تم تحميل هذا الملف من موقع المناهج الإماراتية

ملخص درس The digestive system الجهاز الهضمي

موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف التاسع المتقدم ⇦ علوم ⇦ الفصل الثالث ⇦ الملف

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التواصل الاجتماعي بحسب الصف التاسع المتقدم

اضغط هنا للحصول على جميع روابط "الصف التاسع المتقدم"

روابط مواد الصف التاسع المتقدم على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف التاسع المتقدم والمادة علوم في الفصل الثالث

1	تجميعة صفحات الكتاب وفق الهيكل الوزاري
2	الهيكل الوزاري الجديد منهج انسباير المسار المتقدم
3	الهيكل الوزاري الجديد منهج بريدج المسار المتقدم
4	كتاب الطالب منهج انسباير
5	أسئلة الامتحان النهائي انسباير

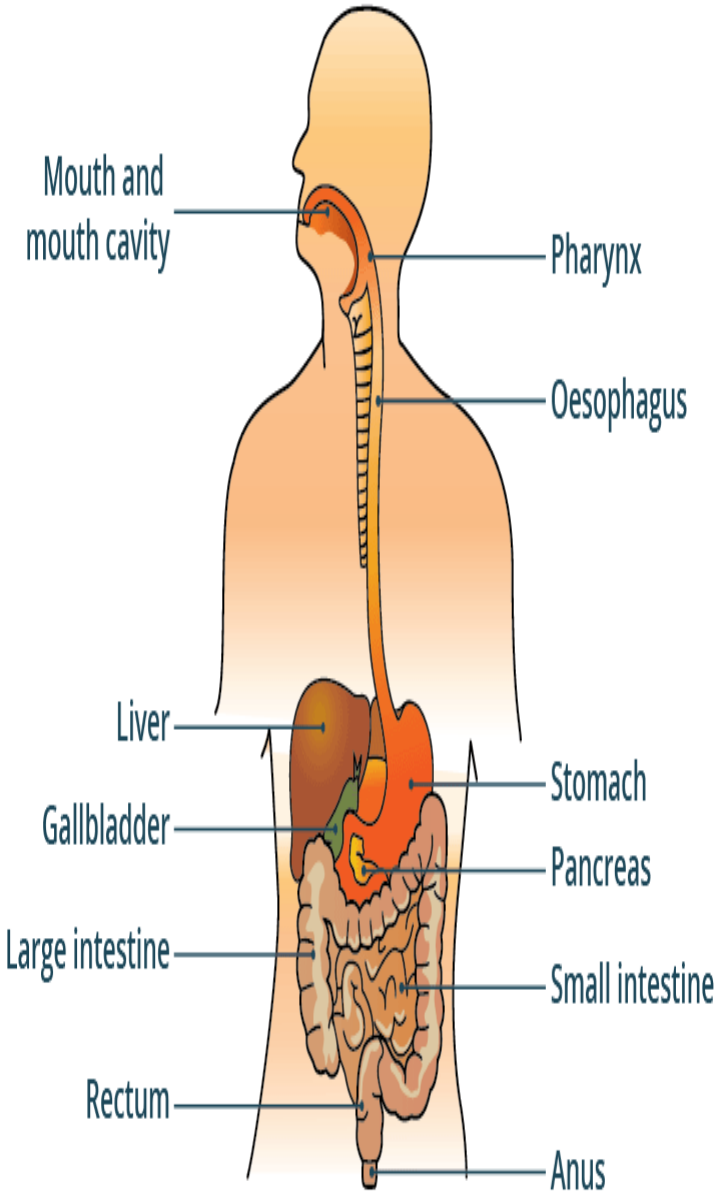
Mr. Ahmed Elhddad

2024

The First Biology Teacher
054 795 5495

The Digestive System

Bio Term 3 Grade 9 2024

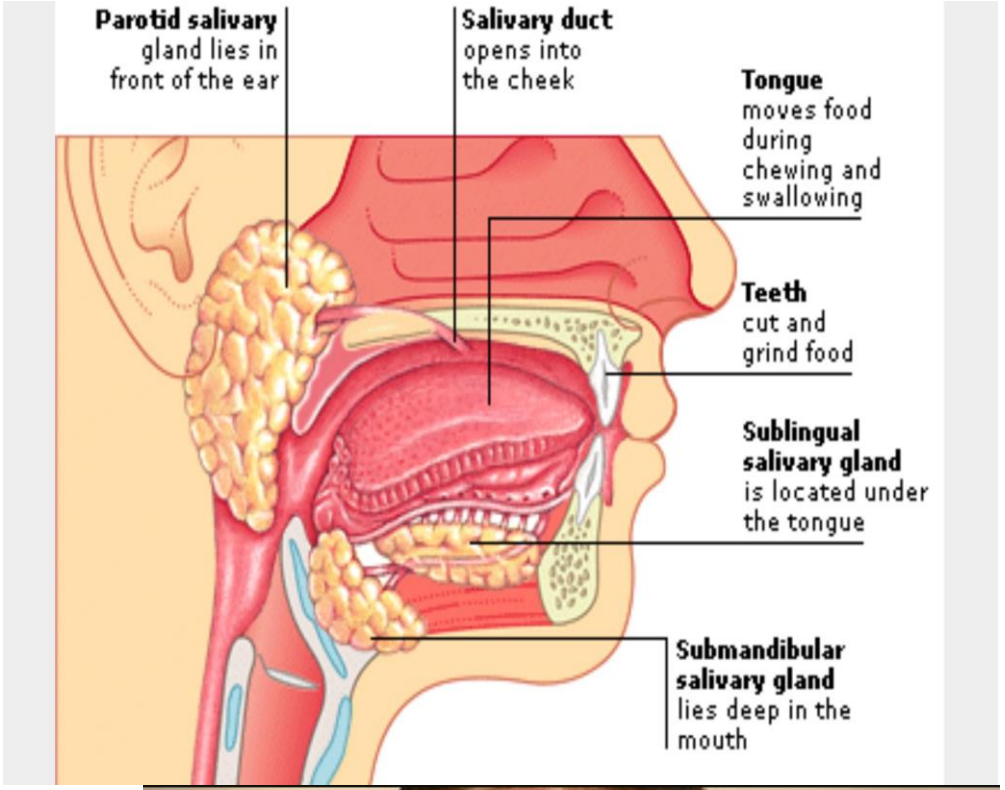


- ***Parts of the body that supports the Digestion system***

