Healthy Eating Habits

The guidelines for healthy eating are summarized in the MyPyramid of the United States Department of Agriculture (USDA). The pyramid, shown in **Figure 5,** lists the daily number of servings needed from each food group to get a variety of nutrients in your diet. **› Good nutrition must be balanced with regular physical activity to maintain a healthy body.**

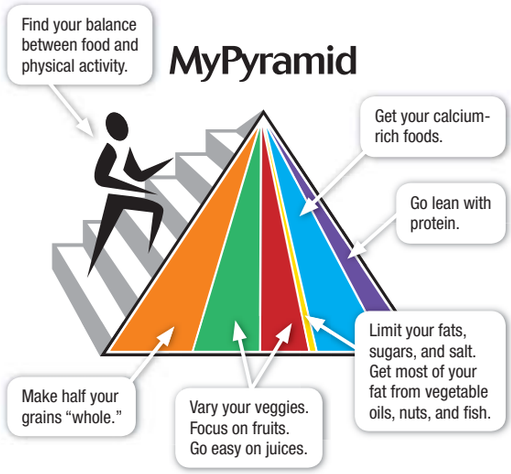


Figure 5 The MyPyramid food guidance system helps you plan your daily diet. The width of each stripe shows you the relative proportion of your diet that should be made up of foods from that group.

Body Mass Index Healthy weights vary depending on the person, so weight recommendations are given as a range. One way to determine your healthy weight range is to calculate your body mass index, or BMI:

$$BMI = \frac{(weight\ in\ pounds)}{(height\ in\ inches)^2} \times 703$$

Adults are said to have a healthy body weight if their BMI is between 18.5 and 25.0.

Excess Body Fat Generally, adults who are overweight (BMI of 25.1–29.9) or obese (BMI of 30.0 or more) have too much body fat. Having excess body fat can increase a person's risk for many chronic diseases, such as heart disease, osteoarthritis, or type 2 diabetes.

Eating Disorders An eating disorder is a condition in which a person has an unhealthy concern for his or her body weight and shape. The person may try to control his or her weight by unhealthy means. Anorexia nervosa is an obsession with being thin that leads to extreme weight loss. Bulimia nervosa is a disorder in which frequent episodes of binge eating are usually followed by behaviors such as vomiting, using laxatives, fasting, or overexercising. Abnormal eating patterns may result in dehydration, fatigue, organ failure, and death.

ACADEMIC VOCABULARY
abnormal differing from the normal or average

› Reading Check ***What is BMI? (See the Appendix for answers to Reading Checks.)***

Section 1 Review

› KEY IDEAS

1. **List** four roles of nutrients.
2. **Compare** the functions of carbohydrates and proteins in maintaining a healthy body.
3. **Evaluate** the roles of vitamins, minerals, and water in maintaining a healthy body.
4. **Explain** how stored energy affects weight gain.

CRITICAL THINKING

5. **Real World Science** Why is eating raw plant foods recommended for high-fiber diets?
6. **Finding Evidence** A student says that obesity does not really harm your health. How would you respond to the statement?

ALTERNATIVE ASSESSMENT

7. **Menu** Create an imaginary menu of foods, including drinks and snacks, that you might eat for the next two days. List the nutrients present in each of the foods.

Teaching Key Ideas

Obesity and Diabetes Explain that type 2 diabetes is linked to obesity and physical inactivity. The hormone resistin is released by fat cells and causes other tissues to become resistant to insulin, a hormone that helps move glucose into cells. Insulin-resistance is often the first step to developing type 2 diabetes. Ask students to infer how obesity is linked with diabetes. (Obese people have more fat cells that produce more resistin, which blocks more insulin. This condition can lead to diabetes.)
LS Logical

› Close

Formative Assessment

One of the functions of lipids in the body is to _____.

A. enhance enzyme activity (Incorrect. Enzyme activity is enhanced by vitamins and minerals.)
B. make glycogen (Incorrect. Glycogen is made of carbohydrates.)
C. make steroid hormones (Correct! Lipids make steroid hormones.)
D. make proteins (Incorrect. Proteins are made of amino acids.)

Answers to Section Review

1. energy, growth, maintenance, and repair
2. Both can be used as a source of energy, but the body usually uses amino acids from proteins as building blocks for other proteins.
3. Vitamins enhance enzyme activity. Minerals are necessary for making certain body structures, for substances that enable normal nerve and muscle function, for maintaining osmotic balance, and for enzyme function. Water transports gases, nutrients, and waste, and regulates body temperature.
4. If you eat more than you use, you will gain weight. If you use more energy than you get from eating, you will lose weight.
5. Raw plant food is high in cellulose, a major component of dietary fiber. Fiber helps clean the large intestine.
6. Obesity increases a person's risk of diabetes, heart disease, osteoarthritis, and other disorders.
7. Answers will vary.