Infectious Diseases

After completing the Infectious Disease notes and participating in class discussion, please use textbook pages 498-501 to answer the following questions:

1. List and explain the four lines of defense the body uses to keep pathogens out.

2. What triggers the inflammatory response? Describe how the inflammatory response defends against invading pathogens.

3. Why is the presence of large numbers of white blood cells in a wound a sign of infection?

4. Identify the cells that are part of the immune system and outline the steps involved in the immune system.



 Breathing Passages – contain mucus and cilia that trap and remove most of the pathogens that enter the respiratory system

You CANNOT get it from contact such as or shaking hands May make you _____ or sneeze Mouth and Stomach – and stomach acid **Active Immunity** • A person acquires active immunity when their own immune system most pathogens The Inflammatory Response produces antibodies in response to the presence of a pathogen Line Defense – the inflammatory response, fluid Can result from either getting the or and white blood cells leak from ______ vessels into being nearby tissue and ______ the pathogens The Immune Response White Blood Cells – the phagocyte is a white blood cell that When someone gets a disease active immunity is produced and _____ and destroys pathogens once the person recovers, some T cells and B cells Inflammation – the blood vessels widen allowing more " " the pathogen's antigen white bloods cells to be delivered making the area red and • Once that pathogen enters the body again, these memory cells recognize the ______ and start the immune response so quickly the person usually does not get Fever – chemicals produced during inflammation cause a _____ because some pathogens do not grow Vaccination well at ______ temperatures Vaccination or immunization is the process by which harmless are deliberately introduced into a person's body The Immune System to produce immunity The line of defense – the immune system can distinguish between different kinds of pathogens with a defense The substance used in a vaccination is called a specifically at that pathogen which consists of a pathogen that has been _____ or Iymphocytes are white blood cells that killed but can still trigger the immune system between different kinds of pathogens **Getting Sick** T Cells – major function of T cells is to pathogens If you do become sick, sometimes medications can help If it is caused by a _____ you may be given an and distinguish one kind of pathogen from another They recognize markers or _____ (molecules antibiotic – a chemical the kills or slows the growth of that the identify each pathogen) bacteria harming the body cells Each antigen has a different I structure Antibiotic Resistance B Cells – lymphocytes the produce proteins that help destroy Bacteria that have survived in the presence of an antibiotic have become making it more difficult to pathogens called Each B cell produces only _____ kind of treat. antibody, each with a different structure How are they treated? They mark the pathogen for destruction There are currently no medications that can cure viral infections. Making them _____ together can help relieve the symptoms Keep from ______ to cells Best treatment – rest, liquids and healthy diet Make them easier for phagocytes to destroy How can they be prevented? may be used Keep your body • Only known virus to attack the human immune system and destroying T cells causing the body to lose its Eat and sleep right _____ your hands often ability to fight disease Spread from one person to another only if bodily fluids from an Do not ______ eating or drinking Store and ______ food properly infected person come in contact with those of an uninfected person

HIV