups is crucial for establishing a healthful, nutritious and enjoyable diet.

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/MyPyramid 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.

Recipes²

Recipe 2-1: Chunky Salsa

5 large tomatoes, diced	8 yellow chili peppers, seeded and minced
1 large onion, chopped	1 can (15 oz.) tomato sauce
1 garlic head, minced	2 tablespoons lime juice
1 bunch cilantro, chopped	¼ cup white vinegar
8 jalapeño peppers, seeded and minced	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	¼ cup plain yogurt
2 cups red cabbage, finely shredded	2 tablespoons white vinegar
¾ cup carrots, shredded	2 teaspoons sugar
3 tablespoons green onions, sliced	1 teaspoon celery seed
¼ cup low-fat mayonnaise	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.

² Contributed by Elizabeth Morton of the University of South Carolina

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.

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 2-3: What's in a

Muncher's Healthy Snacking Menu? provides examples of 100-calorie 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 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.

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 towards 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?
2. Do they consume more or less than the manufacturer "suggests"?
3. After this exercise, ask them 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 serving 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: Health (Nutrient Content) Food Claims

More and more food packages are (legally) making health claims (low in fat, high in fiber, etc.). However, one health 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 health claims, using Table 2-10 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 health/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.

Question: Does a health/nutrition claim guarantee that this particular food is a healthful choice?

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.

- A. Have them (try to) identify some nutrient-dense choices and some less-healthy choices.
- B. Have them discuss which choices they like and why.
- C. Are they adverse to trying the more healthy choices? Why or why not?
- D. If they more often choose the less healthy choices, have them discuss why.

This is a good time to discuss restaurant dining.

Review Worksheet³ for Personal Nutrition 7e
Chapter 2 – The Pursuit of a Healthy Diet

The ABC's of Eating for Health	
Identify the five diet planning principles also known as the ABC's of eating for health.	<ol style="list-style-type: none"> 1. 2. 3. 4. 5.
Identify three nutrient-dense foods:	<ol style="list-style-type: none"> 1. 2. 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:	<p>A 19-year old male needs ____ mg/day of vitamin C.</p> <p>A 19-year old female needs ____ mg/day of vitamin C.</p> <p>A 31-year-old male needs ____ mg/day of iron.</p> <p>A 31-year-old female needs ____ mg/day of iron.</p> <p>At 25 years of age, both males and females need ____ mg/day of calcium.</p>
Discuss the differences between the Recommended Dietary Allowance (RDA) and the Tolerable Upper Intake Level (UL) .	
The Dietary Reference Intakes (DRI) allow ranges for the energy nutrients. Identify the ranges:	<p>Carbohydrate: ____ to ____ percent of total calories.</p> <p>Fats: ____ to ____ percent of total calories.</p> <p>Protein: ____ to ____ percent of total calories.</p>

³ By Charalee Allen of Cincinnati State Technical and Community College

Dietary Guidelines	
<p>The <i>Dietary Guidelines for Americans</i> provide science-based advice to promote health and reduce risk for chronic diseases through diet and physical activity. Discuss three topics (or focus areas) from the <i>Dietary Guidelines</i>.</p>	<ol style="list-style-type: none"> 1. 2. 3.
MyPyramid Food Guidance System	
<p>Identify six key components of health and diet emphasized in MyPyramid.</p>	<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 6.
<p>Use the food groups from MyPyramid to determine the correct food group for each food listed.</p>	<p>Spaghetti can be found in the _____ group.</p> <p>Peanuts can be found in the _____ group.</p> <p>Yogurt can be found in the _____ group.</p> <p>Low-fat mayonnaise can be found in the _____ group.</p> <p>Watermelon can be found in the _____ group.</p> <p>Eggs can be found in the _____ group.</p> <p>Raw carrots can be found in the _____ group.</p>

