

Name _____

IMMUNE SYSTEM REVIEW PKG

Infectious Disease

Looking at the Immune System

Vocabulary

- Acquired
- Antibodies
- Antigens
- Active Immunity
- First
- Helper T Cells
- Immune
- Innate
- Pathogens
- Second
- White Blood Cells

Use the terms in the vocabulary box to fill in the blanks. You can only use each term once.

1. Organisms, such as some bacteria and substances such as viruses that cause disease are called _____.
2. B-cells and killer T-cells are activated by _____.
3. The _____ system is the body's defense system.
4. The immune system's _____ line of defense against infectious diseases includes the skin.
5. The immune system's line of defense that is slower and more specific is called the _____ immune response.
6. The immune response that you are born with is called the _____ immune response. It includes _____ that attack and eat pathogens. It is considered your _____ line of defense.
7. Non-living things that are foreign to the body and trigger an immune response are called _____.
8. B-cells make substances called _____ to bind and "unlock" antigens.
9. All acquired immune responses help give you _____.

A. What are the four ways diseases can be passed on to people?

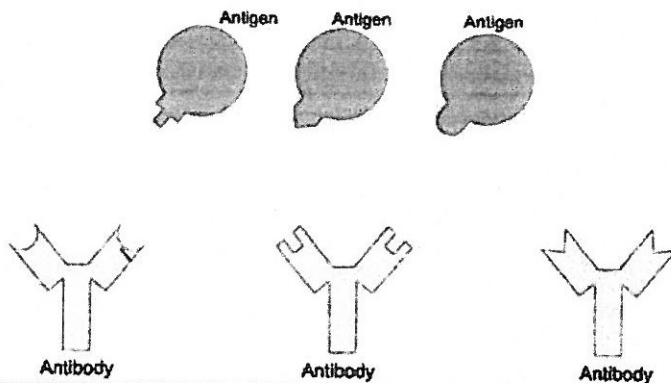
B. For each of the descriptions below, describe the type of transmission method that could have led to contracting an infectious disease. Then, give a way to avoid getting sick in this way.

	Type of transmission from answers above	How to avoid getting sick in this way
i)	You are at a barbeque party and become ill from eating undercooked meat.	
ii)	While on a hiking trip your friend is bitten by small animal. The next day he becomes ill.	
iii)	At a movie, the person behind you seems to be sneezing every five minutes! A couple of days later you develop a cold.	
iv)	At the end of a soccer game, you shake hands with the other team. A few days later you become ill.	

Immune System Matching

- | | | | |
|-----------|--------------------------|----|--|
| 1. _____ | acquired immune response | A. | a dead or weakened form of an antigen that can provide immunity against a disease |
| 2. _____ | active immunity | B. | disease-causing invaders |
| 3. _____ | allergy | C. | a powerful pathogen that attacks the immune system and can infect helper T cells |
| 4. _____ | anaphylactic shock | D. | long-lasting disease protection due to antibodies being stored in the body on memory B cells |
| 5. _____ | antibody | E. | highly specific attack on a pathogen or antigen by creating antibodies to fight it |
| 6. _____ | antigen | F. | system that defends the body from infection and disease |
| 7. _____ | B cells | G. | a severe allergic reaction that can result in swelling, breathing difficulty and sometimes death |
| 8. _____ | histamines | H. | one type can activate B cells, the other can kill antigens |
| 9. _____ | epidemic | I. | global outbreaks of diseases/pathogens |
| 10. _____ | herd immunity | J. | foreign substances in the body |
| 11. _____ | HIV | K. | swelling and redness at the site of infection |
| 12. _____ | immune system | L. | chemicals released by the body in response to an allergen |
| 13. _____ | innate immune response | M. | specific particles that can attach to and destroy antigens & pathogens |
| 14. _____ | inflammation | N. | recognize antigens and produce antibodies to fight them |
| 15. _____ | pandemic | O. | local outbreaks of diseases/pathogens |
| 16. _____ | pathogen | P. | cells that fight infection |
| 17. _____ | T cells | Q. | a quick, general immune response that you are born with |
| 18. _____ | white blood cells | R. | a high sensitivity to a substance |
| 19. _____ | vaccine | S. | having a large portion of the population immunized helps protect others |

20. Draw a line from each antigen to its corresponding antibody.



21. Why is an antigen-antibody complex often referred to as a "lock and key" mechanism? Use the diagrams on the left to help you explain your answer.