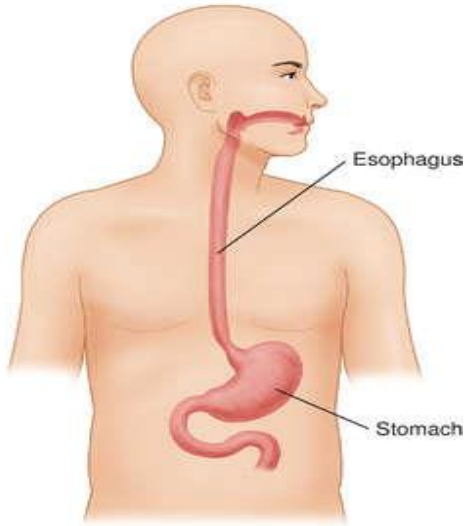
Mouth, esophagus, stomach, small intestine, large intestine,
liver, pancreas, gall bladder,
colon, anus, salivary glands,
chemical digestion, mechanical digestion

Mouth

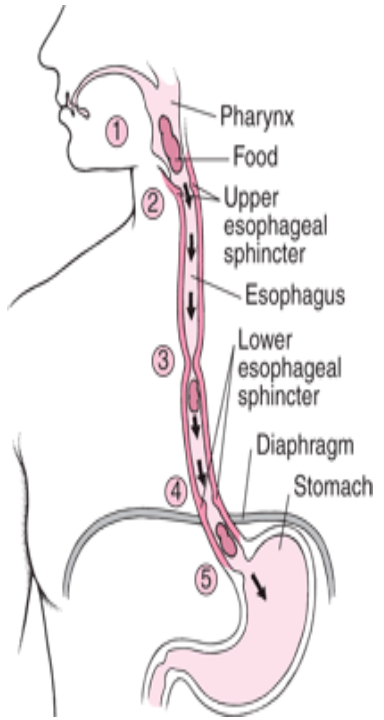
- The start of digestive System
- The mouth helps break down food in which helps the food to be digest in the body
- The mouth produced the **saliva** which breaks down the chemicals in the food a bit, which helps make the food mushy and easy to swallow



Esophagus

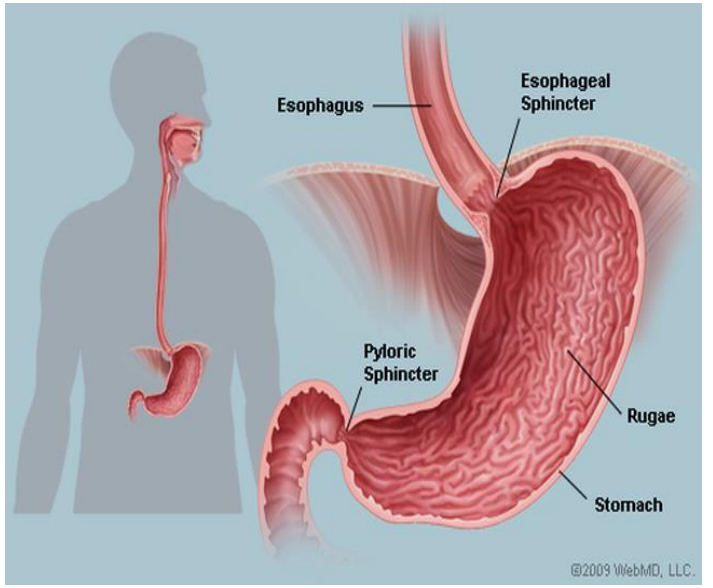


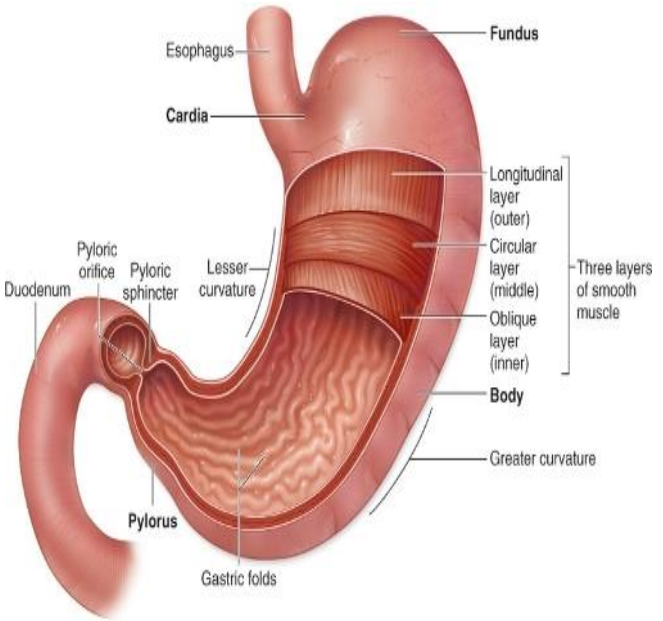
- a long, thin, and muscular tube that connects the pharynx (throat) to the stomach.
- Food and fluids are propelled through the esophagus into the stomach
- The esophageal sphincters normally prevent the contents of the stomach from flowing back into the esophagus or throat.



