

# My Body



## Relate

Which organ helps you to feel hot or cold?

Eyes

Skin

Ears

## You will learn

- About internal and external organs
- Various organ systems



## Gain Knowledge

A machine has different parts that work together. Similarly, the human body is also like a machine. The human body helps us to perform different activities. It comprises of different parts such as eyes, ears, nose, legs, hands, stomach, etc. It has different parts or organs that work together. You have studied earlier that the body is made up of external and internal organs.

**External organs:** Organs of the body that we can see are called **external organs**. For example, head, neck, arms, legs, hands, feet, etc. The sense organs— eyes, ears, nose, tongue and skin are also external organs.



Eyes



Ear



Nose



Skin



Tongue



### For the teacher

Show charts and diagrams of different organ systems of the body. Point out the different organs and explain their working.

**Internal organs:** Organs that are inside the body are called **internal organs**. We cannot see them. For example, brain, heart, lungs, stomach, etc. Each body organ has a different shape and is made up of different tissues.



Brain



Heart



Lungs



Stomach

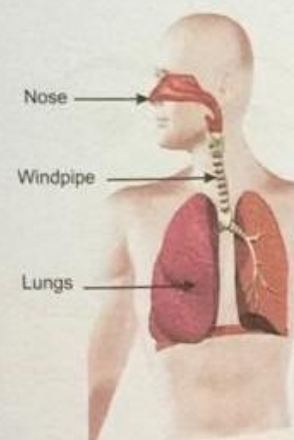
A group of organs that work together to perform one or more functions is called an **organ system**.

Our body is made up of different organ systems that work together to make sure the body is functioning. Let us study about these organ systems.

## Organ Systems

The human body has eight organ systems:

- Breathing system
  - Muscular system
  - Nervous system
  - Circulatory system
  - Digestive system
  - Reproductive system
  - Skeletal system
  - Excretory system
- **Breathing system:** It is also called the **respiratory system**. Nose, windpipe and lungs make the breathing system. This system helps us in breathing. We breathe in air (oxygen) through the nose. This air reaches the lungs through the windpipe. We breathe out air (carbon dioxide) through the nose again.



Breathing system

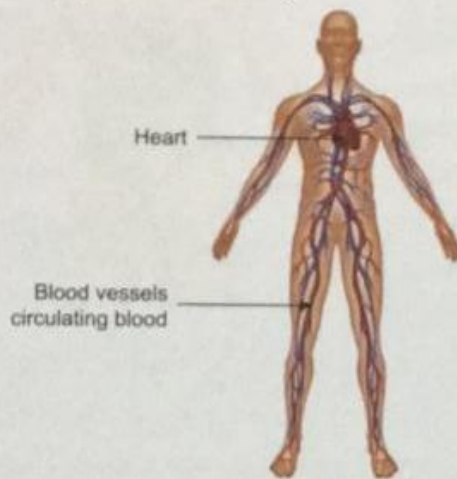


### Knowledge Booster

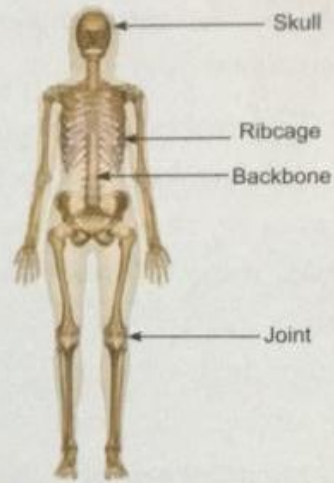
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When at rest, an average adult person breathes 12 to 20 times in a minute.

- **Circulatory system:** Heart, blood vessels and blood make up the circulatory system. It circulates blood to different parts of the body. The heart pumps the blood that circulates in the body with the help of blood vessels. The nutrients (food) and air (oxygen) are mixed in the blood and supplied to every part of our body.



