

# CHAPTER 39 RESPIRATION, CIRCULATION, AND EXCRETION

## Section 39.1 The Respiratory System

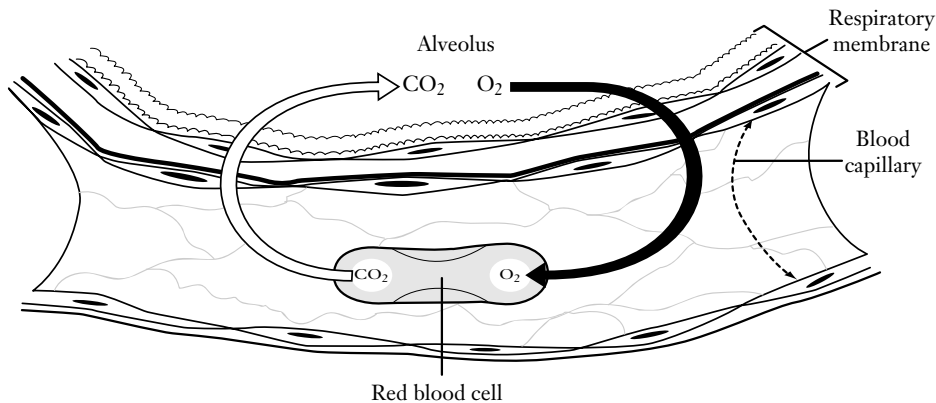
## Section 39.3 The Urinary System

### Study the Diagram

Read the paragraphs in the boxes and study the diagram. Then answer the questions.

The **respiratory system** controls the balance of fresh oxygen entering the body and waste carbon dioxide leaving the body. Our cells need oxygen to make energy. We inhale oxygen through our nose and mouth. This oxygen travels to the lungs and crosses into the blood stream through thin-walled sacs called alveoli (singular: alveolus). At the same time, waste carbon dioxide is picked up from the cells. The carbon dioxide passes from the blood back through the alveoli into the lungs. We then breathe it out of the body. The diaphragm—a powerful sheet of muscle below the lungs—helps pull air in and push air out of the lungs.

The **urinary system** collects other kinds of cell waste products from the blood and stores them until they are passed out of the body in urine. The kidneys are the most important organs in the urinary system. Kidneys act like complex filters. When blood goes through the kidneys, materials that the body needs stay in the blood. Toxic waste products are removed from the blood and stored in the bladder as urine.



- Does the white arrow show air that is rich in
  - oxygen, or
  - carbon dioxide?
- Does the black arrow show air that is rich in
  - oxygen, or
  - carbon dioxide?
- Why do you think damage to the kidneys is so dangerous? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_