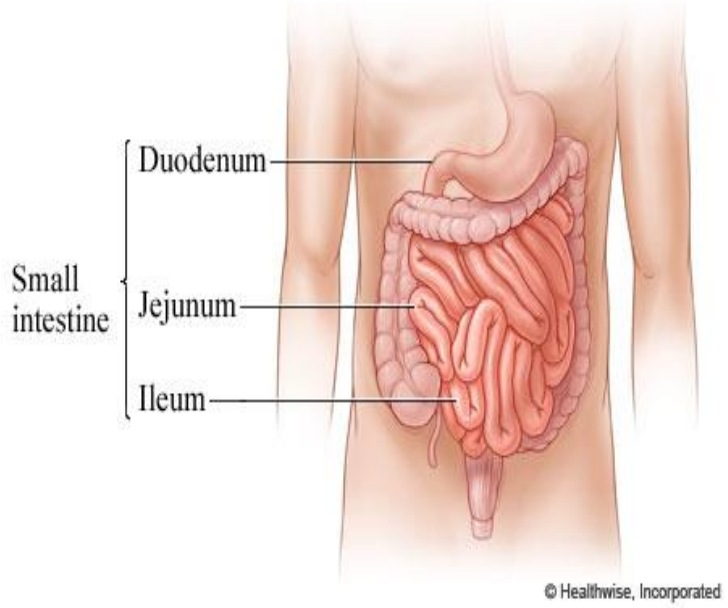
Stomach

- a muscular sac that lies between the esophagus and the small intestine in the upper abdomen.
- The stomach releases acids and enzymes for the chemical breakdown of food
- it can also expand to temporarily store food.
- important for churning food into a consistency that is easier to digest for the rest of the body systems.

