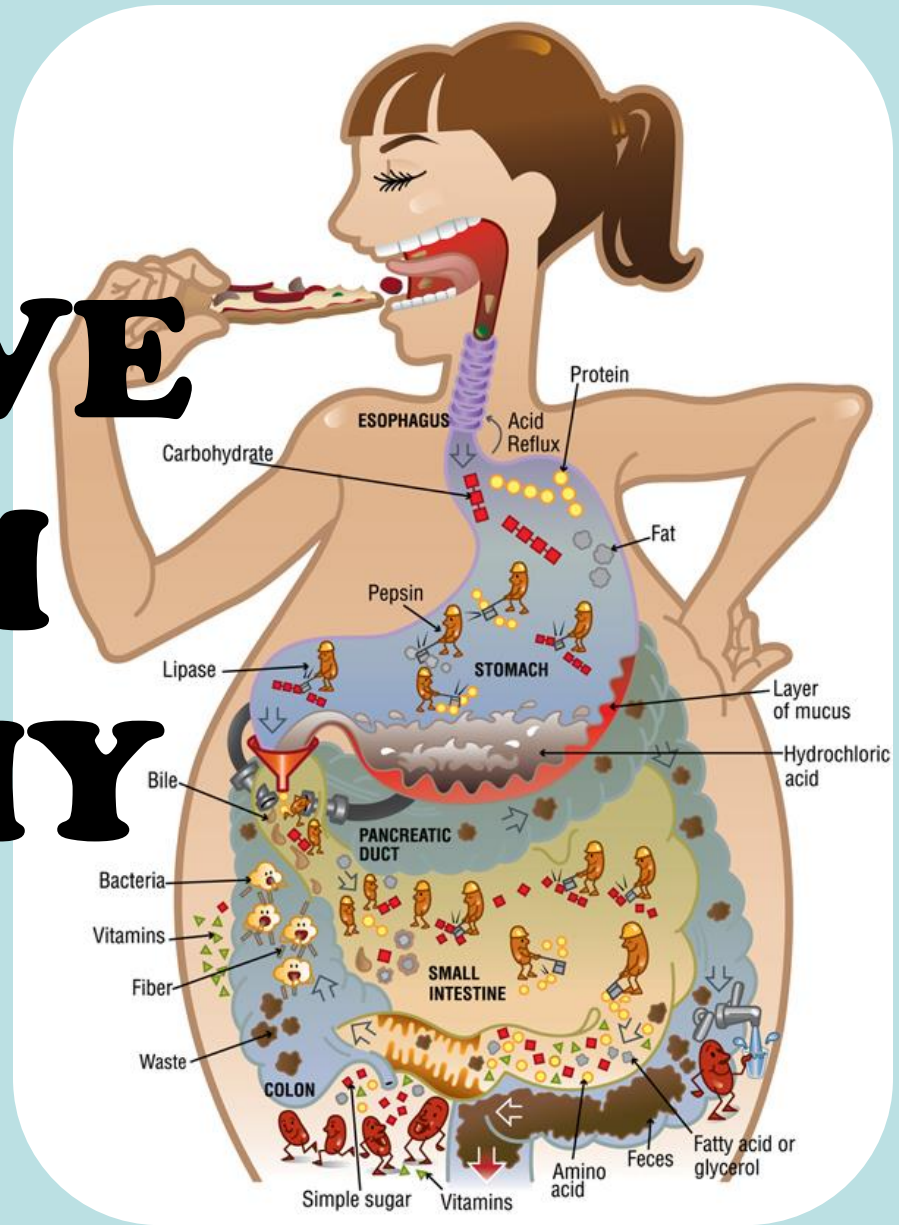


DIGESTIVE SYSTEM ANATOMY



PARTS OF THE DIGESTIVE SYSTEM

- The digestive system begins at the mouth, where food enters the body.
- 3 MAIN STRUCTURES:
 - The teeth
 - The tongue
 - The salivary glands



