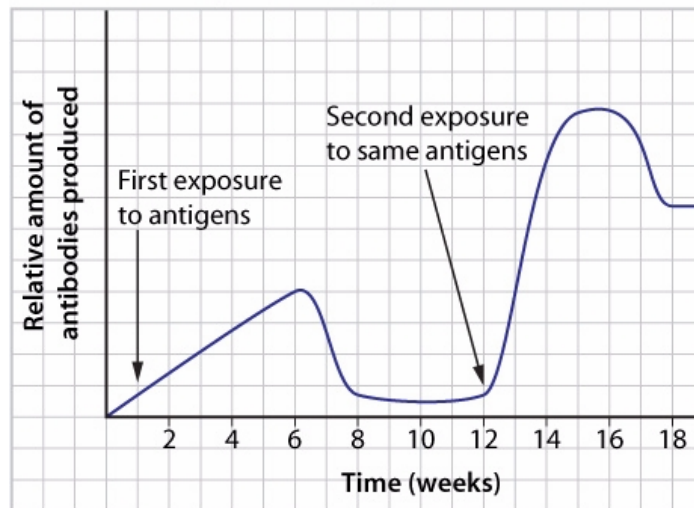


CHAPTER 8
ANSWER KEY
Immune Response Specific
Answer Key
BLM 8.3.4A

1. Antigens are identifier molecules that are found on the surface of all cells, including pathogens (foreign substances). The body catalogues antigens that belong to the body before birth so that when pathogens with non-recognizable antigens enter the body, the invaders can be identified and targeted for destruction by B cells and T cells.



2. The graph shows an immune response to first and second exposures to an antigen. It demonstrates the building of immunity to the antigens.
3. Following the first exposure to antigens, the body took six weeks to reach peak antibody production. Following the second exposure to antigens, the body took only about three weeks to reach peak antibody production.
4. Almost twice as many antibodies formed after the second exposure to antigens, and the peak level of antibodies lasted longer after the second exposure.
5. The flow chart for the B cell response to pathogens should include the following steps:
 - macrophage displays antigen marker on cell surface
 - helper T cells bind to macrophage and release chemicals that activate B cells
 - an activated B cell enlarges and produces both memory B cells and plasma cells
 - plasma cells produce the antibodies
 - antibodies bind with antigens
 - Memory B cells remain in blood for next exposure

| | | |
|-------------------|------------------------------------------------|-------------------|
| CHAPTER 8 | Immune Response Specific Answer Key | BLM 8.3.4A |
| ANSWER KEY | | |

6.

| T Cell Type | Function |
|---------------------------|------------------------------------------------------------------------------------------------------|
| Helper T Cell | Gives off chemical signals that stimulate the production of macrophages, B cells, and other T cells. |
| Killer (Cytotoxic) T Cell | Binds with infected cells and destroys them. Does not need Helper T cells to activate. |
| Suppressor T Cell | Slows and suppresses the cellular immunity reaction so normal tissues are not destroyed. |
| Memory T Cell | Remains in the bloodstream to ensure a quick and stronger response after the next exposure. |