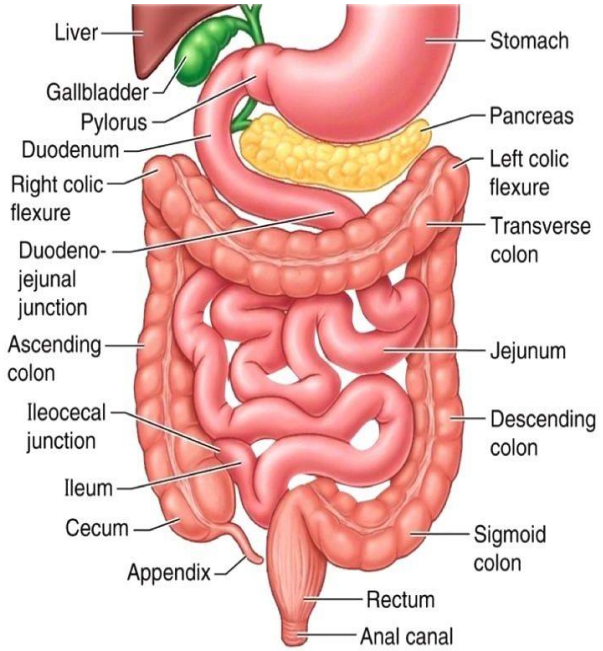




Small intestine

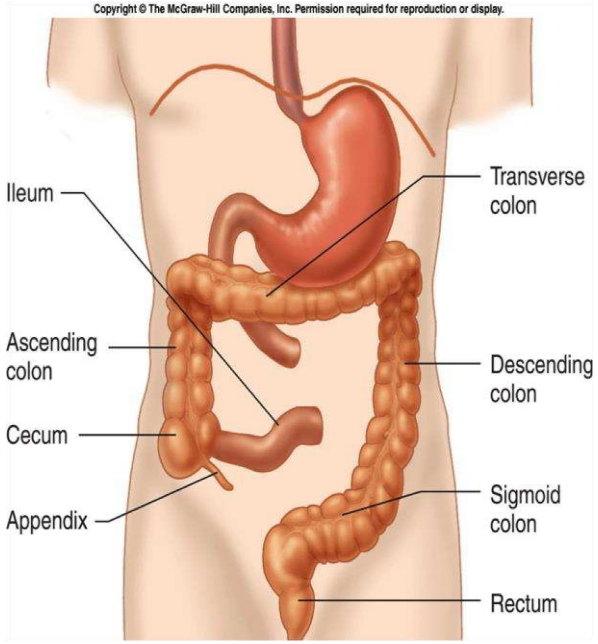


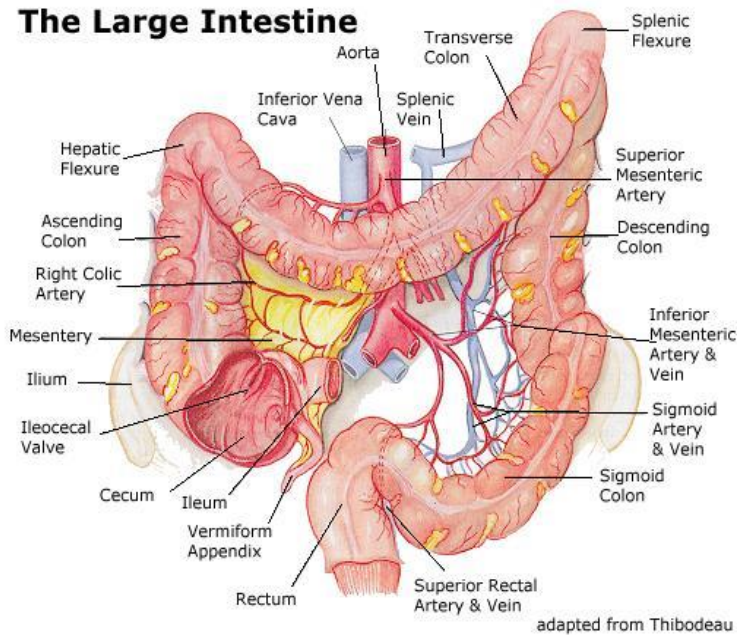
- absorbs about 90 % of the nutrients from the food we eat.
- The small intestine is called small because the diameter or the width of the tube is much less than the large intestine
- The small intestine is the location in the body where the majority of the nutrients from ingested food are absorbed.
- Digested food passes through the wall of the intestine into the blood vessels which then distribute the nutrition first to the liver and then through the rest of the body.



Large intestine

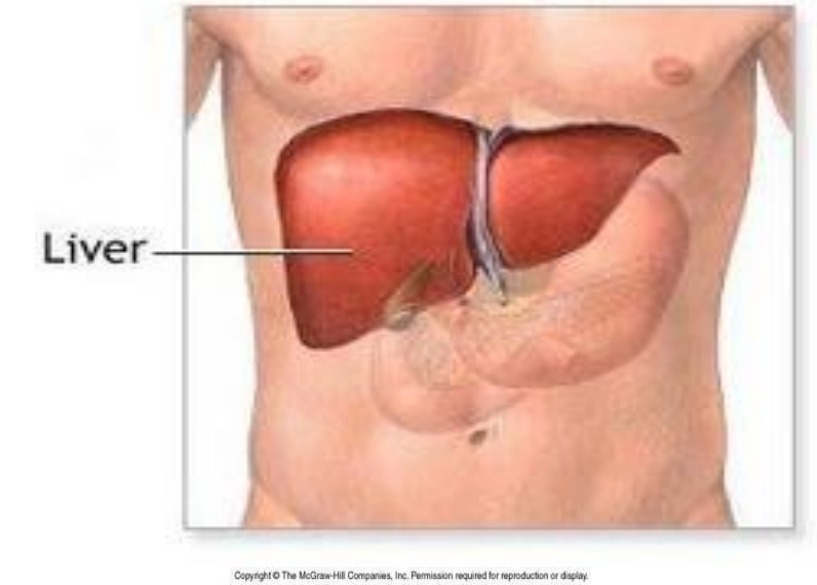
- a little fatter and a little smaller than the small intestine
- Performs the vital task of absorbing water and vitamins while converting digested food into waste(feces)
- As your body takes back water, it just leaves waste products behind. These become dryer and harder so it is easier for your body to get rid of them

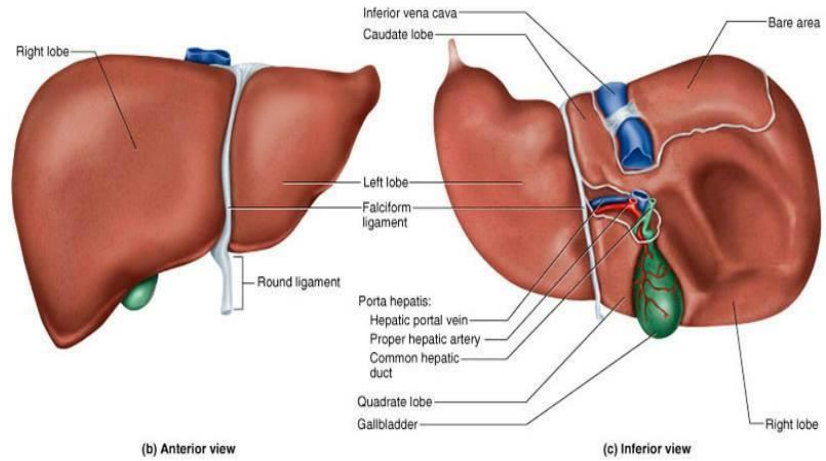




liver

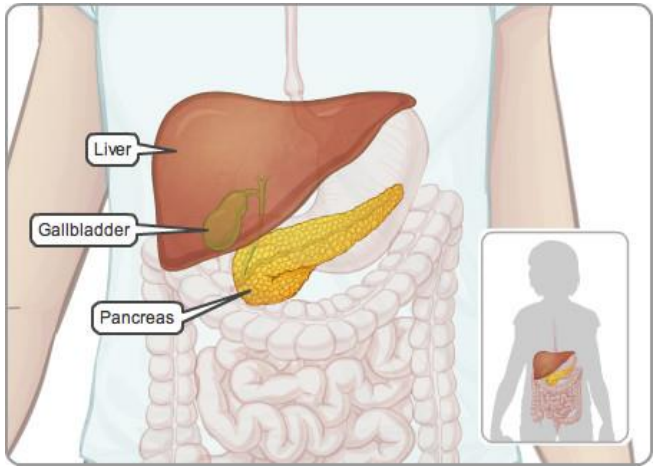
- The liver plays an role in the process of digestion through the production of bile.
  - Bile travels through the bile ducts and is released into the duodenum where it emulsifies large masses of fat
- Fats made by the bile turns the large clumps of fat into smaller pieces that have more surface area and are therefore easier for the body to digest.