PARTS OF THE DIGESTIVE SYSTEM

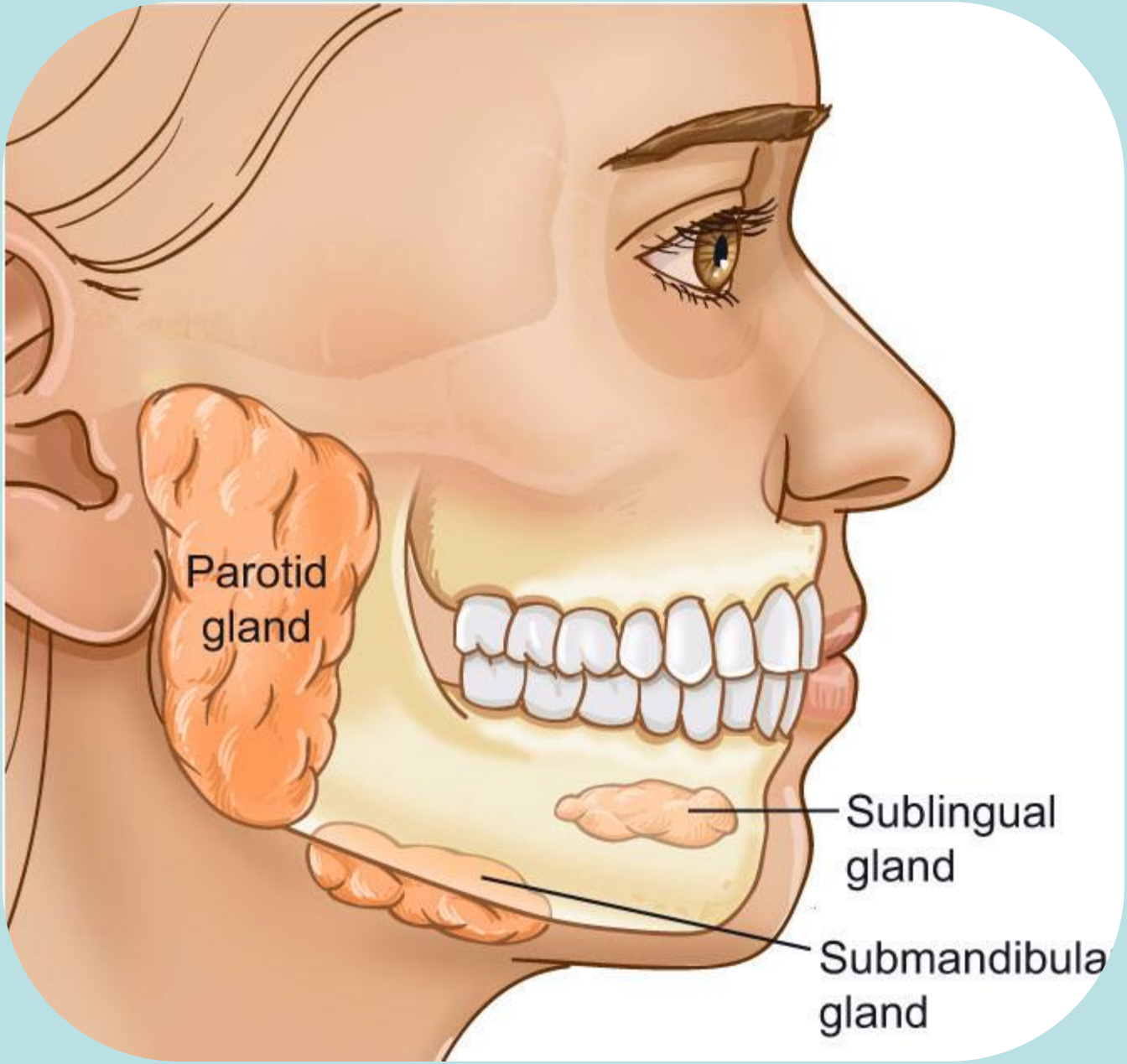
- The **teeth** are involved in breaking down food by chewing so that it can be swallowed. The biological term for chewing is

mastication.



PARTS OF THE DIGESTIVE SYSTEM

- The **salivary glands** release saliva which moistens your food to help you swallow.
- Saliva also contains an enzyme which helps break food down chemically.
- You have three pairs of salivary glands:
 - One pair at the sides of your face (below and in front of your ears)
 - One pair beneath the tongue
 - One pair beneath the floor of the oral cavity (mouth)



