

How Does the Immune System Protect the Body?

Name: _____

Date: _____

Types of Immunity

- ♦ The complexity of your immune system goes _____ the three lines of defense build into your body.
- ♦ Immunity also takes three different forms: _____ immunity, _____ immunity, and _____ immunity

Types of Immunity: Innate Immunity

- ♦ The innate immune system is made up of your _____ and _____ lines of defense.
- ♦ But the innate immune response is not _____ to a particular pathogen.
- ♦ As soon as a body is infected with a pathogen, the _____ immune system is activated.
- ♦ The quick response in the first hours of exposure to a new pathogen allows this system to _____ the body.

Types of Immunity: Adaptive Immunity

- ♦ The adaptive immune system takes a _____ period to react to a new invading pathogen.
- ♦ It may take several _____ or a _____ for the response to be effective.
- ♦ Unlike the innate immune system, adaptive immunity is _____ specific.
- ♦ The immune response is _____ to specific invaders.
- ♦ The adaptive immune system also “_____” when it encounters a certain pathogen.
- ♦ If the pathogen invades the body again, the immune response is _____.
- ♦ The innate immune system, however, does _____ remember an encounter with a pathogen.

Types of Immunity: Passive Immunity

- ♦ Passive immunity is a bit _____.
- ♦ Although it also is specific to a certain antigen, it is acquired _____ rather than formed by the immune system in response to the presence of the antigen.

- ♦ One type of passive immunity is that given from the _____ to a _____ baby.
- ♦ A baby has not yet had the _____ to develop antibodies.
- ♦ Passive immunity _____ the baby against most antigens for its first few months of life, until it develops the ability to produce its own antibodies.
- ♦ Another type of passive immunity is given through special types of _____ that work by giving the body antibodies.
- ♦ The protection given by these vaccines does not _____ if that from traditional vaccines.
- ♦ Often the two types of vaccines are used _____ to prevent immediate infection and to help the body develop long-term protection.
- ♦ One example of this is in the prevention of rabies after a possible exposure to the _____ virus.
- ♦ Several vaccines are administered over the time, the first being an _____-based vaccine given for short-term immediate immunity while the others are given for _____ protection.
- ♦ Antibodies produce _____ if they remain in the body.
- ♦ Passive immunity may last for several _____ or _____ before the body destroys the antibodies.

Problems with the Immune System

- ♦ Our immune system protects us from _____ of diseases.
- ♦ This protection usually allows us to stay _____.
- ♦ However, sometimes an immune system can _____ a person's health instead of protecting it.

Problems with the Immune System: Autoimmune disease

- ♦ An _____ disease is a condition in which the immune system targets a person's cells, tissues, or organs by mistake.
- ♦ This person's immune system cannot tell the _____ between pathogens and the body's own parts.
- ♦ It may attack _____ tissues, such as red blood cells, blood vessels, endocrine glands, joints, muscles, or skin
- ♦ The more than _____ types of autoimmune diseases include multiple sclerosis (MS), rheumatoid arthritis, lupus, and type 1 diabetes.
- ♦ In MS, the nerves of the brain and spinal cord are mistakenly _____ by the person's own immune system.
- ♦ The result is _____ of muscle control, vision, balance, and feeling.
- ♦ A person can have more than _____ autoimmune disease.

- ♦ The treatment for these diseases often includes _____ to reduce the body's immune response.

Problems with Immune System: Allergies

- ♦ An _____ is an immune system response to a foreign substance that an average person would not be affected by.
- ♦ That substance might be _____, foods, animal hair, dust, or mold.
- ♦ It could also be _____, insect _____, or _____.
- ♦ A substance that triggers an allergic reaction is called an _____.
- ♦ When the immune system detects an allergen, it forms _____.
- ♦ The body reacts to the antibodies by releasing chemicals called _____.
- ♦ Histamines cause _____ reactions.
- ♦ They can include red, swollen _____ or itchy _____.
- ♦ Being _____ of one's allergies is an effective way to prevent such potential health problems.
- ♦ Precautions such as _____ the things that cause allergies and taking medications can help reduce or relieve symptoms.
- ♦ _____ medicines usually contain antihistamines.
- ♦ Many allergic reactions result in sneezing, itching, or other _____ reactions.
- ♦ However, some allergic reactions can be _____ and even life threatening.
- ♦ A severe allergic reaction is called _____.
- ♦ Some symptoms of anaphylaxis include difficulty _____ (caused by the swelling of breathing passages), nausea, vomiting, feeling light-headed, skin rash, and a weak pulse.
- ♦ Certain foods, such as _____, or insect bites, such as bee _____, can result in death if not treated immediately.