

Immune System Quiz Questions and Answers PDF

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Which cells are involved in the innate immune response? (Select all that apply)

- Neutrophils ✓
- Macrophages ✓
- B cells
- Natural killer cells ✓

The innate immune response involves various cells, including macrophages, neutrophils, dendritic cells, and natural killer (NK) cells, which act as the first line of defense against pathogens.

Which of the following are autoimmune diseases? (Select all that apply)

- Type 1 diabetes ✓
- Lupus ✓
- Asthma
- Multiple sclerosis ✓

Autoimmune diseases occur when the immune system mistakenly attacks the body's own tissues. Common examples include rheumatoid arthritis, lupus, and multiple sclerosis.

What are the functions of antibodies? (Select all that apply)

- Neutralize pathogens ✓
- Transport oxygen
- Mark pathogens for destruction ✓
- Produce hormones

Antibodies play crucial roles in the immune response by neutralizing pathogens, opsonizing them for phagocytosis, and activating the complement system. They also facilitate the destruction of infected cells and help in the formation of immune memory.

What is the role of cytokines in the immune system?

- They digest pathogens
- They signal between cells ✓**
- They store energy
- They transport oxygen

Cytokines are signaling molecules that mediate and regulate immunity, inflammation, and hematopoiesis. They play a crucial role in cell communication within the immune system, influencing the behavior of immune cells and coordinating the immune response.

What is the primary function of the immune system?

- To produce hormones
- To defend the body against infections ✓**
- To regulate body temperature
- To digest food

The immune system's primary function is to protect the body from harmful pathogens, such as bacteria, viruses, and other foreign invaders. It achieves this through a complex network of cells, tissues, and organs that work together to identify and eliminate threats.

Which nutrient is essential for supporting immune function?

- Vitamin A
- Vitamin C ✓**
- Vitamin K
- Vitamin B12

Vitamins, particularly Vitamin C, Vitamin D, and Zinc, are essential nutrients that play a crucial role in supporting and enhancing immune function.

Which type of vaccine contains a weakened form of the virus?

- Inactivated vaccine
- Subunit vaccine
- Live attenuated vaccine ✓**
- mRNA vaccine

Live attenuated vaccines contain a weakened form of the virus, which helps the immune system recognize and fight the actual virus if encountered in the future.

Which disease is characterized by the immune system attacking the body's own tissues?

- Influenza
- Tuberculosis
- Rheumatoid arthritis ✓
- Malaria

Autoimmune diseases occur when the immune system mistakenly attacks the body's own tissues, leading to inflammation and damage. Common examples include rheumatoid arthritis, lupus, and multiple sclerosis.

Which factors can weaken the immune system? (Select all that apply)

- Chronic stress ✓
- Regular exercise
- Poor nutrition ✓
- Adequate sleep

Several factors can weaken the immune system, including chronic stress, poor nutrition, lack of sleep, and certain medical conditions. Lifestyle choices such as smoking and excessive alcohol consumption also play a significant role in immune function.

Which of the following are types of vaccines? (Select all that apply)

- Live attenuated ✓
- Inactivated ✓
- Subunit ✓
- Antibiotic

Vaccines can be categorized into several types, including live attenuated, inactivated, subunit, and mRNA vaccines. Each type works differently to stimulate the immune response against pathogens.

What type of white blood cell is primarily responsible for producing antibodies?

- Neutrophils
- B cells ✓
- T cells
- Monocytes

The primary type of white blood cell responsible for producing antibodies is the B cell. These cells play a crucial role in the immune response by identifying and neutralizing pathogens such as bacteria and viruses.

Which of the following are components of the adaptive immune system? (Select all that apply)

- B cells ✓
- T cells ✓
- Skin
- Antibodies ✓

The adaptive immune system consists of specialized components that provide a targeted response to specific pathogens, primarily involving T cells and B cells, along with antibodies they produce.

Which of the following is a component of the innate immune system?

- Antibodies
- T cells
- Skin ✓
- Memory cells

The innate immune system includes various components such as physical barriers, phagocytic cells, and proteins like complement. These elements provide the first line of defense against pathogens in a non-specific manner.

Which of the following is NOT a function of the adaptive immune system?

- Rapid response to pathogens ✓
- Memory creation
- Specific targeting of pathogens
- Production of antibodies

The adaptive immune system is primarily responsible for recognizing specific pathogens, generating a targeted response, and developing immunological memory. Functions that do not involve these processes, such as immediate physical barriers or non-specific responses, are not part of the adaptive immune system.