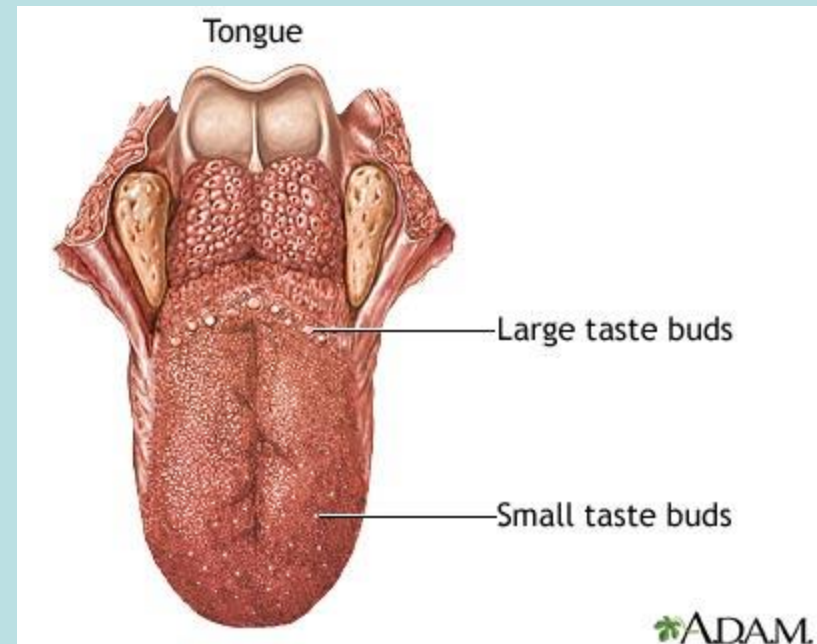
Parotid gland

Sublingual gland

Submandibular gland

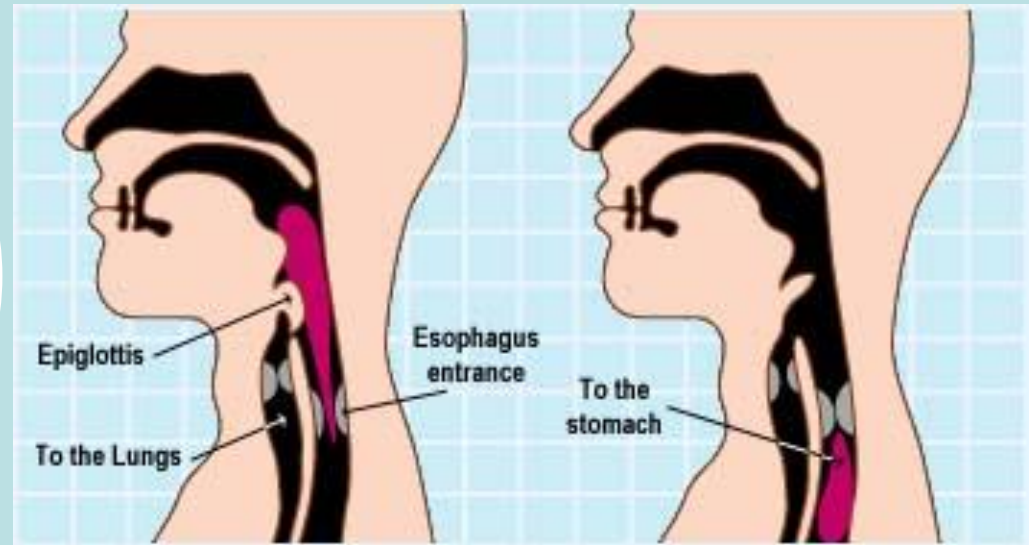
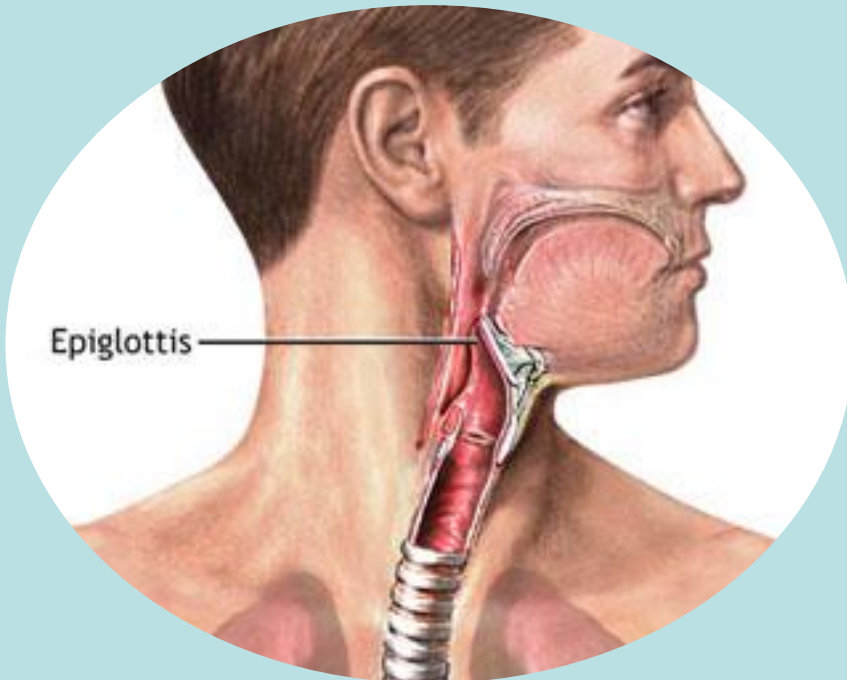
PARTS OF THE DIGESTIVE SYSTEM

- The **tongue** mixes the chewed food with saliva.
- It then forms this mixture into a mass called a **bolus** (lump of chewed up food) in preparation for swallowing.



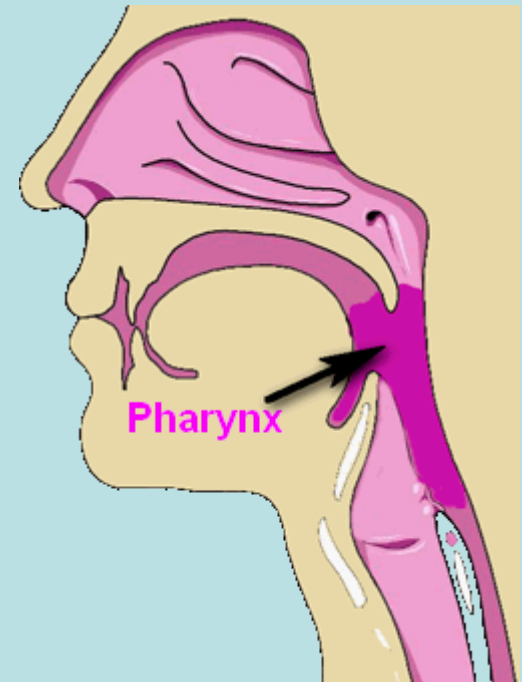
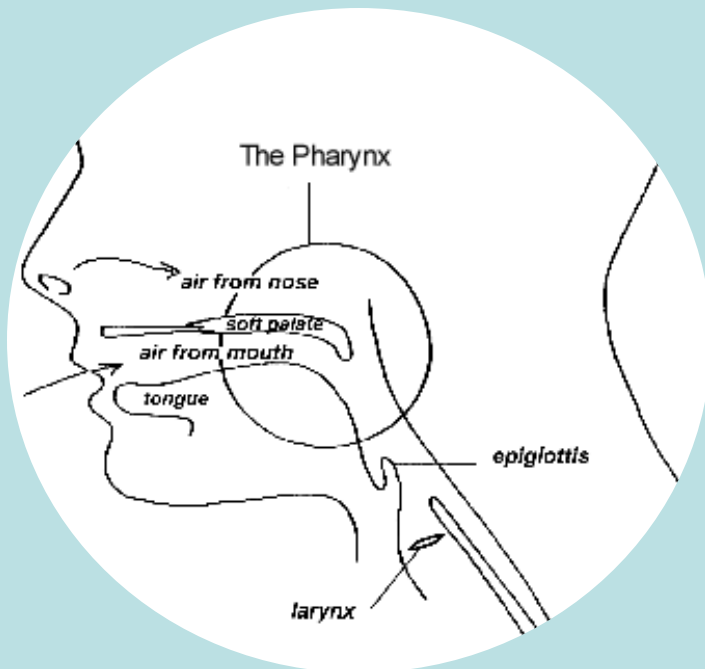
PARTS OF THE DIGESTIVE SYSTEM

- The **epiglottis** is a flap of skin that covers the trachea when swallowing to prevent food from entering the respiratory system.