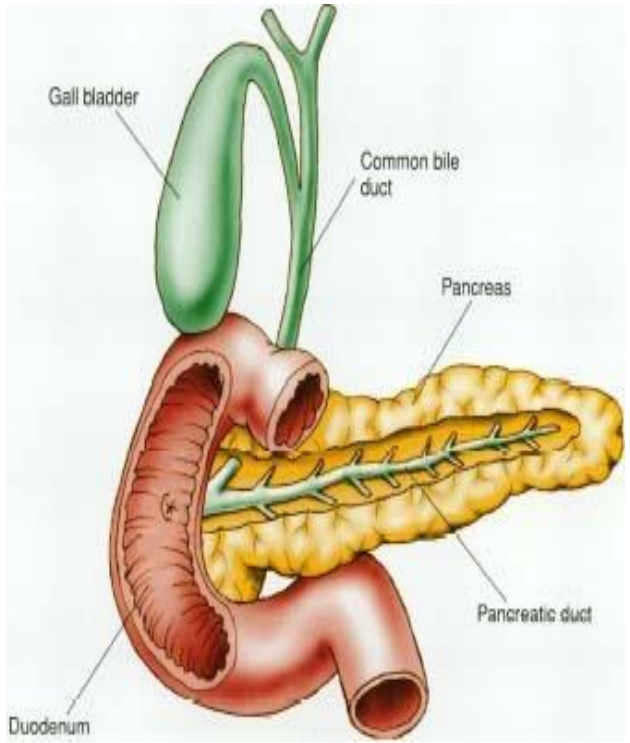




Pancreas

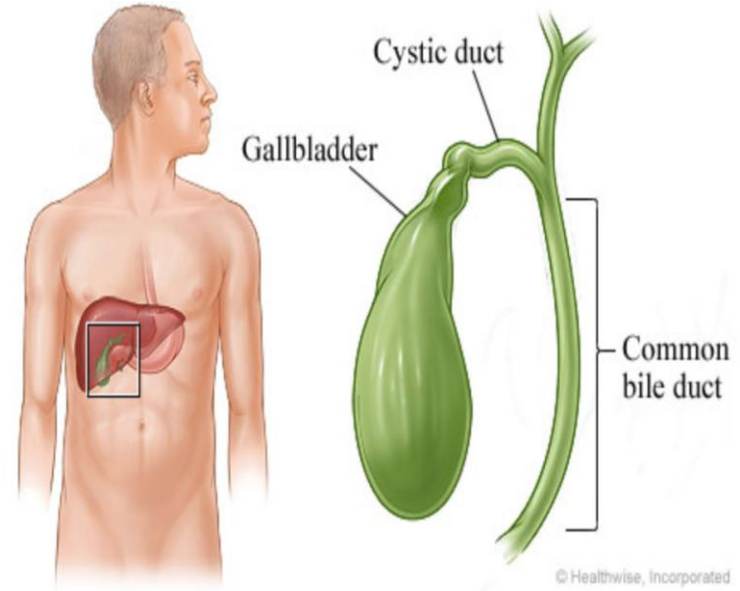
- part of the digestive system and produces important enzymes and hormones that help break down foods.
- Enzymes, or digestive juices, produced by the pancreas are secreted into the small intestine to further break down food after it has left the stomach
- has an endocrine function because it releases juices directly into the bloodstream, and it has an exocrine function because it releases juices into ducts.

