

Welcome to this lesson today on chewing and swallowing. Today, we will be investigating the processes of chewing and swallowing as they are involved in food digestion. So the mouth is actually the first step in digestion, and it involves the chewing and swallowing of food.

So this occurs in the mouth as food begins to get digested before it even gets into the stomach. So within the mouth, we have two forms of digestion that are occurring, mechanical digestion and chemical digestion. So we're going to take a look at what the difference between these two types of digestion are and where they occur in the mouth.

So mechanical digestion is basically digestion that physically breaks down food. OK. So mechanical digestion is the physical breakdown of food. So in your mouth, an example of mechanical digestion would be when you are chewing and your teeth physically break the food down.

Chemical digestion also occurs in your mouth. And chemical digestion is when chemicals will break down the food. Now chemical digestion in your mouth is done by enzymes. So enzymes play a role throughout your whole digestive system in chemical digestion.

But one specific enzyme in your mouth that's very important is called salivary amylase. And salivary amylase is an enzyme secreted by your salivary glands within your mouth that help break down starches in the foods that you eat into sugars. So salivary amylase is secreted by salivary glands and helps break down starches in your mouth.

So mechanical and chemical digestion are both happening in your mouth at the same time to help break down this food as the first step in digestion before it gets to the stomach. So as you're chewing food, your tongue will push the food against your palate, which is also known as the roof of your mouth, and mix it with saliva. So you have a combination of the mechanical and chemical digestion going on.

So then once the mouth is done mechanically and chemically digesting the food, the food is then swallowed. So that chewed ball of food that you swallow is called a bolus. It's just a technical name for a chewed ball of food. And then, as you swallow the food, it will move down towards your stomach and peristalsis is what helps move the food down the esophagus towards the stomach. So peristalsis is this wave-like contraction of the muscles of the esophagus that helps push food down towards the stomach.

So let's take a look at this diagram as an example. So food will enter into your mouth, where you will chew it up and it'll become mechanically and chemically digested by your teeth and by enzymes. From there, it'll move into your throat. And then it'll start to move down your esophagus. So this tube here is the esophagus.

And as it moves down the esophagus, that's when peristalsis comes into play. So basically, let's pretend that this green clump right here is the bolus or the ball of food that we've swallowed. So your esophagus will contract just above the bolus. And what that will do is it'll push it downward. And then a new contraction will go above it again and push it downward farther. So as you're swallowing, you have these wave-like contractions that are pushing food down the esophagus and towards the stomach.

And peristalsis also acts in other parts of the digestive system as well. So it's not just taking place in the esophagus. But peristalsis also plays a role in your intestines to push food through your digestive tract. So this lesson has been an overview on chewing and swallowing and their role in digestion.