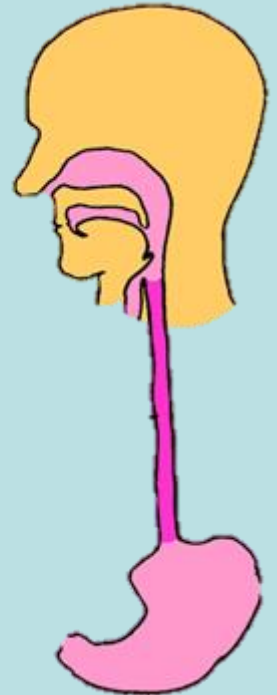
PARTS OF THE DIGESTIVE SYSTEM

- The **pharynx** is a region that receives air from the nasal cavities and food from the mouth.

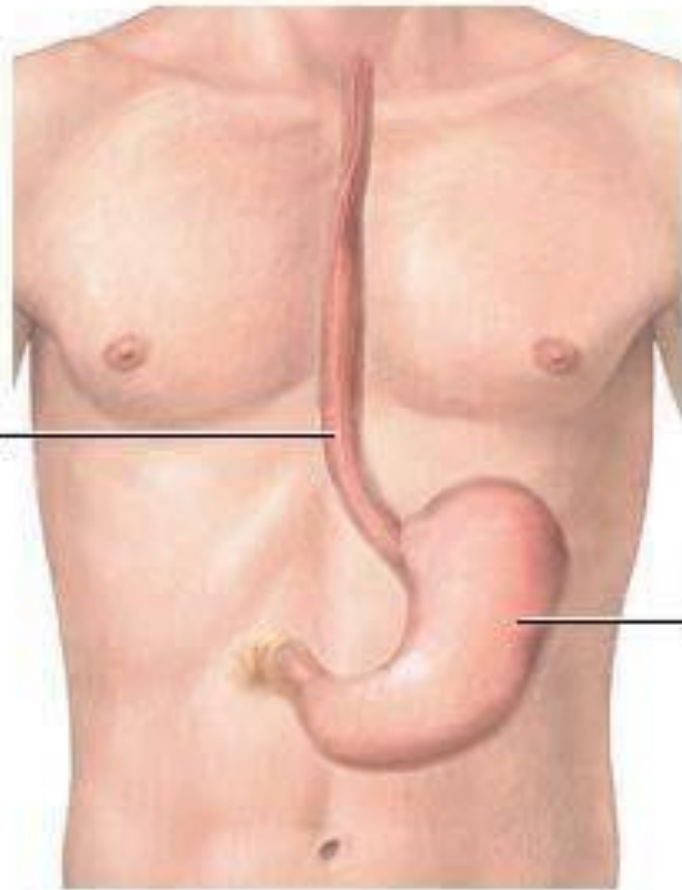


PARTS OF THE DIGESTIVE SYSTEM

- The **esophagus** is a muscular tube that passes from the pharynx to the stomach.
- It is usually collapsed but it opens and receives the bolus when swallowing occurs.
- The esophagus undergoes muscular contractions (**PERISTALSIS**) that push the food down towards the stomach.



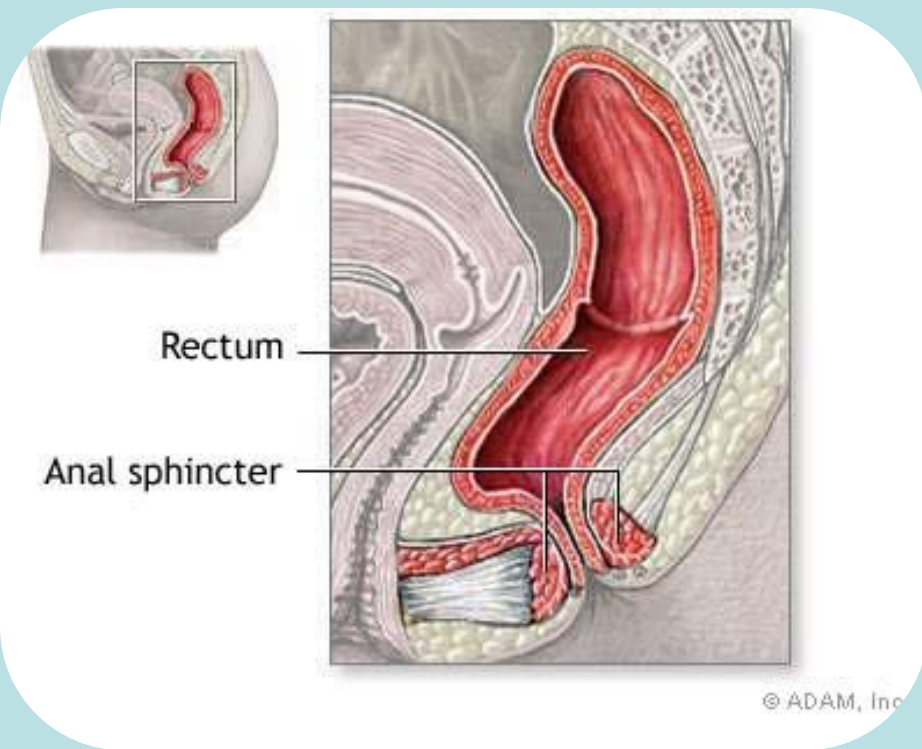
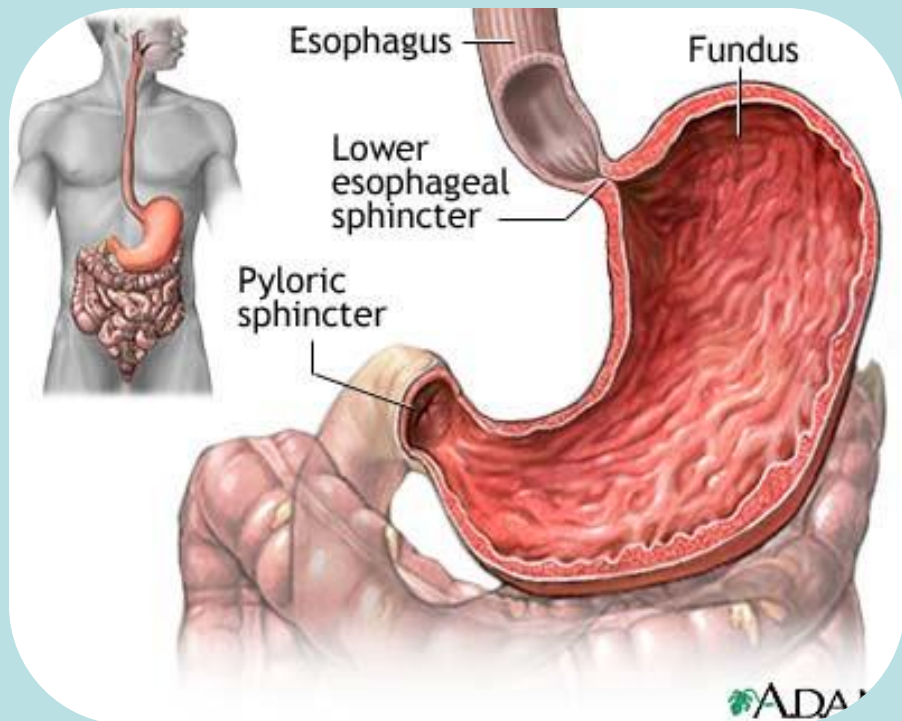
Esophagus



