THE HUMAN DIGESTIVE SYSTEM

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CONTENTS

AT A GLANCE

- Food is the body's source of energy.
- Digestion makes it possible for the body to use the nutrients in food.
- The digestive system is a group of organs in the human body that digest food.
- As food passes through the digestive system, the body breaks it down into smaller parts.
- The body absorbs much of the nutrients in food in the small intestine. Then, food passes through the large intestine before being released as waste.
- Muscles contract and relax to push food through the digestive system.

- Constipation, diarrhea, and gas can all be symptoms of digestive conditions. Many of these conditions can be treated.

- Cancers are among the most serious digestive conditions. Many cancers can be treated.

- Eating well, getting enough sleep, and exercising help keep the digestive system healthy.

HOW DOES THE DIGESTIVE SYSTEM WORK?

The digestive system starts working even before people take a bite of food. First, people see or smell food. Their salivary glands start working. Glands are organs. They make and release substances that do jobs for the body. The salivary glands make saliva, or spit. Saliva is the first digestive juice.

The mouth is the first part of the digestive system. This is where the body

The average person produces 17 to 51 fluid ounces (0.5 to 1.5 L) of saliva per day.

begins to break down food. The teeth grind the food into smaller pieces. Saliva mixes with the food. Saliva contains **enzymes**. One is called amylase. It breaks down carbohydrates.

DOWN THE ESOPHAGUS

Once people are finished chewing, they swallow the food. The tongue pushes it into the throat. The food enters the esophagus. This is a long, narrow tube made of muscles. The muscles behind the food squeeze. The muscles ahead of the food relax. This wavelike motion is called peristalsis. It pushes food through the digestive system.

The food reaches the end of the esophagus. A strong ring of muscle stops

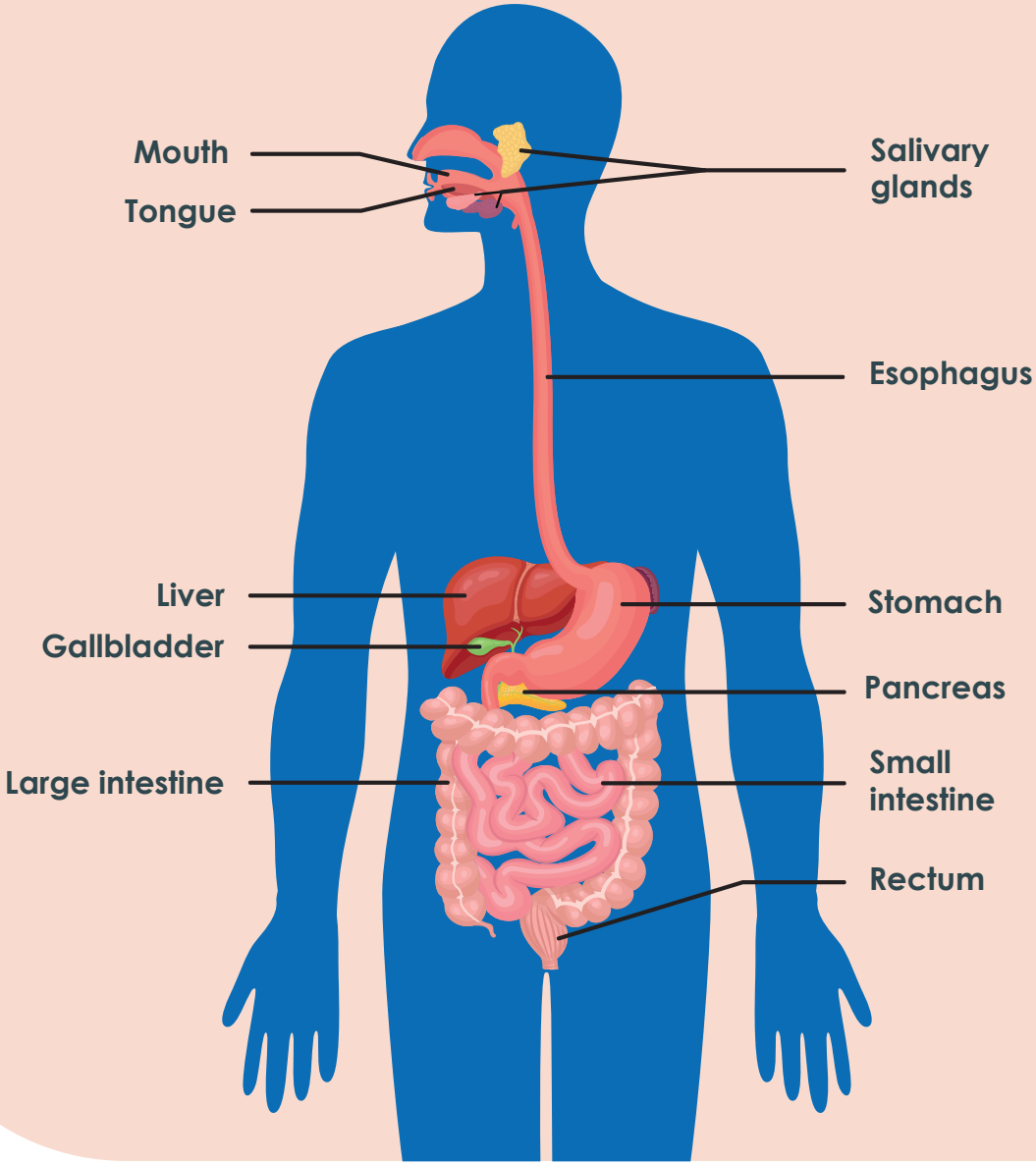
the food's progress. This ring is called a sphincter. It opens to let food into the stomach. Then it squeezes shut again. This keeps the contents of the stomach from returning to the esophagus.

The stomach is an organ shaped like the letter *J*. It is in the left center of the abdomen. In the stomach, muscles squeeze

Salivating for Sour Candy

Some people like sour candy. When they eat it, their mouth may ache. These aches may happen near the jaw hinge or at the base of their mouth. The salivary glands cause these aches. The glands make lots of saliva in response to sour things. This is because sour things are acidic. The saliva reduces the acid's strength. This helps protect the body.

THE HUMAN DIGESTIVE SYSTEM



This diagram shows where the parts of the digestive system are located in the body.

even further. These bacteria also make vitamin K. Vitamin K helps the blood clot. This is how the body stops bleeding. Clotting makes scabs form. Vitamin K also helps build bones.

The large intestine has another job. It absorbs water from the chyme. This water returns to the bloodstream. As water is removed, the chyme becomes solid. This solid waste is now stool. It is stored in the rectum until the person passes the stool. It takes about 36 hours for the contents of the large intestine to pass through it.

GLOSSARY

biopsy

a medical test that is performed on a sample of tissue or cells

cells

the basic units of living things

diagnosed

determined the cause of a medical condition

enzymes

substances that promote the chemical reactions occurring within living things

fiber

a type of carbohydrate that helps the body digest food but is not digested itself

microbes

very small living things that cannot be seen by the naked eye

molecules

groups of atoms bound together that form a pure chemical substance

organic

related to living things

stool

solid human waste, also known as poop

SOURCE NOTES

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FOR FURTHER RESEARCH

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