

Chapter 16

Vocabulary

plasma	congenital	larynx
hemoglobin	anemia	bronchitis
arteries	leukemia	pneumonia
capillaries	Hodgkin's disease	pleurisy
veins	respiration	asthma
platelets	diaphragm	sinusitis
lymph	pharynx	tuberculosis
lymphocytes	trachea	emphysema
blood pressure	bronchi	

- I. **Directions:** Complete the paragraph by writing a term from the list above in each blank.

The components of blood are the white blood cells; the red blood cells, which contain 1. _____; and 2. _____, the fluid in which the other parts of blood are suspended. Blood moves through the body in blood vessels. The 3. _____ are small vessels that reach almost every body cell. These same vessels surround the alveoli in the lungs, allowing external 4. _____ to take place. If the alveoli swell and get clogged with mucus, 5. _____ can be the result.

- II. **Directions:** Match the term in the right column with the correct definition in the left column.

- | | |
|-----------------------------------------------------------------------------------|----------------------|
| _____ 6. A condition in which the ability of the blood to carry oxygen is reduced | a. leukemia |
| _____ 7. An inflammation of the tissues that line the sinuses | b. Hodgkin's disease |
| _____ 8. A disease that progressively destroys the walls of the alveoli | c. emphysema |
| _____ 9. A type of cancer that affects the lymph tissue | d. anemia |
| _____ 10. A form of cancer that affects the white blood cells | e. sinusitis |

Activity 59**Applying Health Skills**

FOR USE WITH CHAPTER 16, LESSON 1

What's Going on Here?

Directions: Our bodies carry out hundreds of different functions every day. We rarely stop to think about many of these. For each situation described below, write several sentences explaining “what’s going on here” with the heart, blood vessels, or cells.

1. You fall off your skateboard and cut your arm. Later the cut stops bleeding.

2. You are sitting at the football game with your friends. As the sun goes down, the temperature falls and you begin to get cold.

3. You have come down with a cold—just like everyone else in your family. After a few days, the cold symptoms go away and you feel better.

4. For warm-ups, you are running extra laps before tennis practice.

Activity 60**Applying Health Skills**

FOR USE WITH CHAPTER 16, LESSON 2

The Case of the Missing Notes

Directions: A medical student has misplaced some of her class notes. The missing notes are case studies of patients with cardiovascular or lymphatic problems. Help the student replace her lost notes by filling in the following case studies.

Case Study 1**Patient:** 78-year-old male _____**Symptoms:** unable to fight off infections, frequently ill _____**Possible Diagnosis:** _____**System Involved:** _____**Case Study 2****Patient:** 15-year-old female _____**Symptoms:** frequently tired, blood tests show low red blood cell count _____**Possible Diagnosis:** _____**System Involved:** _____**Possible Treatment:** _____**Case Study 3****Patient:** 39-year-old male _____**Symptoms:** none, blood pressure reading 160/100, 30 pounds overweight, smoker _____**Possible Diagnosis:** _____**System Involved:** _____**Possible Treatment:** _____**Case Study 4****Patient:** 39-year-old female _____**Symptoms:** severe pain in legs after long periods of standing _____**Possible Diagnosis:** _____**System Involved:** _____**Possible Treatment:** _____

Activity 61**Applying Health Skills**

FOR USE WITH CHAPTER 16, LESSON 3

What's My Line?

Directions: See if you can guess the structures of the respiratory system that are being described below. For each structure, there is a series of clues. Use the clues to guess the structure, and write your answer in the space provided.

1. Clues:

The site of gas exchange in the lungs

Microscopic structures at the end of each bronchiole

Thin-walled air sacs covered with capillaries

Structure: _____

2. Clues:

Connects the throat and the trachea

Contains the vocal cords

Allows you to speak and make sounds

Structure: _____

3. Clues:

Dome-shaped muscle

The base of the chest cavity

Causes chest cavity to expand and contract

Structure: _____

4. Clues:

Part of the upper respiratory system

Lined with cilia

Lined with cells that produce mucus

Structure: _____

5. Clues:

Air moves into the lungs through this

Branches out into bronchi

Also known as the windpipe

Structure: _____

Activity 62**Applying Health Skills**

FOR USE WITH CHAPTER 16, LESSON 4

Write a Letter

Directions: Read each of the following situations. In each situation, a person is putting his or her health at risk. Use the information in the chapter and your knowledge of health to write a letter expressing your concern and suggesting ways the person could take better care of his or her health.

1. Your best friend Sasha has taken up smoking.

Dear Sasha,

Your friend,

2. Your cousin Josh has stopped exercising. Last time you played football in the yard, you noticed Josh fighting to catch his breath.

Dear Josh,

Your cousin,

3. Your little sister Jenna insists on playing with her friend's cat, even though she always has an asthma attack afterward.

Dear Sis,

Your sister,

Chapter 16

Study Guide

- STUDY TIPS:**
- Read *You'll Learn To* for each lesson.
 - Look up the meaning of any unfamiliar vocabulary terms.
 - Read the questions below before you read the chapter.

Directions: As you read the chapter, answer the following questions. Later, you can use this guide to review the information in the chapter.

Lesson 1

1. What is the main function of the cardiovascular system?

2. List three structures found in the heart.

3. What is blood?

4. What is blood composed of?

5. What are two similarities of arteries and veins?

6. What are two differences between arteries and veins?

7. Describe two functions of the lymphatic system.

8. What is lymph?

9. What is the function of lymphocytes and name the two types.

Study Guide, Chapter 16 (Continued)**Lesson 2**

10. What three healthful behaviors can you practice to help avoid problems with your cardiovascular and lymphatic systems?

11. What does blood pressure measure?

12. Name two possible problems of the cardiovascular system.

13. Define *anemia* and describe one way to avoid this condition.

14. Name three problems that can affect the lymphatic system.

Lesson 3

15. Define each of the following:

a. **Internal respiration:** _____

b. **External respiration:** _____

16. Explain how the diaphragm allows breathing to occur.

17. How does gas exchange take place in the lungs?

Study Guide, Chapter 16 (Continued)

18. What is the role of cilia?

19. What is another name for

a. pharynx _____

b. trachea _____

c. larynx _____

Lesson 4

20. What are two strategies you can use to maintain the health of your respiratory system?

21. Name two irritants that can cause bronchitis.

22. Describe pneumonia and name two causes of this disease.

23. Describe what happens during an asthma attack.

24. Describe the symptoms and treatment of tuberculosis.
