

Chapter

39

Immunity From Disease

Reinforcement and Study Guide

Section 39.1 The Nature of Disease

In your textbook, read about what an infectious disease is, determining what causes a disease, and the spread of infectious diseases.

Answer the following questions.

1. Why is a disease like osteoarthritis not considered an infectious disease?

2. What is meant by Koch's postulates?

3. In terms of disease, what is a reservoir?

Complete the table by writing in the method of transmission for each example.

Example	Method of Transmission
4. While exploring a cave, a person breathes in fungal spores that cause a lung infection.	
5. A person contracts Rocky Mountain spotted fever after being bitten by a tick.	
6. After having unprotected sex, a person contracts syphilis.	

In your textbook, read about what causes the symptoms of a disease, patterns of disease, and treating diseases.

For each statement below, write **true** or **false**.

- _____ 7. The toxin produced by a particular microorganism might be far more destructive than the direct damage the microbe does to its host cells.
- _____ 8. Endemic diseases often disappear in a population, only to resurface unexpectedly many years later.
- _____ 9. If you catch the flu during an influenza epidemic, your best hope of recovery is to take antibiotics.
- _____ 10. It is important for researchers to try to discover new antibiotics because many types of bacteria are becoming resistant to the ones now being used.

Section 39.2 Defense Against Infectious Diseases

In your textbook, read about the innate immune system.

Determine if the statement is true. If it is not, rewrite the italicized part to make it true.

1. Healthy skin is a good defense against the invasion of pathogens because it is *free of bacteria*.

2. In your trachea, *saliva* traps microbes and prevents them from entering your lungs.

3. Macrophages migrate *into the bloodstream* when the body is challenged by a pathogen.

4. Phagocytes at the site of an infection or inflammation destroy pathogens by surrounding and engulfing them.

5. The third line of defense against infection is the consumption of pathogens by *neutrophils*.

6. Interferon is produced by cells infected by *pathogenic bacteria*.

In your textbook, read about acquired immunity.

Circle the letter of the choice that best completes the statement.

7. The human lymphatic system is important in
a. filtering pathogens from lymph. b. keeping body fluids constant.
c. resistance to disease. d. all of the above.
8. Tissue fluid is found
a. in lymph vessels. b. in the bloodstream.
c. around body cells. d. in lymph ducts.
9. The main function of lymph nodes is to
a. store red blood cells. b. filter lymph.
c. filter excess fluid. d. trigger an immune response.
10. A reservoir for lymphocytes that can be transformed into specific disease-fighting cells is the
a. thymus gland. b. thyroid gland.
c. pituitary gland. d. pancreas.

Chapter

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Immunity From Disease, *continued*

Reinforcement and Study Guide

Section 39.2 Defense Against Infectious Diseases, *continued*

In your textbook, read about antibody immunity and cellular immunity.

Complete each sentence.

11. _____ is the building up of a _____ to a specific pathogen.
12. Two types of immunity that involve different kinds of cells and cellular actions are _____ immunity and _____ immunity.
13. The presence of foreign _____ in the body triggers the production of _____ by plasma cells.
14. A _____ is a lymphocyte that, when activated by a _____, becomes a plasma cell and produces _____.
15. Cellular immunity involves several different types of _____ cells.
16. A _____ releases enzymes directly into the _____.

Complete the table by checking the correct columns for each example.

Example	Type of Immunity	
	Cellular	Antibody
17. Involves the protection of antibodies		
18. Stimulated by antigens in the body		
19. Clones of killer T cells produced		
20. Memory cells produced so the body can respond quickly to a second attack		
21. Key role played by antigen-antibody complex		
22. T cells destroyed by pathogens directly		

**Chapter
39****Immunity From Disease, continued****Reinforcement and Study Guide****Section 39.2 Defense Against Infectious Diseases, continued**

In your textbook, read about passive and active immunity to infectious diseases.

Answer the following questions.

- 23.** Distinguish between active and passive immunity.

- 24.** In what two ways can passive immunity develop?

- 25.** What is a vaccine?

In your textbook, read about AIDS and the immune system.

For each statement below, write true or false.

- _____ **26.** The virus that causes AIDS—Human Immunodeficiency Virus—is well-named because it attacks the immune system.
- _____ **27.** HIV can be transmitted by air.
- _____ **28.** A child born to a woman who is infected with HIV is at high risk for being infected, too.
- _____ **29.** HIV destroys a person's resistance to disease by attacking and destroying memory T cells.
- _____ **30.** In a blood sample from an HIV-positive person, you would expect to find most of the viruses existing free in the blood, rather than being hidden inside cells.
- _____ **31.** If a person is infected with HIV, he or she will usually develop AIDS within about a year.
- _____ **32.** The cause of death for a person with AIDS usually is some type of infection that the body's weakened immune system can no longer fight off.
- _____ **33.** The majority of persons infected with HIV will develop AIDS.