Circulatory system



Skeletal system

- **Skeletal system:** The skeletal system is made up of bones. It gives shape and structure to the body. It also protects the internal organs of the body. Skull, ribcage and backbone are parts of the skeletal system. The skull is made of flat bones that protect the brain. Ribcage is like a cage of bones. It protects the heart and lungs. The backbone supports our body. It also protects the **spinal cord**.

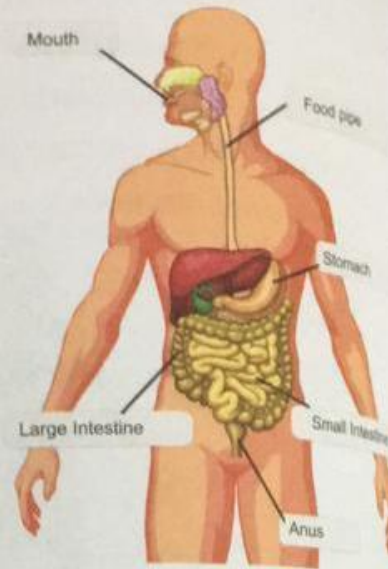
An adult human body is made up of 206 bones. The bones are joined at different points in our body. These are called **joints**. These joints help in the movement of the body.

- **Muscular system:** As the name suggests, the muscles form the muscular system. Muscles are attached to the bones that help in their movement. There are more than 600 muscles in our body. Exercise makes our muscles strong.

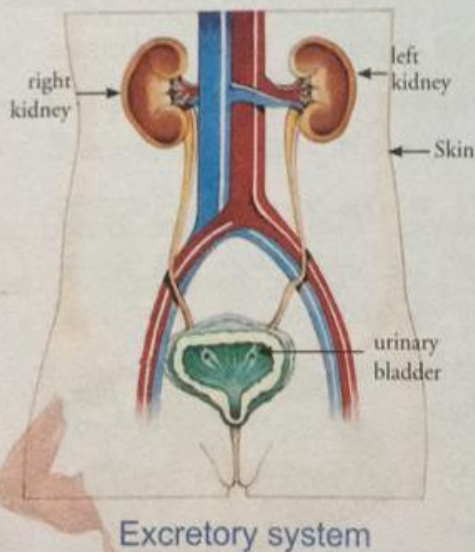


Muscular system

- **Digestive system:** The digestive system is made up of mouth (teeth, tongue and saliva), food pipe, stomach, small intestine, large intestine and anus. It helps in the digestion of food. These organs help in breaking down the food into simpler forms (parts) to get absorbed by the body.

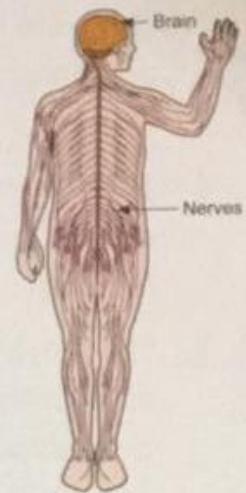


The digestion process begins in the mouth. The teeth break down the food into smaller pieces as we chew and the saliva (from the tongue) starts to break down starchy food. These small pieces of food reach the stomach through the food pipe. The different digestive juices of the stomach digest the food further. They break the food into more simple forms. From the stomach, the food reaches the small intestine, a coiled tube-like structure. Here the food is further digested and nutrients present in the food are absorbed by the blood. The leftover waste after digestion is carried to the large intestine and later removed through the anus.



- **Excretory system:** The excretory system helps in removing waste products from the body. You just learnt how the leftover waste is removed from the body. Besides this, the body releases sweat, urine and carbon dioxide (a waste gas) out of the body. The lungs release carbon dioxide that comes out through the nose. Skin releases sweat and kidneys release urine. Solid waste (faeces) is released by the large intestine that comes out through the anus.

- **Nervous system:** The nervous system consists of the brain and nerves. The brain controls all the organs of the body. It sends and receives signals through a network of nerves. We taste, see, hear, smell, think, move, run, breathe because of the nervous system.
- **Reproductive system:** The reproductive system helps in producing young ones. Males and females have different reproductive organs. Females give birth to young ones.



