

What Are Your Body Systems?

Name: _____

Date: _____

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- What evidence do you see that the organs in your body work together?
- The fact that the _____ atom can combine with other atoms to form molecules and eventually make an _____ that functions as well as you do, shows that a master plan was in place.

Organs and Organ System

- The human body is organized from the _____ to the most complex.
- _____ are the basic unit of life.
- A group of similar cells working together to perform a specific job is a _____
- A group of tissues that work together to perform a certain task is an _____
- A group of organs working together to perform a series of related functions is an _____

Organ Systems

- Your body has _____ organ systems.
- Each depends on the other _____ to function properly.

Endocrine System

- The _____ helps control body functions through the secretion of hormones.
- The endocrine system...
 - Controls the rate at which you _____.
 - The growth and development of your _____ organs.
 - Other body functions.
- Endocrine glands produce _____ which help regulate other cells and organs.
- Hormones go directly into the _____ and travel throughout the body.
- Different endocrine gland produces hormones that act on specific _____ or organs.
- Some glands play a _____ role in the human body than others.
- The _____ is considered a master controlling gland in the endocrine system.
- It is attached to the hypothalamus and produces hormones only when they are _____.
- The hypothalamus is a tiny section of the _____ no larger than a pea.
- If the hypothalamus senses a _____ in the hormone adrenalin, for example, it sends a chemical message to the pituitary gland.
- The pituitary gland responds by releasing a hormone that _____ the activity of the adrenal gland.

Glands in Endocrine System	Hormone	Affects

Immune System

- The organ system that protects against infectious organisms and gives your body immunity is the _____ system.
- The _____ is a network of cells, tissues, and organs that work together to defend every organ and tissue in your body against attacks by infectious substances.
- Some organs can be part of more than _____ body system.
- For example, your _____ is considered to be part of the immune system.
 - It is the body's first line of defense against disease.
- It is also the primary organ of the integumentary system, and acts as part of the _____ system as well.
- The immune system works closely with the _____ system to transport its defensive cells.
- It works with the _____ system to produce and store immature white blood cells.
- All _____ blood cells, known as leukocytes, start in the bone marrow as stem cells.
- There are _____ basic kinds of leukocytes:
 - Lymphocytes
 - Phagocytes
- The lymphoid organs work with the _____ system.
 - Lymphoid organs include lymph nodes, _____, the thymus
- The thymus is an organ located between the _____ and the heart.
- It is responsible for storing the _____ white blood cells and preparing them to become specialized cells called T cells.
- _____ have a unique receptor that helps your body fight off infection.

- _____ mature and remain in the bone marrow until activated.
- _____ circulates in the blood and makes the antibodies that recognize pathogens.
- They may be stored in other lymphatic organs such as the _____.
- The spleen _____ the blood for foreign cells and recycles old or damaged red blood cells.
- If infectious organisms do get into your body, the cells and organs of your immune system _____ them and try to get rid of them before they can reproduce.

Lymphatic System

- How much of your body is made up of water?
- The body is more than _____ of water!
- Where is all that water?
- Is it in your bones, in your blood?
- While bones and blood both contain water, most of the water that makes up your body is in your _____.
- _____ is a clear, fluid tissue that surrounds all body cells and saturates them with water and nutrients.
- Lymph flows through the _____, which is a network of tiny tubes and organs found throughout the body that collects fluid from tissues and returns it to the blood.
- Major lymphatic organs include:
 - Lymph nodes
 - _____
 - Spleen
 - _____
 - Thymus Gland
- Other major organs also contain lymphatic tissue include:
 - _____
 - Lungs
 - Intestines
 - _____
- Lymph nodes are tiny organs shaped like beans that are found in the _____, _____, and groin.
- These nodes filter the lymph and _____ foreign materials.
- The _____ is an organ above the stomach and under the ribs on the left side. It produces lymphocytes and stores _____ red blood cells.

- *What happens if you rupture your spleen and it has to be removed? What will be the effect on your immune system's abilities?*
 - The body's ability to fight infections may be _____
- Recall that specialized blood cells mature and develop in the _____ system.
- These _____ are the white blood cells that fight bacteria and viruses that are harmful to the body by releasing antibodies or destroying foreign materials.
- Lymphocytes also help prevent _____ cell growth.
- There are three types of lymphocytes:
 - _____
 - T cells
 - Natural _____ Cells
- These lymphocytes are stored in lymph nodes and circulate in the _____ and lymph fluid.
- Besides releasing specific cells that fight _____, the lymphatic system has another important function.
- To prevent the build-up of excess fluid in the tissues of the body, small tubes called _____ extend into the tissues to absorb fluids and return them to the circulatory system.
- The lymph also carries fats from the small _____.
- These capillaries merge into larger vessels that contain one-way valves that prevent the lymph fluid from flowing _____.
- It flows into ducts in the upper part of the body and back into the _____.
- A _____ body works like a well-oiled machine.
- The endocrine, lymphatic, and immune systems work _____ and use chemicals and special cells to keep you healthy.

Overview

- Immune system protects us from _____ like viruses, bacteria, fungus infections, and parasites.
- Immune system is made up of special organs, vessels, and many different types of _____ cells that each play very important roles in keeping us healthy.
- We call the cells of the immune system white blood cells or _____.
- There are _____ major types of white blood cells: phagocytes and the lymphocytes.
- Types of lymphocytes include: T cells, _____, and natural killer cells.

- These cells are produced in the bone _____ and stored in the lymphatic system.
- The T cells _____ the activities of the other white blood cells.
- The B cells release the special proteins into the blood called _____ that help the body recognize and fight disease.
- Killer cells engulf and destroy foreign _____.