

The Immune System: Immune System Overview

1. Name two of the major functions of the immune system:

- _____
- _____

Name the defense system responsible for protecting the body from all foreign substances: _____

Name the defense system responsible for attacking particular foreign substances: _____

2. Name the three main lines of defense and give an example of each:

Line of defense	Example

3. When the surface barriers (innate external defenses) are penetrated, what is the next line of defense?

4. This defense mechanism (named in question 6) identifies enemies by recognizing _____ unique to the pathogens.

5. Name the two types of lymphocytes involved in the adaptive defense:

- _____
- _____

6. Name the four key ways adaptive defenses differ from innate defenses:

- _____
- _____
- _____

- _____

7. B and T lymphocytes recognize pathogens by binding to them. The lymphocyte recognizes the _____ found on the antigen.

Humoral Versus Cellular Immunity

8. _____ immunity is directed against pathogens in the extracellular fluid. What type of lymphocyte is involved in this type of immunity? _____ 12. _____ immunity is directed against pathogens within the cells. What type of lymphocyte is involved in this type of immunity? _____ 13. What types of cells produce antibodies? _____ Which type of immunity involves antibodies? _____

9. Name three circumstances in which cellular immunity would be activated to attack living cells:

- _____
- _____
- _____

10. Determine which of the following situations is mediated by humoral or cellular immunity. Place an X in the box for the correct immunity.

Situation	Humoral Immunity	Cellular Immunity
Cancerous cell		
Bacteria in extracellular fluid		
Transplanted cell from another person		
Virus-infected cell		