

THE DIGESTIVE SYSTEM

The digestive system has 4 stages

- Intake of food
- Mechanical and chemical degradation of food
- Absorb the nutrients
- Removal of Indigestible food

The role of digestion is to absorb the enzymes. These enzymes speed up chemicals reaction for digestion and brakes down into smaller molecules to absorb nutrients.

ENZYMES

Oral Cavity

- Amylase
- Lysozyme
- Lingual Lipase

Stomach

- Pepsin

Pancreas

- Amylase
- Protease
- Lipase

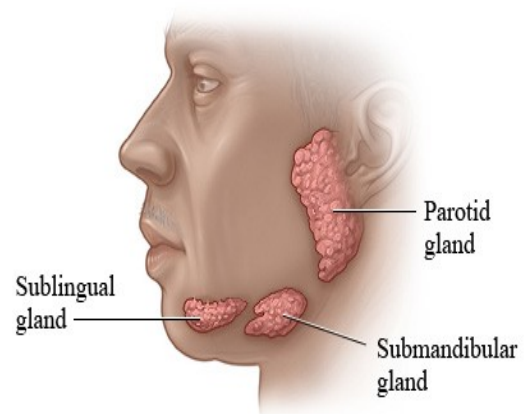
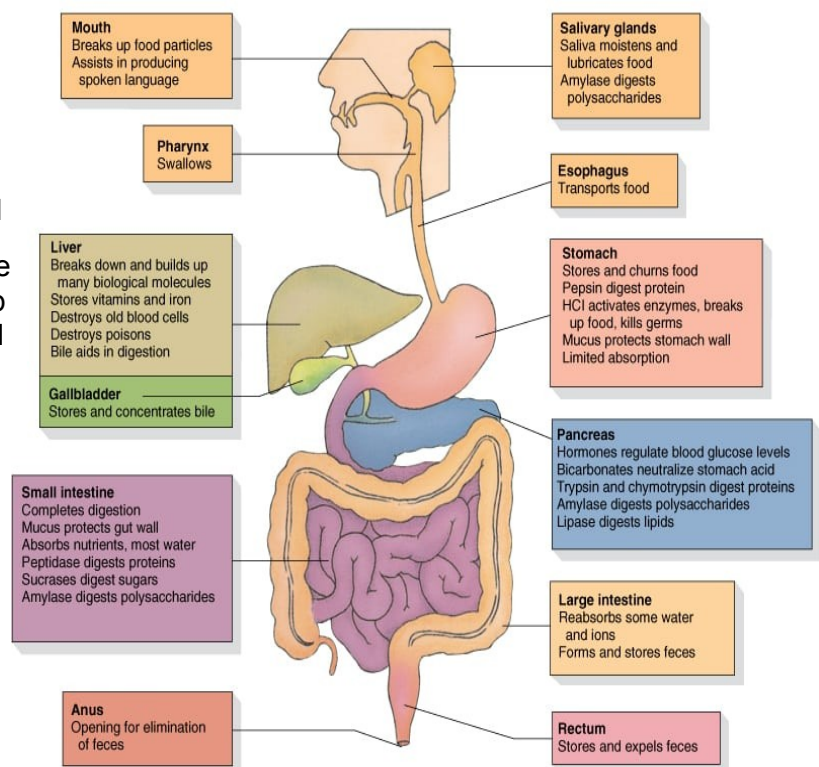
Small Intestines

- Maltase

ORAL CAVITY

The digestion begins in the oral cavity through chewing (TEETH) and churning (TONGUE) known as MECHANICAL

And enzymes that are secreted through three pairs of salivary glands, known as CHEMICAL. (MANI H. ZADEH MD F.A.C.S,2022)