Name _____

Date _____

Disorders of the Immune system 15

Vocabulary

- AIDS
- allergy
- antigen
- allergic reaction
- antibodies
- antigens
- antihistamine
- B cells
- body fluids
- dead
- helper T cells
- histamine
- HIV
- Killer T cells
- live
- memory
- vaccine

Use the terms in the vocabulary box to fill in the blanks. Use each term only once. You will not have to use every term.

1. A(n) _____ is a weakened or form of a disease pathogen that is given to a person by needle or by mouth.
2. Once the vaccine is in the body, the immune system makes against the _____ in the vaccine.
3. Antibodies made to fight the dead form of a pathogen will defend you if you are exposed to the _____ form of the pathogen.
4. Sometimes, you are given additional vaccines later in life to help extend the immune system's _____ for that antigen.
5. If your immune system is too sensitive you may have a(n) _____ to a substance, such as dust or mould.
6. In a(n) _____, the immune system releases a chemical called _____ to combat allergens.
7. A(n) _____ drug can help reduce the effects of histamine.
8. Any substance that causes an allergic reaction is called a(n) _____.
9. AIDS is caused by a dangerous pathogen called _____ which attacks the _____.
10. Without the helper T cells, the body cannot trigger the action of the _____ or the _____.

Immune Responses

A. What are the two immune responses? What parts of the body are involved?

i. _____ (born with it) _____ (must learn it)

- includes: _____ - includes: _____

B. Put the following steps in number order as they should occur in the body:

- _____ Antibodies destroy pathogens
- _____ Helper T-cells activate
- _____ B-cells mobilize to produce antibodies/ Killer T-cells begin attack
- _____ Some immunity remains for future use
- _____ Phagocytes go to the infection site
- _____ Pathogen is recognized

C. How do antibiotics help the Immune System?

- What types of pathogens do they specifically attack?
- How is washing your hands with soap similar to taking antibiotics?

D. Epidemic or Pandemic?

2009 H1N1 _____ current COVID-19 _____
1862 Smallpox in BC _____ 1918 Spanish flu _____

Use with textbook pages 100-109.

The immune system

Match each Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

Term	Descriptor
1. _____ first line of defence	A. sneezing without covering your mouth
2. _____ second line of defence	B. blood cells fight infection
3. _____ direct contact	C. a substance that triggers an immune response
4. _____ indirect contact	D. specific particles created by the immune system to destroy specific disease-causing invaders
5. _____ antigen	E. keeps pathogens out of the body
6. _____ pathogen	F. living things that cause disease
	G. shaking hands or sharing drink containers with an infected person

Circle the letter of the best answer.

7. Pathogens are kept out of your respiratory system by
 A. mucus
 B. sweat
 C. oils on your skin
 D. gastric juice
8. Pathogens on the skin can be killed by
 A. sweat
 B. oils on your skin
 C. A and B
 D. neither A nor B

Use with textbook pages 110-117.

Factors affecting the immune system

Match each Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

Term	Descriptor
1. _____ allergy	A. chemical produced by the body
2. _____ allergen	B. weakened form of pathogen
3. _____ antibodies	C. fight against antigens
4. _____ histamine	D. high sensitivity to a substance
5. _____ vaccine	E. reduces runny nose and watering eyes
	F. causes allergic reaction

Circle the letter of the best answer.

6. As of 2006, all Grade 9 students in British Columbia receive booster shots for
 A. tetanus, diphtheria, and pertussis
 B. tetanus, diphtheria, and smallpox
 C. tetanus, smallpox, and pertussis
 D. polio, smallpox, and diphtheria
7. A vaccine works by stimulating your immune system to
 A. produce more antigens
 B. reduce the number of T cells
 C. reduce the number of B cells
 D. produce more antibodies
8. HIV is not transmitted by
 A. blood
 B. semen
 C. dirty needles
 D. shaking hands

9. AIDS is caused by
 A. bacteria
 B. virus
 C. semen
 D. blood

10. How can you take care of your immune system?
 I. get plenty of rest and exercise
 II. avoid tobacco
 III. never share bodily fluids with other people
 IV. wash your hands often

- A. I, II, and III only
 B. II, III, and IV only
 C. I, III, and IV only
 D. I, II, III, and IV

11. In a severe allergic reaction
 A. a person may have great trouble breathing
 B. the immune system needs to make more antibodies
 C. a person could die from infection
 D. the immune system cannot trigger the B cells

12. HIV attacks
 A. the helper T cells
 B. the killer T cells
 C. the blood
 D. the semen