

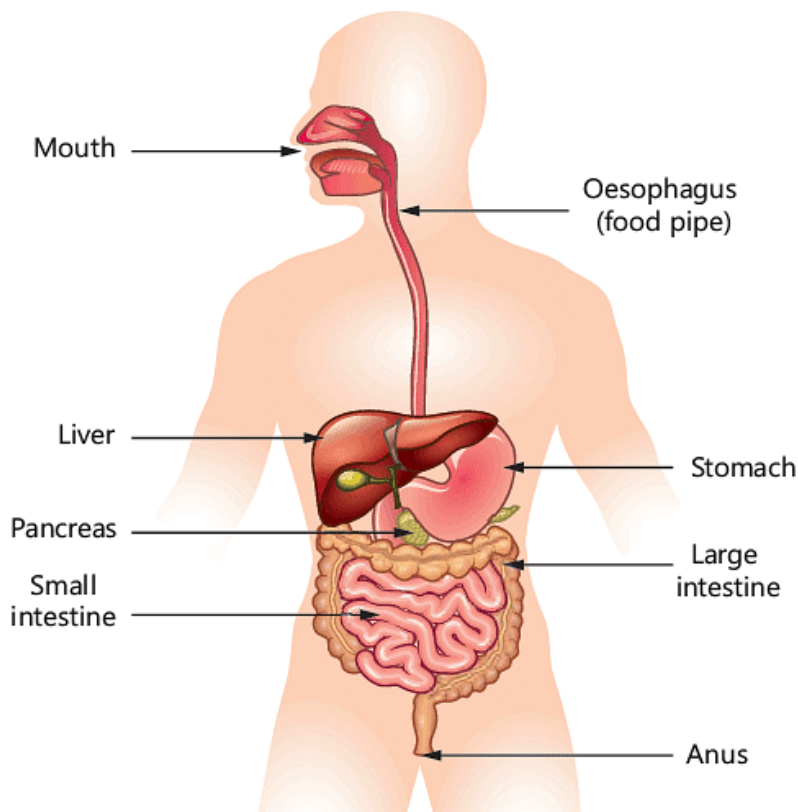
Digestive System

Introduction

Our body gets energy from the food we eat. However, our body cannot use the food in the form it is eaten. It needs to be broken down into simpler form. The process of breaking down of food into simpler form is called digestion.

The Digestive System — Parts and Stages

As soon as we bite a food, such as a sandwich, it starts a journey through our digestive system. The entire process of digestion takes about 3-4 hours. The different organs of a digestive system are: Mouth, food pipe, stomach, liver, pancreas, small intestine, large intestine and anus. Each of these organs does a different job but together they complete the digestion process.



Digestive system

The process of digestion is given in the flowchart below.

In the mouth

- The teeth in the mouth grind the food into smaller pieces.
- Saliva present in the mouth makes the food soft and turns it sweet. This happens because saliva converts starch in the food to sugar.

In the food pipe

- From the mouth, the food gets swallowed into the food pipe also known as oesophagus.
- Food pipe takes the food to the stomach.

In the stomach

- The swallowed food is collected in a bag like structure called stomach. Here, the food is churned and ground to form a paste and mixed with digestive juices produced by the wall of the stomach.

In the small intestine

- The food that enters from the stomach to the small intestine is partly digested. More digestive juices are added to the food in small intestine.
- Bile from liver and pancreatic juice from pancreas are added to the food to digest it completely. Thus, the digestion of food ends in small intestine.
- Blood absorbs the digested food and delivers it to different parts of the body.

In the large intestine

- The undigested food is now passed on to large intestine.
- Here most of the water is absorbed back from the undigested food.

Anus

- The undigested food is thrown out of the body through an opening called the anus.

Mnemonics:

My Father Started Skiing Last August Mouth Food pipe Stomach Small intestine Large intestine Anus

Teeth

We already know that digestion begins in the mouth and teeth help to break down food into smaller pieces. Now, let us understand about structure and types of teeth. When the baby is about six months old, the teeth start appearing. By the time she is about three years old, she has 20 teeth. These teeth are called **milk teeth**. At the age of six, the milk teeth start falling out. New teeth appear in their place. These are called **permanent teeth**. There are 32 permanent teeth in all between the ages of 17 and 21.

Parts of a Tooth

Look in the mirror at your own teeth or see your friend's smile. The tooth has different parts.

- The part of the tooth we can see is called the **crown**. The part we cannot see is called the **root**. It holds the tooth firmly in place.
- The outer part of each tooth is made of **enamel** that is very hard and shiny substance. It protects the inside parts of the tooth. Enamel is the hardest substance in the human body.
- **Dentine** lies under the enamel. It is hard but not as much as the enamel.
- Dentine protects the innermost part of the tooth, called the **pulp**. It is soft and contains **nerve** endings and blood supply. The nerve endings inside the pulp send messages to the brain about any sensation.
- The nerves are connected to the gum through a hole in the root.
- **Gums** are the pink coloured soft tissue surrounding the teeth.