### Let us revise

1. The human body has different organs that work together to perform different functions.
2. We can see the external organs but cannot see the internal organs of the body.
3. A group of organs that work together to perform one or more functions is called an organ system.
4. The human body is made of different organ systems.
  - Breathing system
  - Muscular system
  - Nervous system
  - Circulatory system
  - Digestive system
  - Reproductive system
  - Skeletal system
  - Excretory system



### Testing Time

A. Shade the circle ● of the right answer:

1. Nose, windpipe and lungs make the \_\_\_\_\_ system.
 

a) breathing	<input type="radio"/>	b) circulatory	<input type="radio"/>
c) muscular	<input type="radio"/>	d) excretory	<input type="radio"/>
2. The blood circulates in the body through \_\_\_\_\_ vessels.
 

a) water	<input type="radio"/>	b) muscle	<input type="radio"/>
c) blood	<input type="radio"/>	d) intestine	<input type="radio"/>

3. There are more than 600 \_\_\_\_\_ in the body.
- |           |                       |            |                       |
|-----------|-----------------------|------------|-----------------------|
| a) bones  | <input type="radio"/> | b) muscles | <input type="radio"/> |
| c) joints | <input type="radio"/> | d) organs  | <input type="radio"/> |
4. The waste is removed from the body through \_\_\_\_\_.
- |                    |                       |                    |                       |
|--------------------|-----------------------|--------------------|-----------------------|
| a) small intestine | <input type="radio"/> | b) large intestine | <input type="radio"/> |
| c) lungs           | <input type="radio"/> | d) anus            | <input type="radio"/> |
5. We see, hear, think and move due to \_\_\_\_\_ system.
- |              |                       |                 |                       |
|--------------|-----------------------|-----------------|-----------------------|
| a) digestive | <input type="radio"/> | b) nervous      | <input type="radio"/> |
| c) skeletal  | <input type="radio"/> | d) reproductive | <input type="radio"/> |

**B. Mark (✓) for right and (X) for wrong statements:**

1. Our organ systems work only in the day.
2. We breathe in air through the nose.
3. Heart, blood vessels and blood make the muscular system.
4. Muscles give shape and structure to the body.
5. Brain controls all the organs of the body.

**C. Match the following:**

- |                    |                          |
|--------------------|--------------------------|
| 1. Internal organs | a. carbon dioxide        |
| 2. External organs | b. head, neck, eyes      |
| 3. Breathe in      | c. digestive juices      |
| 4. Breathe out     | d. cage of bones         |
| 5. Ribcage         | e. heart, lungs, stomach |
| 6. Stomach         | f. oxygen                |

**D. Fill in the blanks with the given words:**

joints    windpipe    nerves    Blood    Reproductive

1. Air reaches the lungs through \_\_\_\_\_.
2. \_\_\_\_\_ carries food and air to all the body parts.

3. Bones are joined at the \_\_\_\_\_.
4. Brain sends and receives signals through the \_\_\_\_\_.
5. \_\_\_\_\_ system helps in producing the young ones.

**E. Answer the following questions:**

1. What is an organ system?

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2. List the different organ systems of the body.

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3. What is the skull made of?

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4. Where does the digestive process begin?

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5. Name the waste products produced in the body. Also, mention the organ that produce them.

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## Activity Time

### A. Explore

Visit the science laboratory of your school. Look at the human skeleton and observe the different bones and joints. Notice how many joints are there in our body.

## B. Project

Observe the different activities that you perform in a day. Make a list of them. Now, think about the organs and organ systems that work to do all the activities. Write them beside each activity.

## C. Craft time

Use long ice-cream sticks and make a human body skeleton.



1. What will happen if the organ systems of our body do not work at night?
2. You have read about the process of digestion in the chapter. What do you think is indigestion?

### Life Skills



Our body organs do so much for us. We should take care of them and help them to be healthy. We should eat healthy food, exercise regularly and sleep properly. We should not eat junk food. We should not exert our body too much. These things will help us to keep a healthy body and a healthy mind too.