

**What You Will Learn**

- Describe how tissues, organs, and organ systems are related.
- List 11 organ systems.
- Identify how organ systems work together to maintain homeostasis.

**Vocabulary**

homeostasis    organ  
tissue

**READING STRATEGY**

**Reading Organizer** As you read this section, make a concept map by using the terms above.

**57CS3.a** Analyze scientific data by using, interpreting, and comparing numbers in several equivalent forms, such as integers, fractions, decimals, and percents. **57L2.c** Explain that cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms. **57L2.d** Explain that tissues, organs, and organ systems serve the needs cells have for oxygen, food, and waste removal. **57L2.e** Explain the purpose of the major organ systems in the human body (i.e., digestion, respiration, reproduction, circulation, excretion, movement, control, and coordination, and for protection from disease).

# Body Organization

Imagine jumping into a lake. At first, your body feels very cold. You may even shiver. But eventually you get used to the cold water. How?

Your body gets used to cold water because it returns to *homeostasis*. **Homeostasis** (HOH mee OH STAY sis) is the maintenance of a stable internal environment in the body. When you jump into a lake, homeostasis helps your body adapt to the cold water.

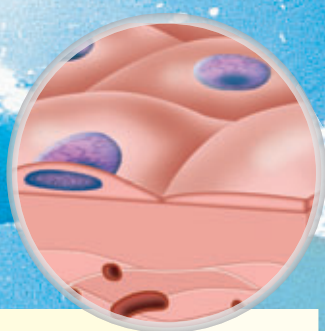
## Cells, Tissues, and Organs

Maintaining homeostasis is not easy. Your internal environment is always changing. Your cells need nutrients and oxygen to survive. Your cells need wastes removed. If homeostasis is disrupted, cells may not get the materials they need. So, cells may be damaged or may die.

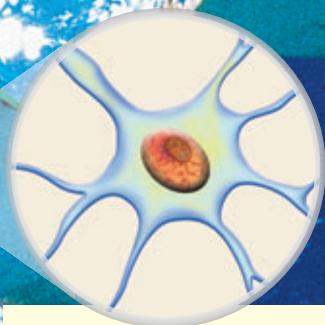
### Cells Form Tissues

Your cells must do many jobs to maintain homeostasis. But, each of your cells does not have to do all of those jobs. Just as each person on a soccer team has a role during a game, each cell in your body has a job in maintaining homeostasis. Your cells are organized into groups. A group of similar cells working together forms a **tissue**. Your body has four main kinds of tissue. The four kinds of tissue are shown in **Figure 1**.

**Figure 1** Four Kinds of Tissue



**Epithelial tissue** covers and protects underlying tissue. When you look at the surface of your skin, you see epithelial tissue. The cells form a continuous sheet.



**Nervous tissue** sends electrical signals through the body. It is found in the brain, nerves, and sense organs.