Stomach

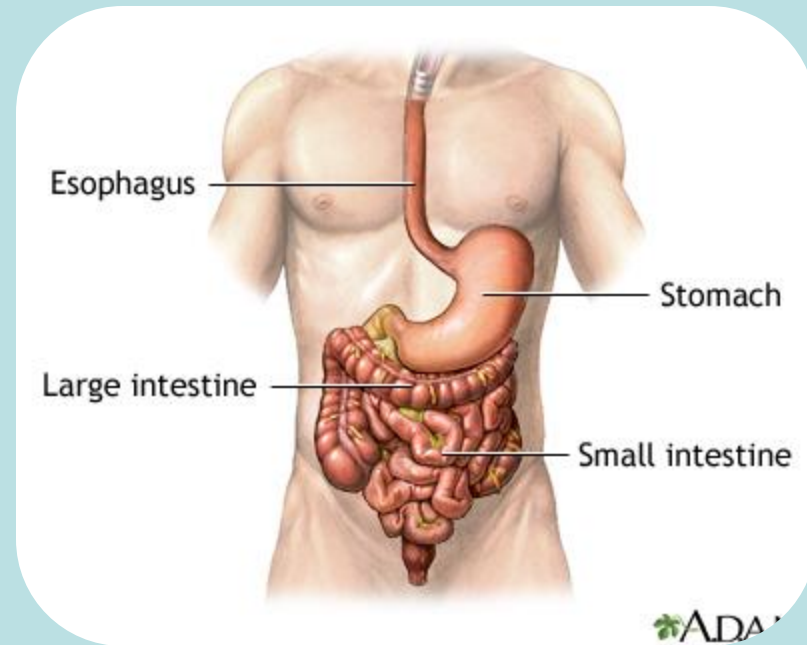
PARTS OF THE DIGESTIVE SYSTEM

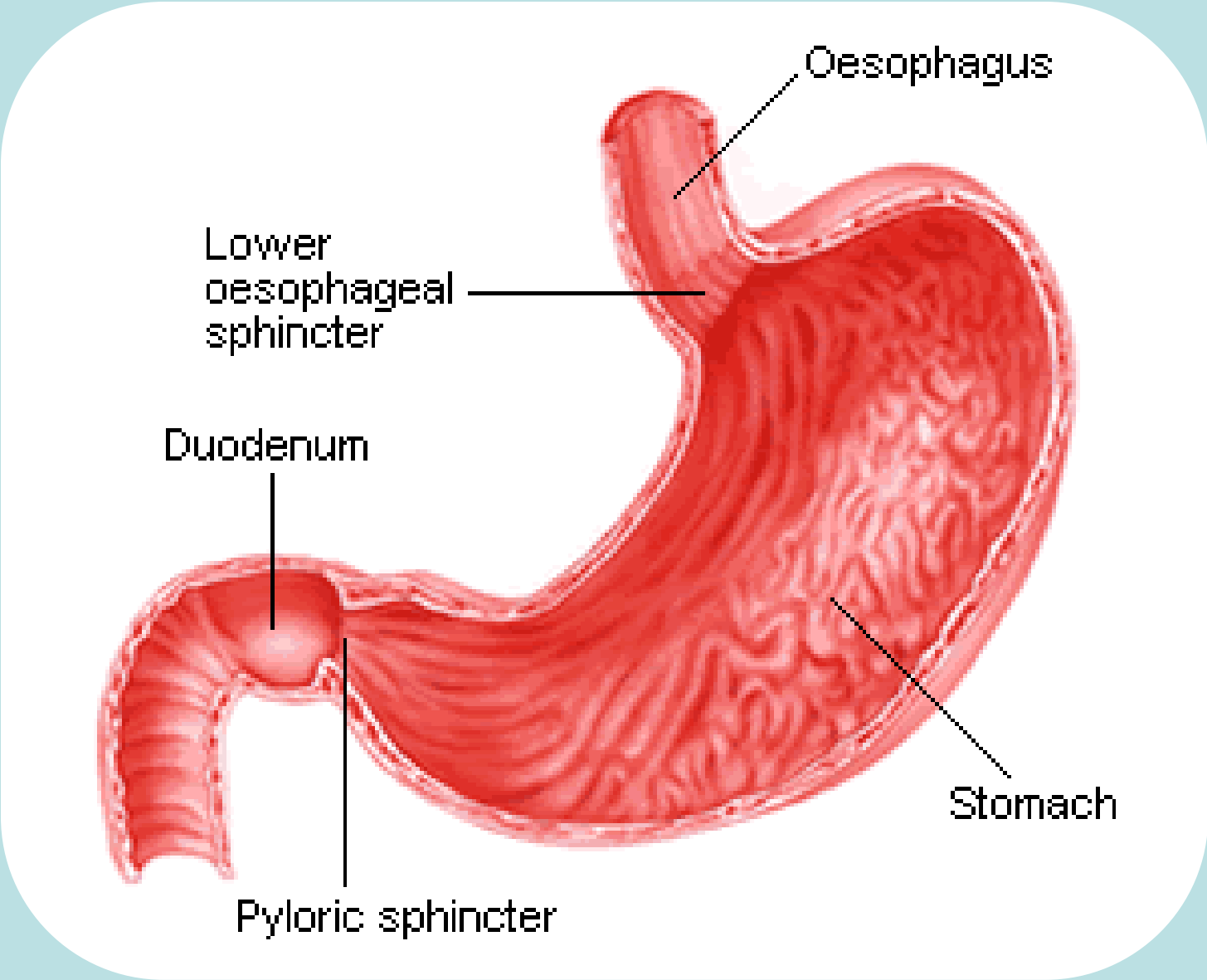
- **Sphincters** are rings of muscle that encircle tubes and act as valves, preventing materials from moving backwards through the digestive system.
- The **cardiac sphincter** (a.k.a **lower esophageal sphincter**) is found between the esophagus and the stomach.
- The **pyloric sphincter** is found between the stomach and small intestine.
- The **anal sphincter** is found between the rectum and anus.



PARTS OF THE DIGESTIVE SYSTEM

- The **stomach** receives food from the esophagus, stores food, mixes food with its juices and moves food into the small intestine.
- The stomach walls contracts to churn the food, break it down and mix it with juices.
- The juices secreted by the glands in the stomach help to break down the food chemically. The juices also are very acidic which helps to kill any bacteria present in food.





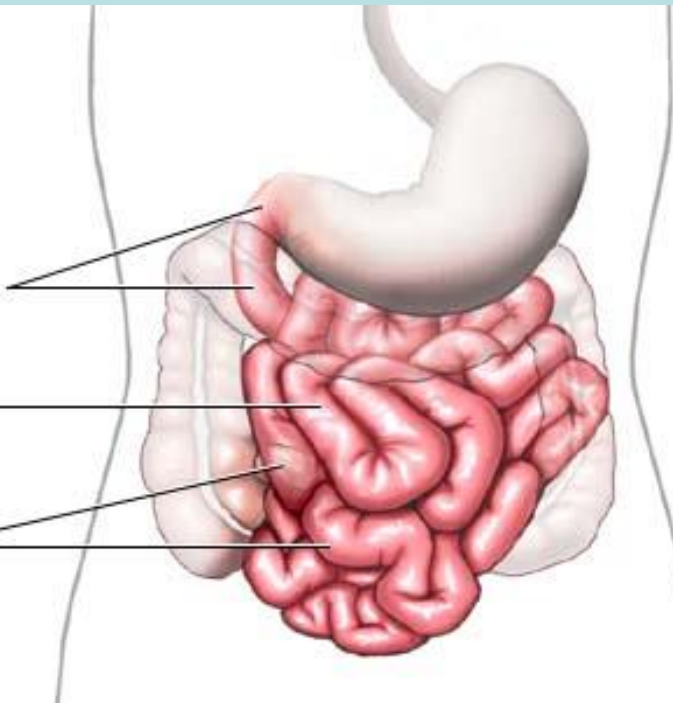
PARTS OF THE DIGESTIVE SYSTEM

- The **small intestine** is small in diameter (compared to the large intestine) but long in length (18 feet long).
- The small intestine is responsible for **breaking down the food** even further chemically and for **absorbing the nutrients** from the food.
- The small intestine is divided into three sections:
 - The **duodenum**
 - The **jejunum**
 - The **ileum**

