

Immune System Objectives:

Define these key terms:

disease pathogen vector antibiotic immunity inflammatory response fever interferon
antigen antibody humoral immunity cell-mediated immunity vaccination active immunity
passive immunity allergy histamines antihistamines anaphylactic shock asthma
autoimmune disease cancer benign tumor malignant tumor angiogenesis metastasis
chemotherapy radiation carcinogen

- Describe the germ theory of disease.
- List 4 kinds of microorganisms which can cause disease.
- Compare & contrast between an infectious and noninfectious disease. Give 2 specific examples.
- Explain how infectious diseases are transmitted (spread).
- Identify 5 specific diseases and state the pathogen that causes it.
- Describe how antibiotics fight infection.
- List two ways to avoid antibiotic resistance.

- Explain how *barriers* function in defending your body from pathogens.
- Give examples of internal *nonspecific* defenses referred to as 1st & 2nd defenses.
- Explain how the 3rd line of defense is a *targeted* defense.
- Sequence the order for the 3 levels the body defends itself against disease.
- Observe a virtual inflammatory response.
- List the characteristics of an inflammatory response.
- Observe a virtual interferon response.
- Explain the connection between an antigen & antibody encounter.
- Explain the role for B lymphocytes in an immune response.
- Discriminate between the similarities and differences for B & T lymphocytes in an immune response.
- Sequence the humoral response of the immune response.
- Sequence the cell mediated response of the immune response.

- Explain how a vaccination uses antigens and antibodies to produce an immunity to a disease.
- Describe how booster shots work.
- State examples for active & primary immunity.
- State the actions to take if exposed to rabies.
- Describe an allergic reaction.
- Describe how asthma can be an example of an allergic reaction.
- Sequence the order of exposure to allergens resulting in an allergic response.
- Identify symptoms that are signs of anaphylactic shock.
- What are histamines and the role of antihistamines.
- State 2 diseases that individuals are protected from due to the development of vaccines.
- Explain how autoimmune diseases like rheumatoid arthritis and multiple sclerosis affect the body.
- Explain why a person could reject a transplanted organ and how can it be prevented.
- Explain why HIV is incurable at this time.
- List 4 ways an individual can lower their risk of getting a disease.

- Compare and contrast between allergies, autoimmune diseases, and cancer.
- Define angiogenesis and metastasis.
- Compare benign and malignant tumors.
- Explain how three types of cancer treatments work at the cellular level.

