

Digestion Process

Teeth: Like most mammals, humans have different types of teeth for biting and chewing. Ask students if all their teeth look the same. Ask how the front teeth differ from the back teeth. Front teeth (incisors) are sharper and bigger, back teeth (molars) are flat and broad. While food is broken down somewhat by chewing and grinding, most digestion takes place by body chemicals. Chemicals known as enzymes break down food in the mouth, stomach and small intestines.

Saliva: Digestion begins in the mouth. As teeth crush and grind the food, an enzyme in saliva begins breaking down the starches into sugar. Ask the students what happened when they put the saltine in their mouth at the beginning of class. Look at the label on the package. Saltines are made from flour and have little or no sugar. Explain to students that the sweet taste means an enzyme in their saliva had started to break down the starch to sugar. This is one of the first steps in digestion. Starches are broken down into sugars.

Swallowing: After food leaves the mouth it goes down the esophagus. Show the students where the esophagus is on the overhead. Demonstrate swallowing by place the orange at the top of the stocking. Use your hands to move the orange down the tube. Muscle waves along the esophagus help squeeze the bolus of food to the stomach. This process is called peristalsis. Your esophagus muscles take seven seconds to push a ball of food from your throat to your stomach.

Stomach and intestines: After the food leaves the esophagus it goes into the stomach. Strong muscles in the elastic stomach squeeze and mash the food to break it down. Digestive juices made of chemicals and enzymes also help break down proteins in the food. The food then enters into the small intestines to be broken down further by digestive enzymes from the liver, pancreas and gallbladder. After the food is digested into small particles, it moves from the digestive tract into the body. The nutrients from the food pass into the blood and are carried to every cell in the body where they will be used to build new cells, repair old ones and provide the body with energy. That is why it is important to eat healthy foods to build and repair all the parts of our body. Undigested materials such as fiber and water continue into the large intestines. The large intestines absorb the water turning it into a paste which is excreted through the anus.