Name: Date:



### The Human Heart: Nature's Incredible Pump

The heart, a muscular marvel, is essential for life. Situated between the lungs in the mediastinum, it is roughly the size of a closed fist. Its apex points leftward, while its base anchors to major blood vessels, ensuring its stability. The heart's primary function is to pump blood throughout the body, delivering oxygen and nutrients while removing waste. This constant circulation is vital for sustaining life. The heart is divided into four chambers: two atria and two ventricles. The right side handles deoxygenated blood, directing it to the lungs, while the left side pumps oxygenated blood to the body.

The heart's rhythmic beating begins with an electrical impulse from the sinoatrial node. This impulse travels through the atria, causing them to contract and push blood into the ventricles. The ventricles then contract, sending blood out to the lungs and the rest of the body. Heart valves ensure this blood flows in the correct direction, preventing backflow. The heart's walls are composed of three layers: the epicardium, myocardium, and endocardium, each contributing to its robust function.

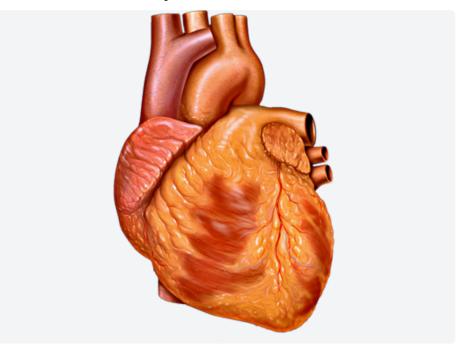


Image: Anterior view of the human heart. <u>Source</u>

Located centrally within the chest, the heart's position allows it to efficiently circulate blood. The heart's size and shape can vary among individuals, often influenced by factors such as age and physical fitness. Understanding the heart's anatomy and function is crucial for recognizing its vital role in maintaining overall health and well-being.

In essence, the heart's continuous pumping action ensures that our bodies receive the oxygen and nutrients they need to function properly. This complex organ, with its intricate structure and relentless rhythm, is a testament to the wonders of human biology. Recognizing the importance of heart health can lead to better lifestyle choices and a deeper appreciation for this incredible organ.

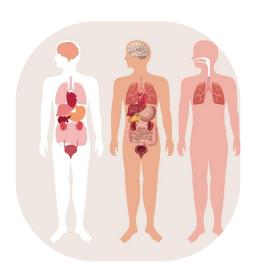
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	Name of the organ
	. Size
	Location in the body
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Name: Date:





Name of the organ	
Heart	

#### Size

Roughly the size of a closed fist

#### Location in the body -----

Situated between the lungs in the mediastinum

#### Function

Pumps blood throughout the body, delivering oxygen and nutrients while removing waste

#### Interesting facts

The heart is divided into four chambers: two atria and two ventricles. The right side handles deoxygenated blood, directing it to the lungs, while the left side pumps oxygenated blood to the body. The heart's rhythmic beating begins with an electrical impulse from the sinoatrial node. Heart valves ensure that blood flows in the correct direction, preventing backflow. The heart's walls are composed of three layers: the epicardium, myocardium, and endocardium.

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Put the sentences in the correct order.		
$\bigcirc$	The right side of the heart handles deoxygenated blood, directing it to the lungs to receive oxygen.	
$\bigcirc$	Heart valves ensure that blood flows in the correct direction, preventing any backflow during this process.	
$\bigcirc$	This impulse travels through the atria, causing them to contract and push blood into the ventricles.	
$\bigcirc$	The heart's function begins with an electrical impulse from the sinoatrial node.	
$\bigcirc$	The left side of the heart pumps oxygenated blood to the rest of the body to supply tissues with oxygen and nutrients.	
	The ventricles then contract, sending blood out to the lungs and the rest of the body.	

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Tick the correct answer.
What is the primary role of the heart's four chambers?
$\bigcirc$ To pump blood throughout the body $\bigcirc$ To filter waste products from the blood
$\bigcirc$ To regulate body temperature $\bigcirc$ To store oxygen and nutrients for later use
How does the sinoatrial node contribute to heart function?
$\bigcirc$ It opens and closes the heart valves $\bigcirc$ It filters impurities from the blood
O It generates the electrical impulse that initiates the heart's rhythmic beating
O It anchors the heart to major blood vessels
Why is the heart's location in the mediastinum important for its function?
$\bigcirc$ It assists in the digestion process $\bigcirc$ It allows the heart to efficiently circulate blood
O It provides a protective barrier against external injury
O It helps the heart to store oxygenated blood
What is the function of heart valves?
O To filter oxygen from the blood
O To ensure blood flows in the correct direction and prevent backflow
O To provide structural support to the heart
O To generate electrical impulses for heart contractions





Describe the process by which the heart pumps blood throughout the body.	
Explain the significance of the heart's location within the chest.	