<p>Use MyPyramid to determine the correct equivalent amounts for the foods listed:</p>	<p>Given Menu: 1 cup orange juice (100%) ½ English muffin 1 tsp soft margarine 1 medium banana 1 poached egg</p>	<p>Identify Food Groups Consumed: ____ Grain Group (oz.) ____ Vegetable Group (c.) ____ Fruit Group (c.) ____ Milk Group (c.) ____ Meat & Beans Group (oz.) ____ Oils Group (tsp.)</p>
<p>Use MyPyramid to determine the correct equivalent amounts for the foods listed:</p>	<p>Given Menu: 2 cups raw leafy greens 1 cup vegetables (tomato, cucumber, radish, celery) 1/3 cup shredded cheese 2 ounces diced ham 4 Tbsp. light salad dressing 1 mini bagel 1 medium banana</p>	<p>Identify Food Groups Consumed: ____ Grain Group (oz.) ____ Vegetable Group (c.) ____ Fruit Group (c.) ____ Milk Group (c.) ____ Meat & Beans Group (oz.) ____ Oils Group (tsp.)</p>
<p>All calorie levels in MyPyramid contain a discretionary calorie allowance. Discretionary calories can be used for:</p>		
<p>Food Labels</p>		
<p>An ingredient list provides a listing of ingredients in descending order by weight. Please explain what this means. How can this be useful?</p>		
<p>What are Daily Values (DV)? How can they be used in a healthful diet?</p>		

<p>What are nutrient content claims? Give three examples:</p>	<p>Examples include:</p> <ol style="list-style-type: none"> 1. 2. 3.
<p>What are health claims on food labels? Give three examples:</p>	<p>Examples include:</p> <ol style="list-style-type: none"> 1. 2. 3.
<p>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.</p>	<p>How can the food composition tables be used to provide information that would be useful to you?</p>

**Key to Review Worksheet⁴ for Personal Nutrition 7e
Chapter 2 – The Pursuit of a Healthy Diet**

The ABC's of Eating for Health	
Identify the five diet planning principles also known as the ABC's of eating for health.	<ol style="list-style-type: none"> 1. Adequacy 2. Balance 3. Calorie control 4. Moderation 5. Variety
Identify three nutrient-dense foods:	<ol style="list-style-type: none"> 1. Low-fat milk 2. Orange juice 3. Egg <p><i>Note: A wide variety of answers can be expected here.</i></p>
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:	<p>A 19-year old male needs <u>90</u> mg/day of vitamin C. A 19-year old female needs <u>75</u> mg/day of vitamin C. A 31-year-old male needs <u>8</u> mg/day of iron. A 31-year-old female needs <u>18</u> mg/day of iron. At 25 years of age, both males and females need <u>1000</u> mg/day of calcium.</p>
Discuss the differences between the Recommended Dietary Allowance (RDA) and the Tolerable Upper Intake Level (UL) .	<p>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.</p> <p>UL: The maximum amount of a nutrient that is unlikely to pose any risk of adverse health effects to most healthy people.</p> <p>The RDA is a target for nutritional intake, while the UL is not intended to be a recommended level of intake.</p>
The Dietary Reference Intakes (DRI) allow ranges for the energy nutrients. Identify the ranges:	<p>Carbohydrate: <u>45</u> to <u>65</u> percent of total calories. Fats: <u>20</u> to <u>35</u> percent of total calories. Protein: <u>10</u> to <u>35</u> percent of total calories.</p>
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 three topics (or focus areas) from the <i>Dietary Guidelines</i> .	<ol style="list-style-type: none"> 1. Adequate nutrients within energy needs 2. Weight management 3. Physical activity 4. Food groups to encourage 5. Fats 6. Carbohydrates 7. Sodium and potassium 8. Alcoholic beverages 9. Food safety <p><i>Note: The student can pick from any topic above. Discussions shall relate to the recommendations provided in Table 2-1, Key Recommendations of the Dietary Guidelines for Americans.</i></p>

