

Lymphatic System & Body Defense Study Questions

Dr. J. Lim

1. Name three functions of the lymphatic system.

2. The lymphatic system is crucial to maintain proper blood _____.
3. The lymphatic system prevents fluid accumulation in tissues called _____.
4. Unlike the cardiovascular system which is a closed system, the lymphatic system is a(n) _____ system.
5. Lymph only flows in one direction and that direction is _____ the heart.
6. State four characteristics of lymphatic vessels.

7. Lymph is driven towards the heart by _____.
8. A nonspecific body defense mechanism always responds the _____ way regardless of the type of invader.
9. The 1st line of body defense includes _____ and _____.
10. Under what circumstance is the 2nd line of defense implemented?

11. The 2nd line of body defense includes which three mechanisms?

12. The inflammatory response is characterized by increased _____, _____ and _____.
13. A rise in body temperature (fever) slows _____ and accelerates _____.
14. State three characteristics of specific body defense.

15. Name cells which mediate the immune response. Do these cells have visible granules? _____, _____ & _____. Yes/No
16. In antibody-mediated immunity, a ___ lymphocyte binds with a specific antigen to cause _____ and the generation of _____ and _____ cells.
17. The structures in humoral immunity that acts to neutralize non-self antigens are _____.
18. Cell-mediated immunity involves antigen presentation where a ___ lymphocyte joins forces with a _____.
19. In cellular immunity, this “director” stimulates the activity of other immune and body defense cells and mechanisms. _____
20. Antibodies an infant receives from mother’s milk is an example of _____.

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- Name three functions of the lymphatic system.
 - **return leaked plasma back to blood vessels**
 - **cleanses lymph of foreign matter at lymph nodes/tissue**
 - **provides lymph nodes/tissue (Fort Point) for lymphocytes & macrophages hang out and clean lymph**
- The lymphatic system is crucial to maintain proper blood **volume**.
- The lymphatic system prevents fluid accumulation in tissues called **edema**.
- Unlike the cardiovascular system which is a closed system, the lymphatic system is a(n) **open** system.
- Lymph only flows in one direction and that direction is **towards** the heart.
- State four characteristics of lymphatic vessels.
 - **blind-ended**
 - **thin-walled, permeable vessels**
 - **more valves than veins**
 - **contain lymph**
- Lymph is driven towards the heart by **milking action**.
- A nonspecific body defense mechanism always responds the **same** way regardless of the type of invader.
- The 1st line of body defense includes **skin and mucus membranes**.
- Under what circumstance is the 2nd line of defense implemented?
 - **when the 1st line of defense fails**
- The 2nd line of body defense includes which three mechanisms?
 - **phagocytes and natural killer cells, inflammation & fever**
- The inflammatory response is characterized by increased **blood flow, heart rate** and **capillary permeability**.
- A rise in body temperature (fever) slows **bacterial growth** and accelerates **body repair processes**.
- State three characteristics of specific body defense.
 - **antigen specific**
 - **not limited to infection site (systemic)**
 - **initial exposure primes body for more vigorous reaction with next exposure to same antigen (memory)**
- Name cells which mediate the immune response. Do these cells have visible granules? **B lymphocytes, T lymphocytes, macrophages. NO**
- In antibody-mediated immunity, a **B** lymphocyte binds with a specific antigen to cause **clonal expansion** and the generation of **memory** and **plasma** cells.
- The structures in humoral immunity that acts to neutralize non-self antigens are **antibodies/immunoglobulins**.
- Cell-mediated immunity involves antigen presentation where a **T** lymphocyte joins forces with a **macrophage**.
- In cellular immunity, this “director” stimulates the activity of other immune and body defense cells and mechanisms. **Helper T cells**
- Antibodies an infant receives from mother’s milk is an example of **passive naturally acquired immunity**.