

# The path of food through the digestive system



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**THE PATH OF FOOD THROUGH THE DIGESTIVE SYSTEM** The process of digestion can be fast, or can take some time depending on what a person has eaten. The time frame can also be affected by the person's activity level. Food which is taken through the mouth is initially broken down by mechanical means. The teeth are responsible for grinding food, while the tongue assists the mixing of the food with saliva, which is secreted by the salivary glands, thereby initiating the chemical digestion of carbohydrates. This mechanically broken down food is now swallowed into the esophagus where the process of peristalsis pushes the food into the stomach. Once in the stomach, gastric juices which have been secreted into the stomach mix with the food and begin the enzymatic digestion of proteins. The food is then passed through the pyloric sphincter into the duodenum. The liver, gallbladder and pancreas are all located around the stomach, but do not affect the food until it is in the duodenum. These accessory organs are responsible for the following: - Liver — produces bile, which emulsifies fat - Gallbladder — stores bile and introduces it into the small intestine - Pancreas — produces and secretes pancreatic juice, containing digestive enzymes and bicarbonate ions into the small intestine From the duodenum the food is moved into the small intestine, where it is mixed with bile and pancreatic juice. The small intestine is where the final enzymatic breakdown of food molecules occurs, and is the main site of nutrient absorption. From here the food is delivered to the large intestine where water and electrolytes are absorbed and feces are formed. This food will travel through the large intestine into the rectum which regulates the elimination of feces.