⁴ By Charalee Allen of Cincinnati State Technical and Community College

MyPyramid Food Guidance System			
Identify six key components of health and diet emphasized in MyPyramid .	<ol style="list-style-type: none"> 1. Activity 2. Variety 3. Proportionality 4. Moderation 5. Personalization 6. Gradual improvement 		
Use the food groups from MyPyramid to determine the correct food group for each food listed.	<p>Spaghetti can be found in the <u>grain</u> group. Peanuts can be found in the <u>meat & beans</u> group. Yogurt can be found in the <u>milk</u> group. Low-fat mayonnaise can be found in the <u>oils</u> group. Watermelon can be found in the <u>fruit</u> group. Eggs can be found in the <u>meat & beans</u> group. Raw carrots can be found in the <u>vegetable</u> group.</p>		
Use MyPyramid to determine the correct equivalent amounts for the foods listed:	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <p>Given Menu: 1 cup orange juice (100%) ½ English muffin 1 tsp soft margarine 1 medium banana 1 poached egg</p> </td> <td style="vertical-align: top;"> <p>Identify Food Groups Consumed: <u>1</u> Grain Group (oz.) <u>0</u> Vegetable Group (c.) <u>1 ½</u> Fruit Group (c.) <u>1</u> Milk Group (c.) <u>1</u> Meat & Beans Group (oz.) <u>1</u> Oils Group (tsp.)</p> </td> </tr> </table>	<p>Given Menu: 1 cup orange juice (100%) ½ English muffin 1 tsp soft margarine 1 medium banana 1 poached egg</p>	<p>Identify Food Groups Consumed: <u>1</u> Grain Group (oz.) <u>0</u> Vegetable Group (c.) <u>1 ½</u> Fruit Group (c.) <u>1</u> Milk Group (c.) <u>1</u> Meat & Beans Group (oz.) <u>1</u> Oils Group (tsp.)</p>
<p>Given Menu: 1 cup orange juice (100%) ½ English muffin 1 tsp soft margarine 1 medium banana 1 poached egg</p>	<p>Identify Food Groups Consumed: <u>1</u> Grain Group (oz.) <u>0</u> Vegetable Group (c.) <u>1 ½</u> Fruit Group (c.) <u>1</u> Milk Group (c.) <u>1</u> Meat & Beans Group (oz.) <u>1</u> Oils Group (tsp.)</p>		
Use MyPyramid to determine the correct equivalent amounts for the foods listed:	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <p>Given Menu: 2 cups raw leafy greens 1 cup vegetables (tomato, cucumber, radish, celery) 1/3 cup shredded cheese 2 ounces diced ham 4 Tbsp. light salad dressing 1 mini bagel 1 medium banana</p> </td> <td style="vertical-align: top;"> <p>Identify Food Groups Consumed: <u>1</u> Grain Group (oz.) <u>2</u> Vegetable Group (c.) <u>½</u> Fruit Group (c.) <u>1</u> Milk Group (c.) <u>2</u> Meat & Beans Group (oz.) <u>2</u> Oils Group (tsp.)</p> </td> </tr> </table>	<p>Given Menu: 2 cups raw leafy greens 1 cup vegetables (tomato, cucumber, radish, celery) 1/3 cup shredded cheese 2 ounces diced ham 4 Tbsp. light salad dressing 1 mini bagel 1 medium banana</p>	<p>Identify Food Groups Consumed: <u>1</u> Grain Group (oz.) <u>2</u> Vegetable Group (c.) <u>½</u> Fruit Group (c.) <u>1</u> Milk Group (c.) <u>2</u> Meat & Beans Group (oz.) <u>2</u> Oils Group (tsp.)</p>
<p>Given Menu: 2 cups raw leafy greens 1 cup vegetables (tomato, cucumber, radish, celery) 1/3 cup shredded cheese 2 ounces diced ham 4 Tbsp. light salad dressing 1 mini bagel 1 medium banana</p>	<p>Identify Food Groups Consumed: <u>1</u> Grain Group (oz.) <u>2</u> Vegetable Group (c.) <u>½</u> Fruit Group (c.) <u>1</u> Milk Group (c.) <u>2</u> Meat & Beans Group (oz.) <u>2</u> Oils Group (tsp.)</p>		
All calorie levels in MyPyramid contain a discretionary calorie allowance. Discretionary calories can be used for:	<ul style="list-style-type: none"> • Eat additional nutrient-dense foods from food groups. • Select limited amounts of foods that contain “solid fats” or “added sugars.” • Add fats or sweeteners to foods. • Eat or drink items that contain only fats, caloric sweeteners, and/or alcohol. 		
Food Labels			
An ingredient list provides a listing of ingredients in descending order by weight. Please explain what this means. How can this be useful?	<p>The first ingredient listed makes up the largest proportion of all ingredients listed. The second ingredient contains the second most amount and so forth.</p> <ul style="list-style-type: none"> • The ingredient list can be used to identify added sugars and fats in a food (to avoid them). • The ingredient list can be used to identify ingredients that a person may wish to add to their diet (e.g., whole grains). • 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. 		