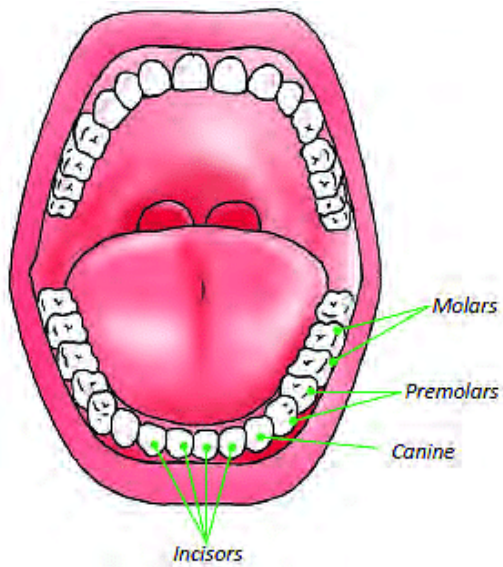
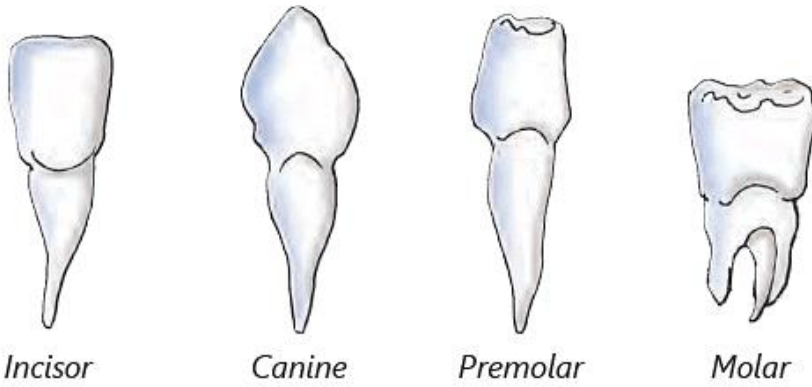


Cross section of tooth

Types of Teeth

There are different types of permanent teeth in the mouth. Each one has its own function. The four types of teeth are:

- Incisors
- Canines
- Premolars
- Molars



Arrangement of teeth

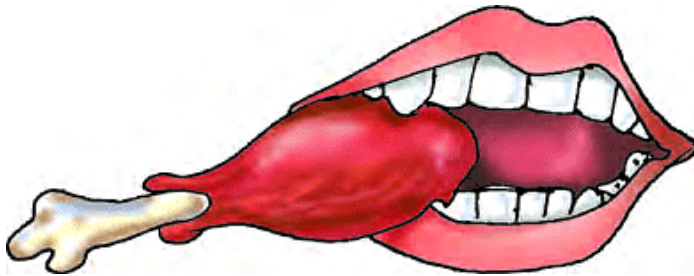


Incisors cut food



A chisel

- The two front teeth and the teeth on either side of them are the **incisors**. They are four on the top and four on lower jaw.
- The incisors are also known as **cutting teeth** as they are shaped like tiny chisels, with flat ends.
- They are used for cutting food.



Canines tear food

- The pointed and sharp teeth on either side of the incisors are called **canines**.
- There are four of them, two on top and two on bottom.
- They help tear food, hence they are also called **tearing teeth**.



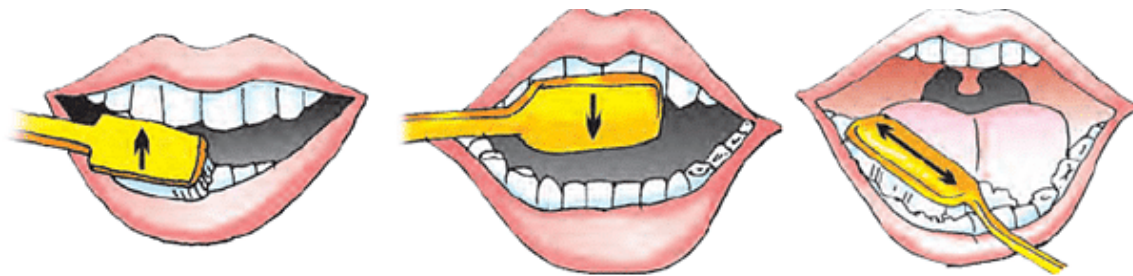
Premolars and molars crush and grind food

- Next to the canine teeth are the **premolars**. We have eight premolars in all, four on top and four on the bottom.
- These teeth are bigger, stronger, and have ridges, which make them useful for crushing food. Thus, they are also called **crushing teeth**.
- We have twelve of molars, six on the top and six on the bottom.
- Molars are the toughest among all types of teeth.
- They are wider and stronger than premolars, and have more ridges.
- They help to grind the food. Thus, they are also called **grinding teeth**.

Taking Care of Teeth

By following some simple rules we can keep our teeth healthy and sparkling. They are:

- Brushing teeth with a toothpaste, twice a day.
- It is also good to clean between the teeth with dental floss, which is a special string for cleaning teeth, to remove food particles.
- It is also important to visit the dentist regularly.
- We can also prevent tooth decay by not eating many sugary snacks and drinks.
- Calcium in milk keeps our teeth strong. Vitamin C keeps our gums healthy.
- The best way to brush teeth is in little circles until we have covered surface of every tooth. Brush up and down, rather than side to side.



Correct way of brushing teeth

Healthy Eating Habits

Apart from eating a balanced diet we also need to do some more things to be fit and healthy. We must follow these in our daily life.

- Drink at least eight glasses of water every day.



- Wash your hands before and after eating.



- Always eat freshly cooked food.



- Eat a balanced meal. Include plenty of fruits and vegetables as they help in faster digestion of food.



- Do not eat too many sweets and chocolates.
- Eat meals at regular intervals. Do not overeat.
- We should not eat food that is left uncovered because germs present in the air may settle on it and can make us sick.



- We should rinse our mouth after every meal.
- We should not play or exercise immediately after eating our meal.