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Burps, Bottoms and Bile

Human digestion

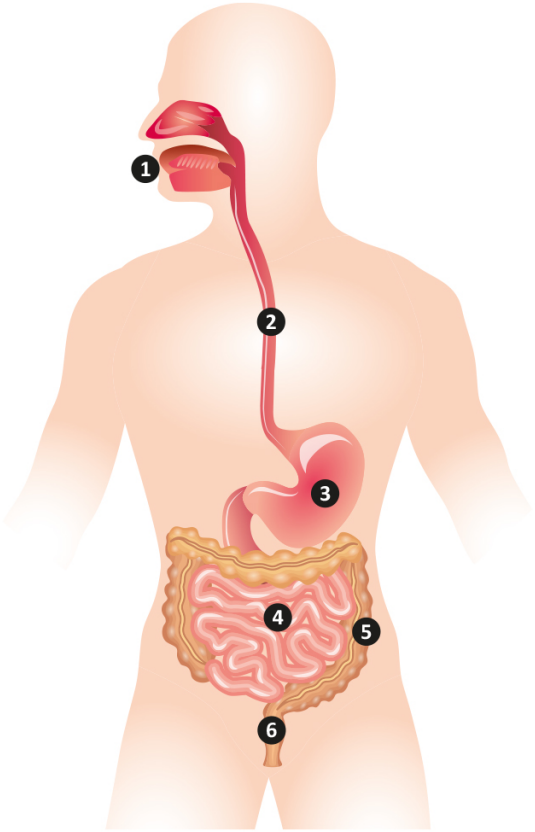
Humans need to absorb proteins, carbohydrates, fats, vitamins and minerals from their food to keep healthy and have enough energy to live and work. The job of the digestive system is to break down food so it can be absorbed and used by the body.

The digestive system

1. Teeth chew food into small pieces in the **mouth**. These pieces mix with saliva containing enzymes to start digestion.
2. The muscles in the **oesophagus** move a ball, or bolus, of food down to the stomach.
3. The muscles in the **stomach** churn the food and acids and enzymes break it down. This can take 2–6 hours.
4. Partially digested food travels through the **small intestine** and nutrients are absorbed into the body. This can take 3–5 hours.
5. The **large intestine** removes excess water from the food that can't be digested to make solid faeces (poo). This can take 4–72 hours.
6. The faeces are stored in the **rectum** ready to leave the body.

Healthy digestion

The digestive system is directly affected by food and lifestyle. It is important to have a healthy digestive system to maintain good general health and well-being. Eating a balanced diet and drinking plenty of water will keep food moving through the digestive system. Regular exercise is also important to maintain a healthy weight and keep muscles moving digestive waste through the body.



Good toilet habits

It is important to go to the toilet as soon as the urge is felt. Not going can lead to stomach ache and constipation. It is essential to maintain good personal hygiene when using the toilet, including washing hands with soap and water to prevent the spread of germs. Soap kills bacteria and viruses that could cause illness. Drying hands thoroughly is also important because bacteria spread more easily on wet hands.

Healthy diet

Eating a healthy, balanced diet helps people to get rid of solid waste more easily. Fibre or roughage in our diet is crucial to healthy digestion. Fibre is found in fruit and vegetables, wholewheat breakfast cereals, granary bread and pulses, such as beans or lentils. Drinking plenty of water also helps to break down food and softens faeces to prevent constipation. Foods that contain a lot of fat, such as chips, burgers and fried foods are harder to digest and can cause stomach ache. Eating more lean meat and fish, drinking skimmed or semi-skimmed milk and grilling instead of frying foods can help to keep the digestive system working well.

A healthy society

One of the main health problems today is obesity. Obesity means being extremely overweight, which is dangerous for health. Being overweight can lead to type 2 diabetes, where there is too much sugar in the blood, which can cause serious problems with the eyes, heart and nerves. It can also cause heart disease, cancer and strokes. Having a healthy diet with more fruit and vegetables and fewer high-fat foods and fizzy drinks helps people to stay healthy. It is also important to do plenty of exercise, which reduces the risk of major illnesses.