Duodenum

Jejunum

Ileum



Stomach

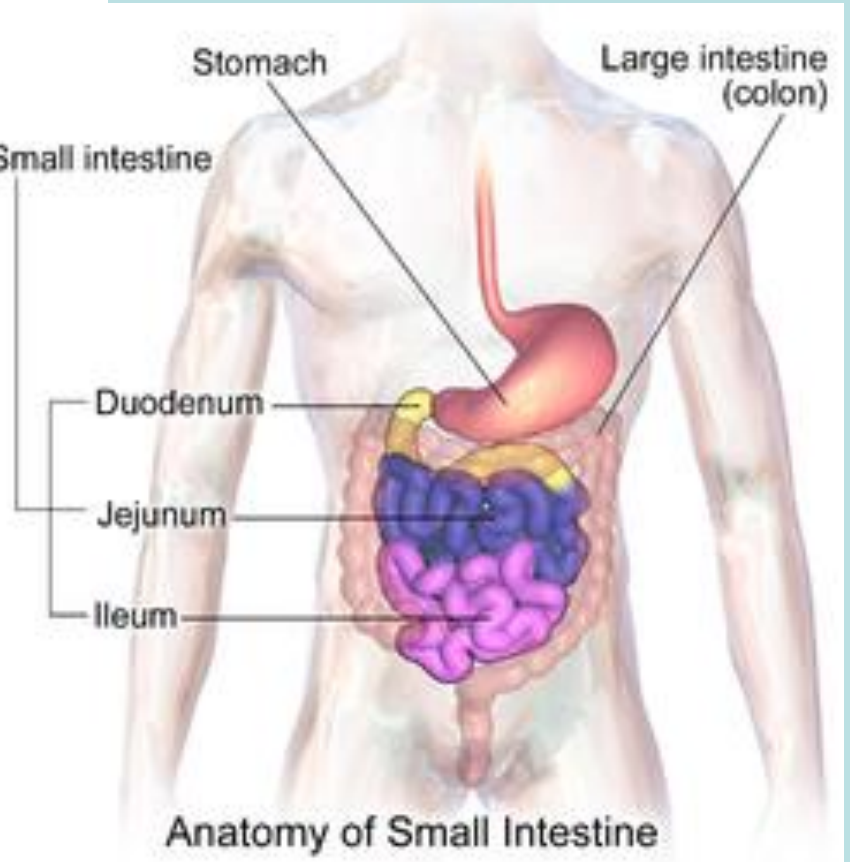
Large intestine (colon)