<p>What are Daily Values (DV)? How can they be used in a healthful diet?</p>	<p>Daily Value: The amount of fat, sodium, fiber, and other nutrients that health experts say should make up a healthful diet.</p> <ul style="list-style-type: none"> • Use the Daily Values (DV) to get a good idea of how various foods fit into a healthful diet. • Use the Daily Values (DV) to comparison shop.
<p>What are nutrient content claims? Give three examples:</p>	<p>By law, foods must adhere to specific definitions as specified by the Food and Drug Administration.</p> <p>Examples include:</p> <ol style="list-style-type: none"> 1. Low fat 2. High or excellent source of a nutrient 3. Healthy <p><i>Note: A wide variety of responses are possible. Please see Table 2-10, Definitions of Nutrient Content Claims.</i></p>
<p>What are health claims on food labels? Give three examples:</p>	<p>A statement on the food label linking the nutritional profile of a food to reduced risk of a particular disease.</p> <p>Examples include:</p> <ol style="list-style-type: none"> 1. Calcium-rich food and reduced risk of osteoporosis 2. Low-fat foods and reduced risk of cancer 3. Soy protein and reduced risk of heart disease <p><i>Note: A wide variety of responses are possible. Please see Table 2-11, Health Claims on Food Labels.</i></p>
<p>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.</p>	<p>How can the food composition tables be used to provide information that would be useful to you?</p> <ul style="list-style-type: none"> • Find amounts of specific nutrients in the foods consumed • Find content of nutrients by cooking methods • Compare nutrient content of various foods • Generate a list of nutrients consumed per day • Generate lists of foods that are high or low in certain specified nutrients (e.g., calcium and sodium)

Internet Exercise Worksheet⁵ for *Personal Nutrition 7e* Chapter 2 – The Pursuit of a Healthy Diet

My Name:	<input type="checkbox"/> Male	Due Date:
My Age:	<input type="checkbox"/> Female	Point Value:
	<input type="checkbox"/> Pregnant	Points Earned:
	<input type="checkbox"/> Lactating	
	<i>(Check those that apply)</i>	

Overview:

MyPyramid.gov is an interactive website that includes lots of nutrition information and links. You will access the site, generate your personal MyPyramid plan and do an in-depth review of the website.

Directions:

1. Access the web site at: www.mypyramid.gov.
2. From the home page, click on MyPyramid plan. Enter your personal information including: age; sex; weight in pounds; height in feet and inches; and physical activity. Hit the submit key to obtain your results. You may be asked to choose a plan to maintain your weight or to move to a healthier weight.
3. Record your MyPyramid plan in the space below. You should also print a copy of your plan and retain it for use later.

How Many Calories is Your Plan?	
How Many Ounces of Grain?	
How Many Cups of Vegetables?	
How Many Cups of Fruits?	
How Many Cups of Milk?	
How Many Ounces of Meat & Beans?	
How Many Teaspoons of Oil?	
How Many Discretionary Calories?	

4. Go back to the MyPyramid web site and fully explore the website. Find **three** things that are new or interesting to you. Write a brief paragraph for each of the main points.

⁵ By Charalee Allen of Cincinnati State Technical and Community College

First Paragraph:

Second Paragraph:

Third Paragraph:

Key to Internet Exercise Worksheet⁶ for Personal Nutrition 7e
Chapter 2 – The Pursuit of a Healthy Diet

3. Record your MyPyramid plan in the space below. You should also print a copy of your plan and retain it for use later.

Students will generate one of 12 calorie levels from MyPyramid. Use age and gender to identify the correct calorie levels. These patterns can be found on the MyPyramid.gov website; click on For Professionals and scroll down.

4. Go back to the MyPyramid web site and fully explore the website. Find **three** things that are new or interesting to you. Write a brief paragraph for each of the main points.

Students can explore any of the topics from MyPyramid.gov including links. This will give them the opportunity to fully explore the website.

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