Amylase-
Brakes down
stacks

Lingual Lipase-
Brakes down
fatty acids

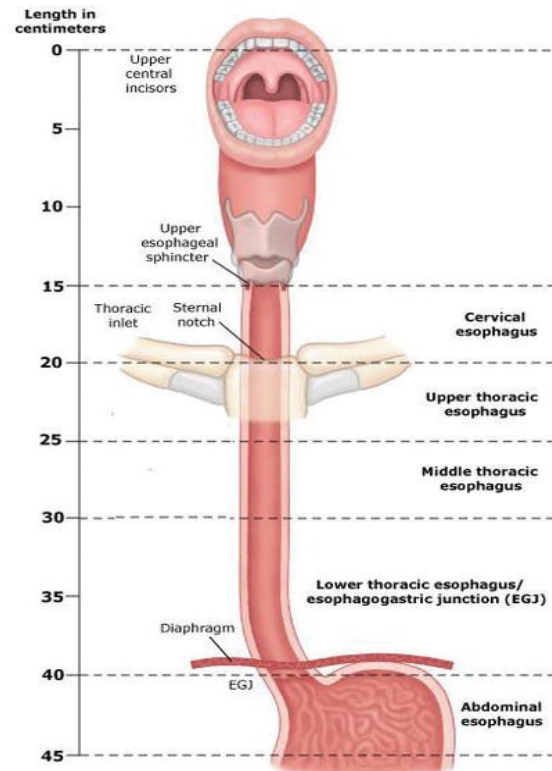
Lisozyme-
Brakes down
bacteria

ESOPHAGUS

Your esophagus, a muscular, hollow tube of 10 inches in length, connects your throat to your stomach. When you swallow, the many layers of tissue lining your oesophagus work in concert to force food into your **stomach**. (Fred Hutch,2022)

This process forms a BOLAS- BALL OF FOOD that is pushed to the pharynx and consciously opens the (UES) Upper esophageal Sphincter. The oesophagus has to openings the (UES) and the (LES) Lower esophageal sphincter which prevents food to come back to esophagus.

The Esophagus is called by the public the “Food pipe”, food travels down in a wave like motion.



STOMACH

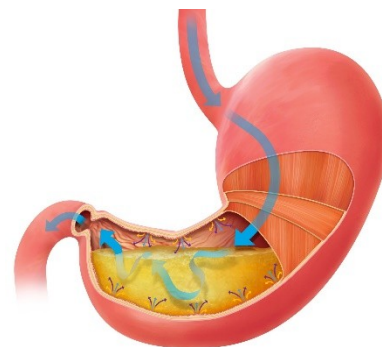
The stomach releases gastric juices:

- Hydrochloric acid
- Pepsin

Foods are not processed in the order they are eaten; rather, they are mixed together with digestive juices in the stomach until they are converted into chyme, which is released into the small intestine.

Food forms Chymes and Peristalsis also helps to churn the food.

The stomach is protected from the gastric juices with a mucus barrier and biocarbonate. (FindOut,2022)



The Pancreas secretes pancreatic juices including lipase which breaks down fat, hormones such as insulin (regulates blood sugars). The pancreas is an extremely special organ. Endocrine and exocrine functions are just two of its numerous regulatory features. The function of the gastrointestinal system, hormone secretion and inhibition, digestion, and absorption of various food components are all greatly influenced by it. The pancreas is an extremely special organ. Endocrine and exocrine functions are just two of its numerous regulatory features. The function of the gastrointestinal system, hormone secretion and inhibition, digestion, and absorption of various food components are all greatly influenced by it. (GBMC,2022)

The Enzymes in the pancreas are:

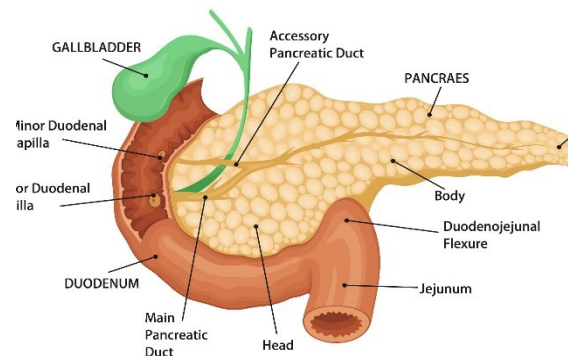
- Amylase
- Lipase
- Protease

which is primarily liquid, is next emptied into the colon. The colon is where the water is absorbed. The residual substance is broken down by bacteria in the colon. The colon then passes the waste into the rectum.

Large Intestines

Absorbs water and some vitamins and minerals, it is the home to intestinal bacteria and it passes all the solid waste to the anus.

PANCREAS



THE LIVER AND GALLBLADDER

The liver secretes bile and works with lipase to break down fat.

Whilst the gallbladder stores bile ready for the liver.

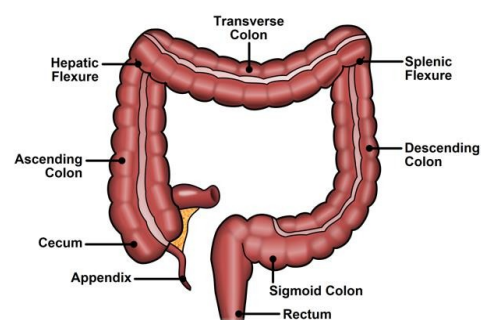
Small Intestines

The small intestines digest food and absorb the nutrients into the blood. (ASCRS,2022)

The residual, which is primarily liquid, is next emptied into the colon. The colon is where the water is absorbed. The residual substance is broken down by bacteria in the colon. The colon then passes the waste into the rectum. The remainder,

Anus

The anus opens to allow waste to leave the body.



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