

Chapter 5

Nutrients at Work

Nutrient Guidelines

Directions: Read the following selection. Then answer the questions under *Thinking Critically*, and complete the activities as directed by your teacher.

Your ability to enjoy life and reach your potential depends on making sure your body receives the required nutrients in the right quantities. A little knowledge will help you properly manage your body's nutrition.

Reference Values for Nutrients

How do you know what amount of each nutrient you need every day? You need larger amounts of nutrients such as carbohydrates, proteins, fats, and water and smaller amounts of other nutrients, including vitamins and minerals.

How much you need of each nutrient varies according to your age, size, activity level, and gender. Because teens grow and develop rapidly, their nutrient needs are higher than they will be during the adult years. Nutrition experts have established reference values to help people know what to eat in order to consume healthful amounts of each nutrient.

The most familiar reference values are Recommended Dietary Allowances (RDAs). An RDA is the average daily amount of a nutrient that will meet the needs of most healthy people of a specific age and gender.

For some nutrients, not enough information is available to establish an RDA. Therefore, another reference value is used, called an Adequate Intake (AI). This is an approximate amount of each nutrient a person needs that nutritionists believe is adequate for healthful living.

Together, these and other reference values are called Dietary Reference Intakes (DRIs). Once you know how much of a nutrient is in a serving of food, you can compare that amount to the DRIs to see how close you've come to your required amount.

Daily Values

To make your nutrition watch easier, the Food and Drug Administration (FDA) has developed Daily Values, which are daily nutrient amounts used in food labeling. Daily Values help consumers compare the nutrient amounts they need to the amount of nutrients products contain.

The Daily Values apply to all people in general without taking age, gender, and activity level into account. As a teen, you may need more than the Daily Value for some nutrients and less for others.

To see how the Daily Values work, look for the Nutrition Facts panel on the outside of a box of cereal. The panel might say that one serving provides 12 percent of the Daily Value for iron. Because the Daily Value for iron is 18 milligrams, multiply 18 by 0.12. You'll see that the cereal contains about 2 milligrams of iron per serving. Suppose a teen female eats two servings of the cereal for a total of 4 milligrams. Because she needs 18 milligrams of iron per day, she would have 14 milligrams left to consume.

Thinking Critically

Directions: Use the Dietary Reference Intake information found on the U.S. Department of Agriculture's *Food and Nutrition Information Center* Web site to answer the following questions.

1. What might account for the difference in the DRI values for males ages 14–18 compared to females of the same age for protein, a variety of the B vitamins, or vitamin C? Explain.

2. Why are the DRI values for calcium, vitamin D, and phosphorus for males ages 14–18 and females ages 14–18 the same? Explain.

3. Calculate the milligrams of vitamin C provided in a daily diet if a selected food provides 25 percent of the Daily Value for vitamin C. Then make suggestions for foods that could be added to a day's menu plan to provide 60 milligrams or 100% of vitamin C. Support your food choices.

For Further Study

- ◆ Someone once wrote, "You are what you eat." Use this idea to write a poem or rhyme about how the food you eat helps to determine your physical appearance, how you spend your free time, etc. Next, make a poster or transparency to use as part of a class discussion on the role of nutrients.
- ◆ Create a PowerPoint® presentation showing how a peanut butter sandwich or other food choice "becomes you." The presentation should include a minimum of (a) 8–10 slides; (b) two slides with images; (c) one slide with sound; (d) an introduction and conclusion slide. Present your PowerPoint® slide show to your class.
- ◆ Create a fill-in-the-blank short story about nutrients and the digestion process for upper elementary school children. Create characters or images that will make connections for the students. Provide key words for the students to use as they complete the activity. With the help of your teacher, make arrangements to use your story with a group of elementary school students in your district.