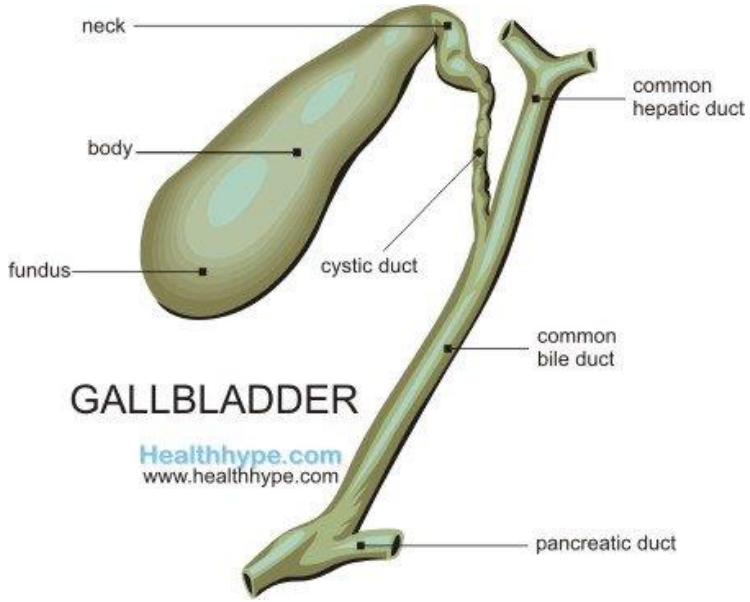




Gall bladder

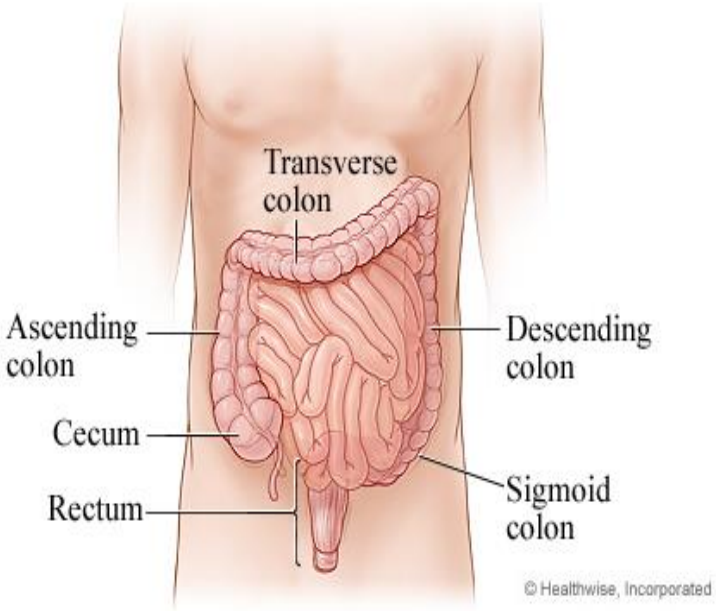
- a small storage organ located inferior and posterior to the liver.
- holds bile produced in the liver until it is needed for digesting fatty foods in the duodenum of the small intestine.
- When food enters the small intestine, a hormone called cholecystokinin is released, signaling the gallbladder to contract and secrete bile into the small intestine through the common bile duct.

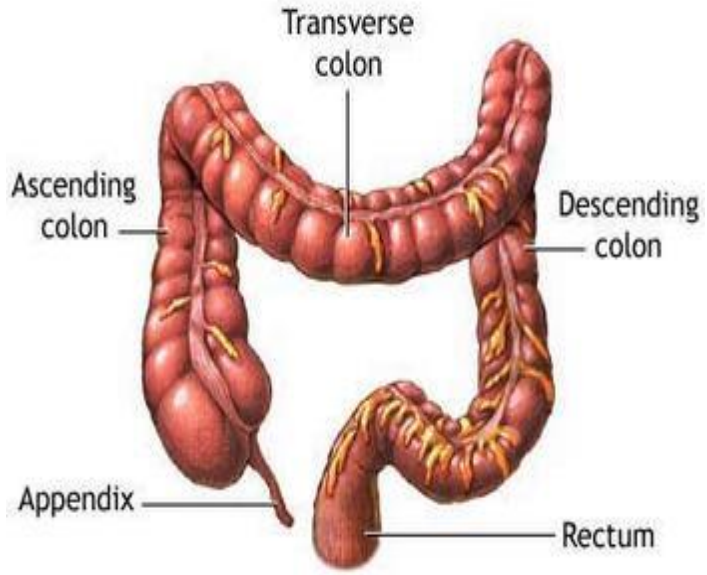




Colon

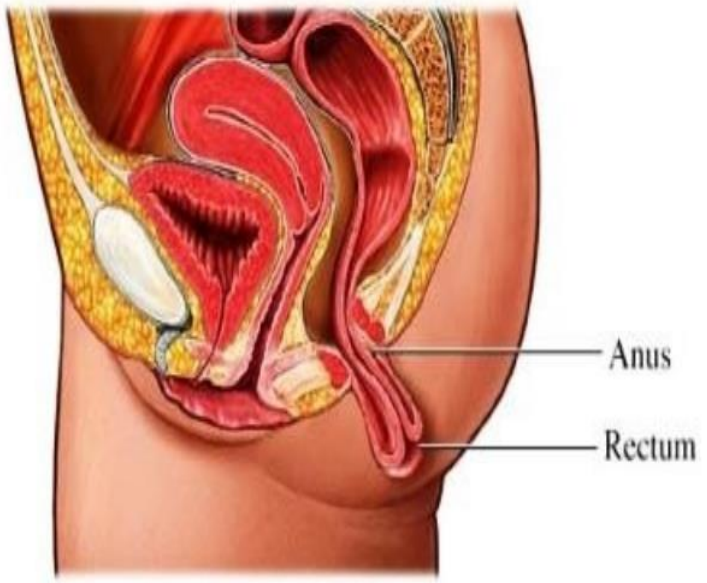
- Also known as Large Intestine
- liquid and salt is removed from the waste as it passes through the colon.
- get rid of food left over after the nutrients are removed from it, bacteria and other waste.