Small intestine

Duodenum

Jejunum

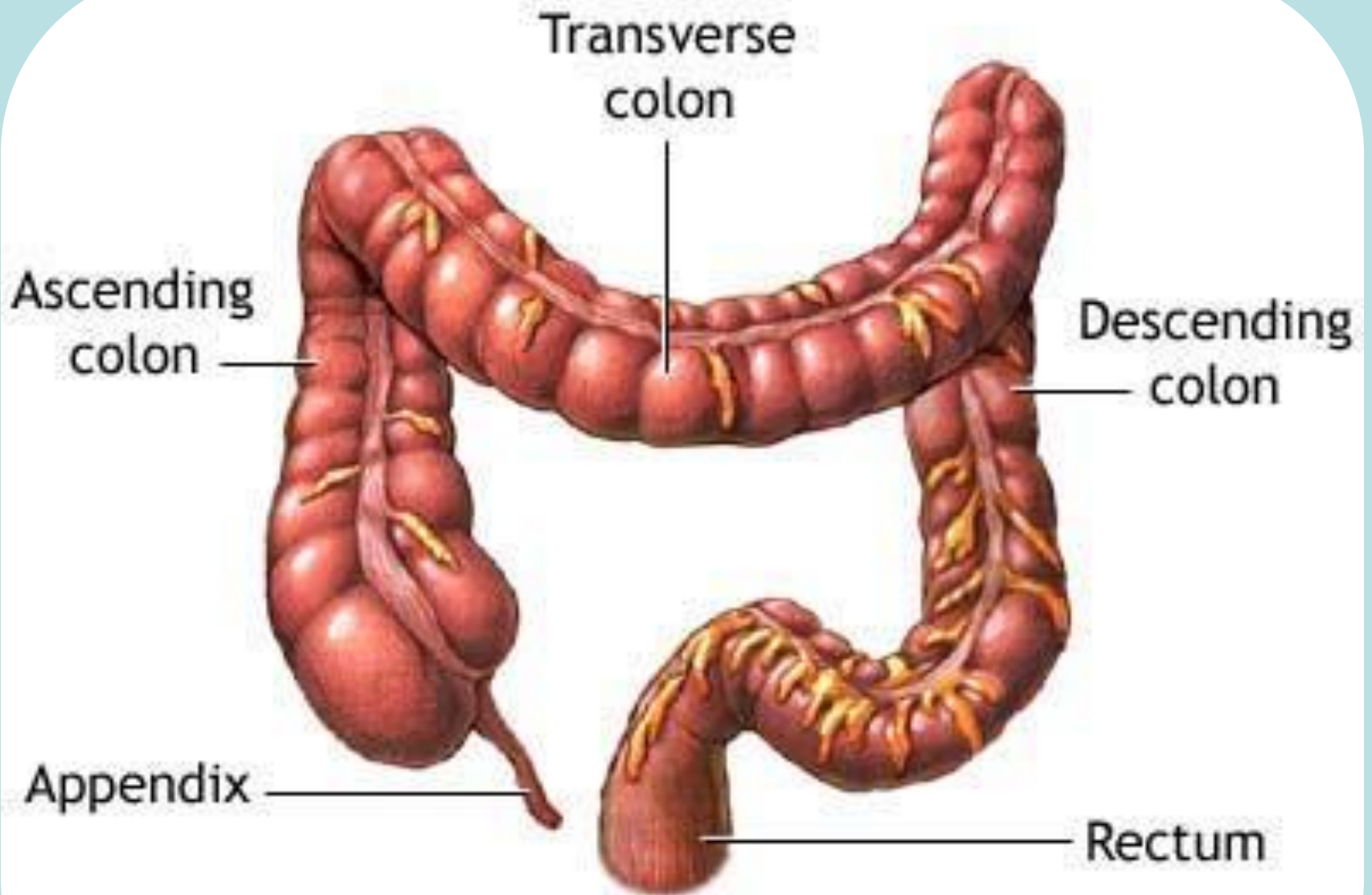
Ileum



Anatomy of Small Intestine

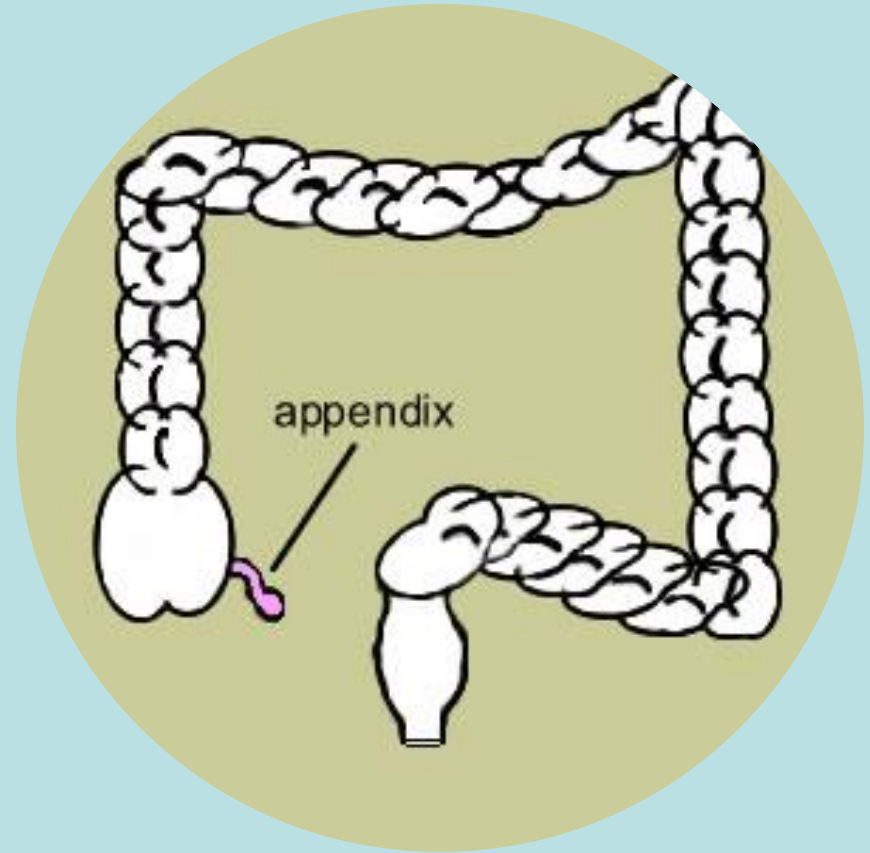
PARTS OF THE DIGESTIVE SYSTEM

- The **large intestine** is large in diameter but short in length.
- It is responsible for absorbing water, salts and some vitamins from the food.
- It also stores *indigestible* material until it is eliminated at the anus.
- The large intestine is divided into three sections:
 - The **cecum**
 - The **colon**
 - The **rectum**



