# The alimentary tract: a journey through the digestive system.

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## Abstract

**The alimentary tract, also known as the digestive system, is a complex network of organs responsible for the breakdown of food and its absorption into the body. The digestive system begins at the mouth and ends at the rectum and anus and includes the following organs: Mouth, pharynx, esophagus, stomach, small intestine, large intestine and rectum.**

**Keywords:** Alimentary tract, Digestive enzymes, Gastric juices, Rectum, Breakdown

## Introduction

Starting with the mouth, food is mechanically broken down through chewing and mixed with saliva, which contains digestive enzymes. The chewed food, called bolus, then passes down the pharynx into the esophagus. The esophagus is a muscular tube that moves food to the stomach through a series of contractions known as peristalsis. Once food reaches the stomach, it is mixed with gastric juices, which contain digestive enzymes and hydrochloric acid. This mixture, known as chyme, is further broken down through churning and grinding movements of the stomach wall. The chyme is then slowly released into the small intestine, where the majority of nutrient absorption occurs.

## Description

The small intestine is lined with tiny finger like projections called villi, which increase the surface area for absorption. The small intestine also receives secretions from the liver and pancreas, which contain digestive enzymes that break down the remaining nutrients in the chyme. The small intestine has three parts. The first part is called the duodenum. The jejunum is in the middle and the ileum is at the end. The large intestine includes the appendix, cecum, colon and rectum. The appendix is a finger shaped pouch attached to the cecum. The cecum is the first part of the large intestine. The colon is next. The rectum is the end of the large intestine.

Bacteria in your GI tract, also called gut flora or microbiome, help with digestion. Parts of your nervous and circulatory NIH external link systems also help. Working together, nerves, hormones, bacteria, blood and the organs of your digestive system digest the foods and liquids you eat or drink each day.

The small intestine absorbs most of the nutrients in your food and your circulatory system passes them on to other parts of your body to store or use. Special cells help absorbed nutrients cross the intestinal lining into your bloodstream. Your blood carries simple sugars, amino acids, glycerol and some vitamins and salts to the liver. Your liver stores, processes and delivers nutrients to the rest of your body when needed. The lymph system NIH external link, a network of vessels that carry white blood cells and a fluid called lymph throughout your body to fight infection, absorbs fatty acids and vitamins. Your body uses sugars, amino acids, fatty acids and glycerol to build substances you need for energy, growth and cell repair.

After passing through the small intestine, undigested food particles move into the large intestine. The large intestine's main functions are to absorb water and electrolytes from the remaining chyme and to form and eliminate solid waste in the form of feces. The feces are then stored in the rectum until they are eliminated through the anus. It is important to maintain a healthy digestive system, as this can affect the absorption of nutrients and overall health. This can be achieved through a balanced diet, regular exercise and proper hydration. Additionally, avoiding certain habits such as smoking and excessive alcohol consumption can also help maintain a healthy digestive system.

## Conclusion

In conclusion, the alimentary tract plays a crucial role in breaking down food and absorbing nutrients into the body. Understanding its anatomy and functions can help us maintain a healthy digestive system and overall well-being.

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