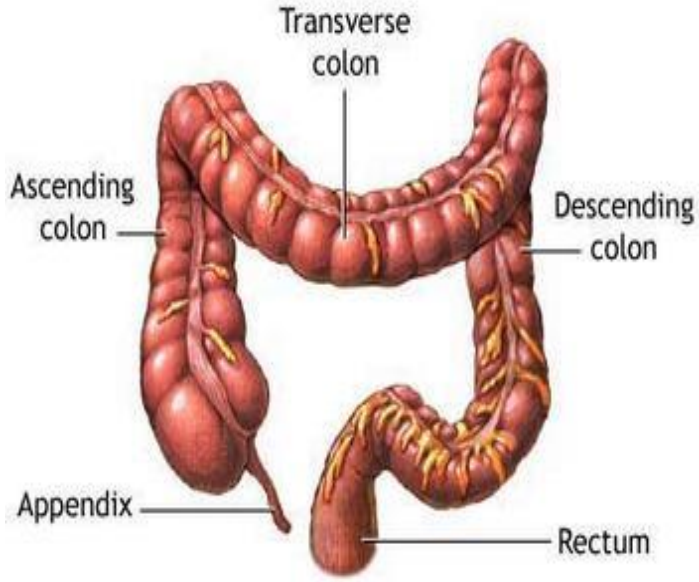




Anus

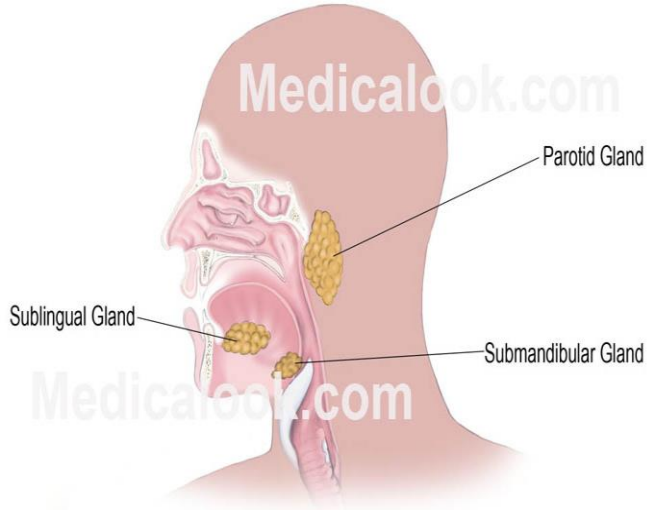
- the opening at the far end of the digestive tract through which stool leaves the body.
- Acts like a gate that allows the waste to exit the body

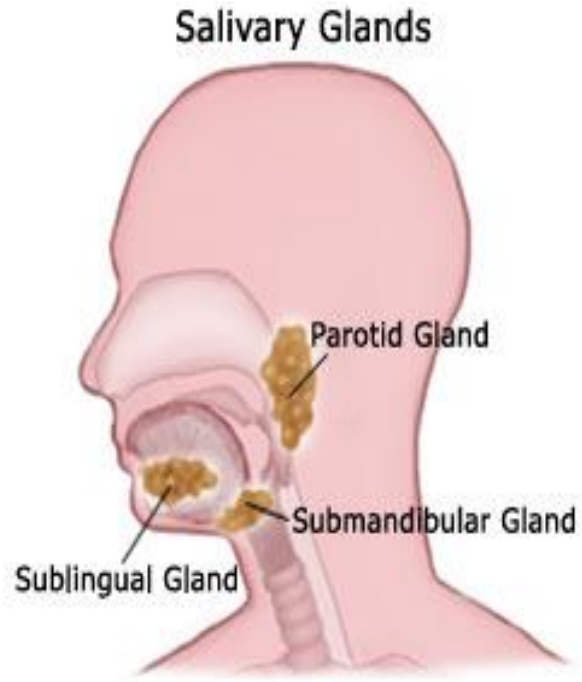




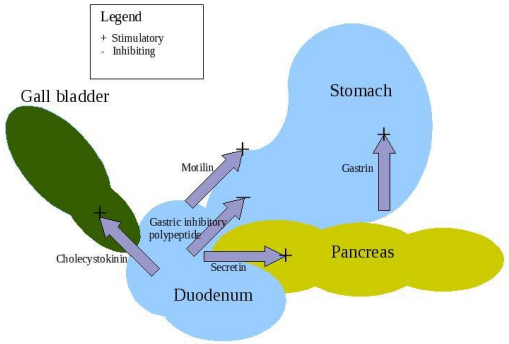
Salivary glands

- Produce saliva, which keeps the mouth and other parts of the digestive system moist
- helps break down carbohydrates
- lubricates the passage of food down from the oro-pharynx to the **esophagus** to the stomach.





Chemical digestion



- breaking down the food into simpler nutrients that can be used by the cells.
- begins in the mouth when food mixes with saliva.
- The enzymes necessary for proper chemical digestion are in equilibrium.

