

CHAPTER 18: Immune System

1. List the two main types of defense mechanisms and briefly describe features of each.

2. Give examples of "barrier" defense.

3. What is the role of the lymphatic system in immunity?

4. What is the role of phagocytic leukocytes?

5. Identify differences between the lymphocytes.

a. B Lymphocytes – _____

b. T Lymphocytes – _____

6. What is the role of cytokines?

7. What is the mechanism by which complement proteins aid in defense?

8. Outline the significant steps that occur during an inflammatory response?

9. Why do we get fevers?

10. What is the role of toll receptors? What does it activate?

11. What are antigens? What are antigenic determinates?

12. What are four characteristics of the specific immune system?

- a. _____
- b. _____
- c. _____
- d. _____

13. What is the difference between the primary and secondary immune response?

14. What is the difference between immunization and vaccination?

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15. What is the difference between immunity and resistance? (think bacteria!)

16. What are the key features of antibody structure?

17. List and briefly describe four ways that antibodies aid in immunity.

18. How do B cells become activated?

19. Once activated, what do B cells do?

20. What is the role of the cytotoxic T cells and describe their mechanism of action.

21. What are some of the actions of helper T cells?

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22. What is the role of the major histocompatibility complex (MHC)?

23. Define active immunity.

24. Define passive immunity.

25. How can so many different antibodies form from an organism's genome?

26. What are allergies and what happens when you have an allergic reaction?

27. Give examples of autoimmune disorders.

28. Propose a possible reason why there may be a small percentage of people who have a natural immunity to HIV.

END OF CHAPTER 18 MULTIPLE CHOICE

1. Phagocytes kill harmful bacteria by
 - A) endocytosis.
 - B) producing antibodies.
 - C) complement proteins.
 - D) T cell stimulation.
 - E) inflammation.

2. Which statement about immunoglobulins is true?
 - A) They help antibodies do their job.
 - B) They recognize and bind antigenic determinants.
 - C) They encode some of the most important genes in an animal.
 - D) They are the chief participants in nonspecific defense mechanisms.
 - E) They are a specialized class of white blood cells.

3. Which statement about an antigenic determinant is not true?
 - A) It is a specific chemical grouping.
 - B) It may be part of many different molecules.
 - C) It is the part of an antigen to which an antibody binds.
 - D) It may be part of a cell.
 - E) A single protein has only one on its surface.

4. T cell receptors
 - A) are the primary receptors for the humoral immune system.
 - B) are carbohydrates.
 - C) cannot function unless the animal has previously encountered the antigen.
 - D) are produced by plasma cells.
 - E) are important in combating viral infections.

5. According to the clonal selection theory,
 - A) an antibody changes its shape according to the antigen it meets.
 - B) an individual animal contains only one type of B cell.
 - C) an individual animal contains many types of B cells, each producing one kind of antibody.
 - D) each B cell produces many types of antibodies.
 - E) many clones of antiself lymphocytes appear in the bloodstream.

6. Immunological tolerance
 - A) depends on exposure to an antigen.
 - B) develops late in life and is usually life-threatening.
 - C) disappears at birth.
 - D) results from the activities of the complement system.
 - E) results from DNA splicing.

7. The extraordinary diversity of antibodies results in part from
 - A) the action of monoclonal antibodies.
 - B) the splicing of protein molecules.
 - C) the action of cytotoxic T cells.
 - D) the rearrangement of genes.
 - E) their remarkable nonspecificity.

8. Which of the following play(s) no role in the antibody response?
 - A) Helper T cells
 - B) Growth factors
 - C) Macrophages
 - D) Reverse transcriptase
 - E) Products of class II MHC genes

9. The major histocompatibility complex
 - A) codes for specific proteins found on the surfaces of cells.
 - B) plays no role in T cell immunity.
 - C) plays no role in antibody responses.
 - D) plays no role in skin graft rejection.
 - E) is encoded by a single locus with multiple alleles.

10. Which of the following plays no role in HIV reproduction?
 - A) Integrase
 - B) Reverse transcriptase
 - C) gp120
 - D) Interleukin-1
 - E) Protease