

Review: The Immune System

Name:

Date:

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<u>B</u> An organism or substance that can cause a disease	A. immune system
<u>G</u> A type of white blood cell that recognizes antigens present in the body and produces specific antibodies to fight them.	B. pathogens
<u>L</u> A special version of an antigen that provides immunity against a disease	C. infectious diseases
<u>H</u> Specific particles created by the immune system to destroy specific disease-causing invaders	D. innate immune response
<u>M</u> A thick slippery substance that lines various structures and organs in the body such as the nose, lungs, and stomach	E. acquired immune response
<u>D</u> A quick, general immune response that all living things are born with	F. inflammation
<u>N</u> Tiny non-living particles capable of reproducing only when they are inside a host cell	G. B Cells
<u>I</u> Long-lasting disease protection that is acquired through the production of antibodies in response to an invading pathogen	H. antibodies
<u>R</u> Blood cells that fight infection and help prevent the growth of cancer	I. active immunity
<u>A</u> The body system that defends the body against infection and disease-causing substances	J. Helper T Cells
<u>S</u> Single-celled micro-organisms, some of which can cause disease	K. Killer T Cells
<u>C</u> A disease that can be spread by contact with infected people, animals, water or food	L. vaccines
<u>Q</u> A type of white blood cells which stores some antibodies on B Cells and reactivated if the antigen of pathogen reappears	M. mucous
<u>J</u> Specialized white blood cells that fight disease by activating B cells	N. virus
<u>E</u> A highly specific attack on a pathogen or antigen by the creation of antibodies to fight it	O. passive immunity
<u>K</u> Specialized white blood cells that fight disease by attacking antigens directly	P. booster
<u>P</u> An additional dose of a vaccine needed periodically to boost the immune system	Q. Memory B Cells
<u>F</u> Swelling and redness at the site of an infection	R. white blood cells
<u>O</u> A type of immunity resulting from the introduction of antibodies from another person or animal	S. bacteria

1. What are the four methods of transmitting diseases?

- i. Direct
- ii. Indirect
- iii. Food & water
- iv. Animal bites

2. For each of the descriptions below, describe the type of transmission method that could have led to contracting an infection disease.

a) You are at a barbeque party and become ill from eating undercooked meat.

Food & water

b) While on a hiking trip, your friend is bitten by a small animal. The next day he becomes ill.

Animal bite

c) At a movie, the person behind you seems to be sneezing every five minutes. A couple of days later you develop a cold.

Indirect

d) At the end of a soccer game, you shake hands with the other team. A few days later you become ill.

Direct

3. How is the role of sweat in the immune system?

They prevent pathogens from growing on the surface of your body.
It's part of the first line of defense.

4. Describe the process of inflammation.

It's part of the second line of defense's innate immune response.
It's a flow of fluid to the site of infection

5. Explain the difference between an innate response and an acquired response.

Innate - quick, general, non-specific

Acquired - highly specific attack on a pathogen

6. What is an antibody?

Antibody - specific particles created by the immune system to destroy specific disease causing invaders



7. What is an antigen?

Any substance your body can't recognize

8. Summarize the function of a B cell.

B cells produce antibodies, which attach to and destroy/mark pathogens to be destroyed

9. Compare a helper T cell with a killer T cell.

Helper T cell : recognizes a pathogen & activates B cells to come.
Killer T cell : work independently & directly destroy pathogens

10. What is active immunity?

Your body remembers which antibodies should be used to attack a pathogen that has infected it before.

11. Which of the following statements describe activities that **would help** to take care of your immune system? For activities that are **not helpful**, change the statement to make it a helpful activity:

i. Eat fast foods high in sugar.

Not helpful ⇒ eat a well-balanced diet

ii. Wash your hands only once in a while.

Not helpful ⇒ wash your hands often

iii. Keep your home tidy and neat.

Helpful!

iv. Avoid smoking.

Helpful!

v. Prioritize enough rest and exercise.

Helpful!

vi. Keep your vaccinations up to date.

Helpful!

vii. Share drinks with a contaminated person.

Not helpful ⇒ don't engage in direct contact with a contaminated person.