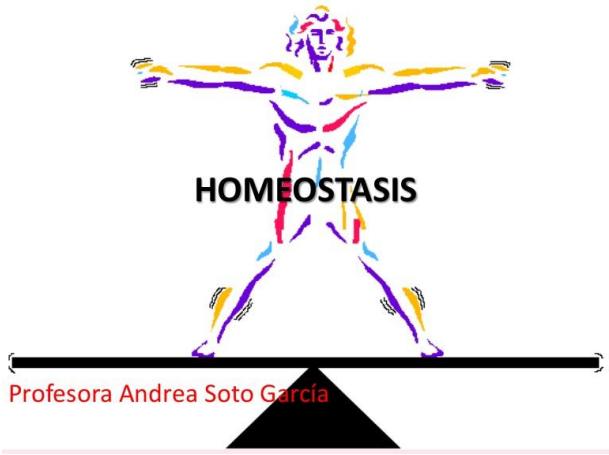
Mechanical Digestion

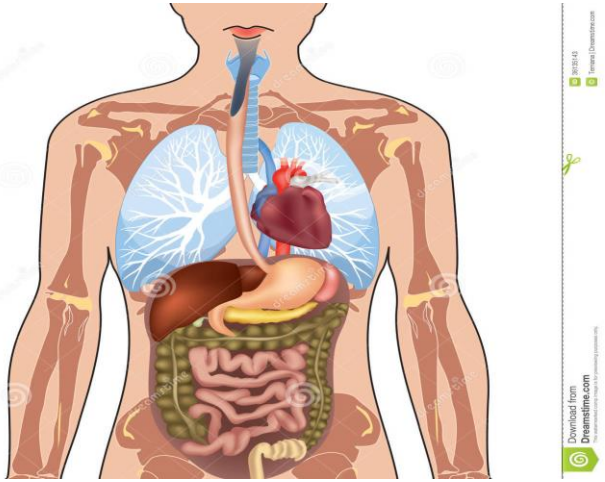
- involves physically breaking the food into smaller pieces. Mechanical digestion begins in the mouth as the food is chewed.
- These are how food is break down physically:

- Mouth – teeth, tongue, and palates
- Esophagus - peristalsis
- Stomach – muscular churning action of stomach
- SI – bile and peristalsis

How did the Digestive System maintains Homeostasis ?

- The digestive system maintains homeostasis by creating the proper pH balance in the gastric environment. In addition, by maintaining the correct enzyme ratio, the digestive system nurtures beneficial bacteria that inhibit disease and produce biological substances the body needs such as vitamin K.



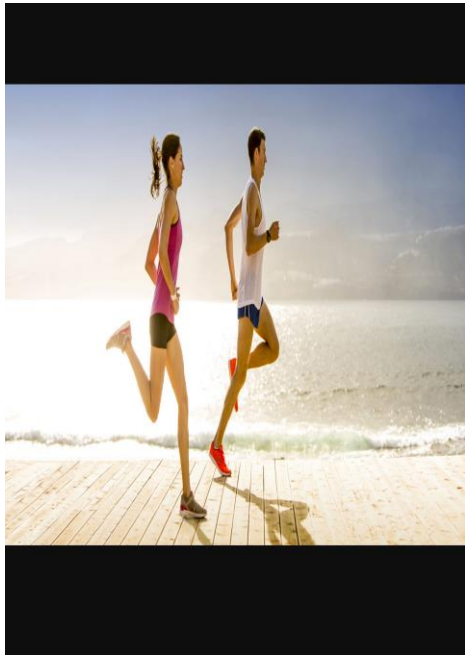


Describe the path food travels throughout the digestive system ?

- The food starts in the mouth, travels down the esophagus to the stomach, travels from the stomach to the small intestine, travels then to to large intestine, and exits the body through the rectum then the anus.

How the Digestion system affects other Body Systems ?

- The digestion system makes and distribute the nutrients to the rest of the body systems
- This provides the systems energy to keep on working which is why you have energy to do daily life activities
- **Example**
  - The digestive system works in parallel with the excretory system. While the digestive system collects and removes undigested solids, the excretory system filters compounds from the blood stream and collects them in urine. They are closely connected in controlling the amount of water in your body.

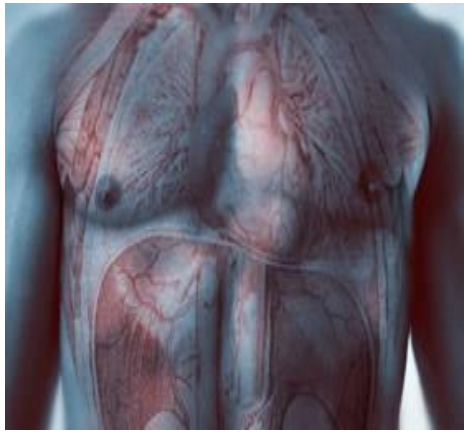


How other body systems affect the system ?

- Other body parts helps give the ability of the digestion system to digest the food
  - Both certain bones of the skeletal system and muscles of the muscular system are involved in chewing food.
  - The muscular system also plays an important role in swallowing food and moving the products of the digestion process along the gastrointestinal tract
  - The endocrine system interacts with the digestive system in that there are hormones that play a role the digestion process
  - The functioning of the nervous system can also have an impact on how digestion progresses.

2 diseases of the system

- **Gastroesophageal Reflux Disease (GERD):** Severe "heartburn" in laymen's language. Weakness of the valve between the esophagus and stomach may allow stomach acid to reflux into the esophagus and irritate and inflame the lining. This results in chest pain which can mimic that of angina.



- **Jaundice:** Yellowing of the skin and whites of the eyes from a backup of bile metabolic by-products from the blood into body tissues. May result from blockage of the ducts draining bile from the liver into the intestines or excessive breakdown of red blood cells. Hemoglobin from destroyed RBCs is broken down, and in part, ends up in bile secretions.

3 Fun facts about the digestion System

- When you eat something, the food doesn't simply fall through your esophagus and into your stomach. The muscles in your esophagus constrict and relax in a wavelike manner called peristalsis, pushing the food down through the small canal and into the stomach.
- Because of peristalsis, even if you were to eat while hanging upside down, the food would still be able to get to your stomach.
- The stomach is an integral part of the digestive system, but it's not the same in all animals. Some animals have stomachs with multiple compartments. (They're often mistakenly said to have multiple stomachs.) Cows and other "ruminants" — including giraffes, deer and cattle — have four-chambered stomachs, which help them digest their plant-based food.