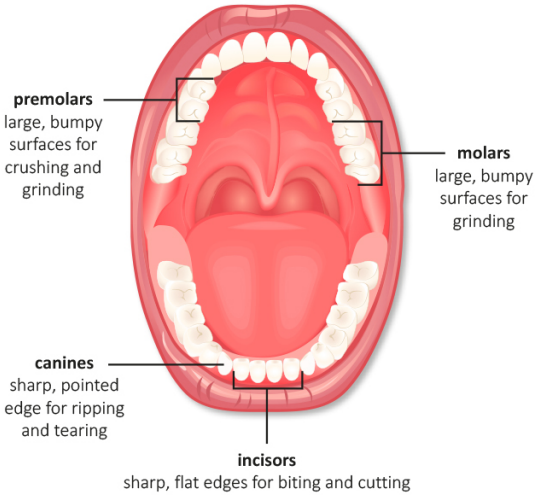
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Teeth

Teeth are hard, white objects in the mouth that are used for biting and chewing. Humans have two sets of teeth over their lifetime. The first set of 20 teeth are called deciduous or milk teeth. These start to come through when babies are around six months old. They are gradually replaced by 32 permanent adult teeth from about six years old. There are four different types of teeth, which are shaped according to the job they do.

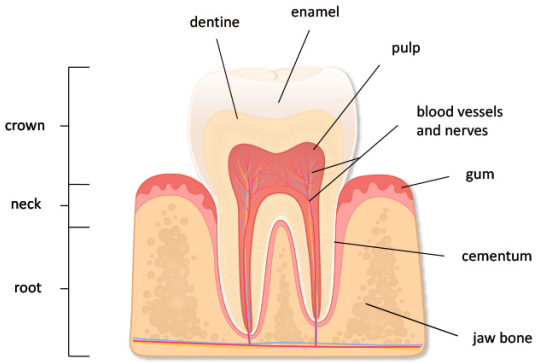


Tooth decay

Bacteria are microorganisms that live in and on the body. Some are completely harmless or even helpful, but some cause disease. Millions of bacteria live in a healthy mouth. If sugary foods are left on teeth after eating, the sugar and bacteria in the mouth form a soft, sticky film on the teeth called plaque. The bacteria then turn the sugar into acid. The acid starts to dissolve the tooth enamel, leading to holes and pain. This is called tooth decay or cavities.

Structure of a tooth

The visible part of a tooth is called the crown. The neck of a tooth is between the crown and the root. The root is anchored in the jawbone to keep the tooth still. The outer layer of a tooth is the enamel, which is the hardest substance in the body. Under the enamel is a layer called dentine. Dentine contains the pulp, which is the soft middle of the tooth that has a blood supply and nerves. The gums protect a tooth's root. It is important that gums are regularly cleaned and kept healthy.



Cross section of a healthy tooth

Keeping teeth healthy

It is important to keep teeth healthy by regularly removing plaque. This is done by brushing twice a day using a toothbrush and toothpaste that contains fluoride. Fluoride is a mineral that helps prevent tooth decay. Having a dental check up every six months will make sure any problems are sorted out as soon as possible and the dentist will give advice about keeping teeth healthy. It is also important not to have too many sugary foods and drinks.

Glossary

absorb	To take in or soak up a substance.
bacteria	Microorganisms that are found everywhere. Some can be useful but others cause disease.
bolus	A small, chewed-up lump of food.
constipation	A condition where it becomes difficult to expel faeces from the body.
decay	Damage caused by bacteria.
digestion	The process when food is broken down and absorbed inside the body after being eaten.
digestive system	The parts of the body that are responsible for digesting food.
enzyme	A chemical in the body that speeds up changes. For example, enzymes in saliva start the breakdown of food.
faeces	The solid waste passed out of the body after digestion. Also known as poo.
microorganism	A living thing that can only be seen with a microscope.
nutrient	A substance needed by the body to live and grow.
saliva	The liquid made in the mouth that contains enzymes and starts digestion.
tongue	A muscular organ in the mouth that is involved in swallowing.

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