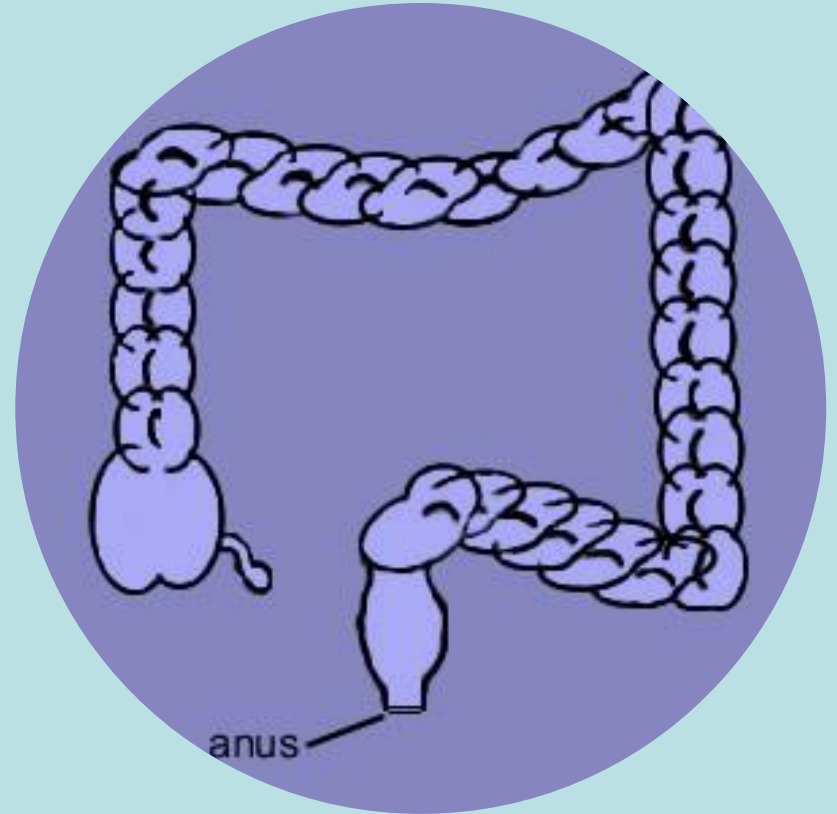
PARTS OF THE DIGESTIVE SYSTEM

- The large intestine also has a small projection from the cecum known as the **appendix**.
- The appendix *may* play a role in fighting infection.



PARTS OF THE DIGESTIVE SYSTEM

- The **anus** is the ending of the digestive system.
- This is where defecation occurs (the expulsion of feces).



THREE ACCESSORY ORGANS

*Accessory Organs help with digestion but are **not** attached to the digestive tract.*

1. The Pancreas

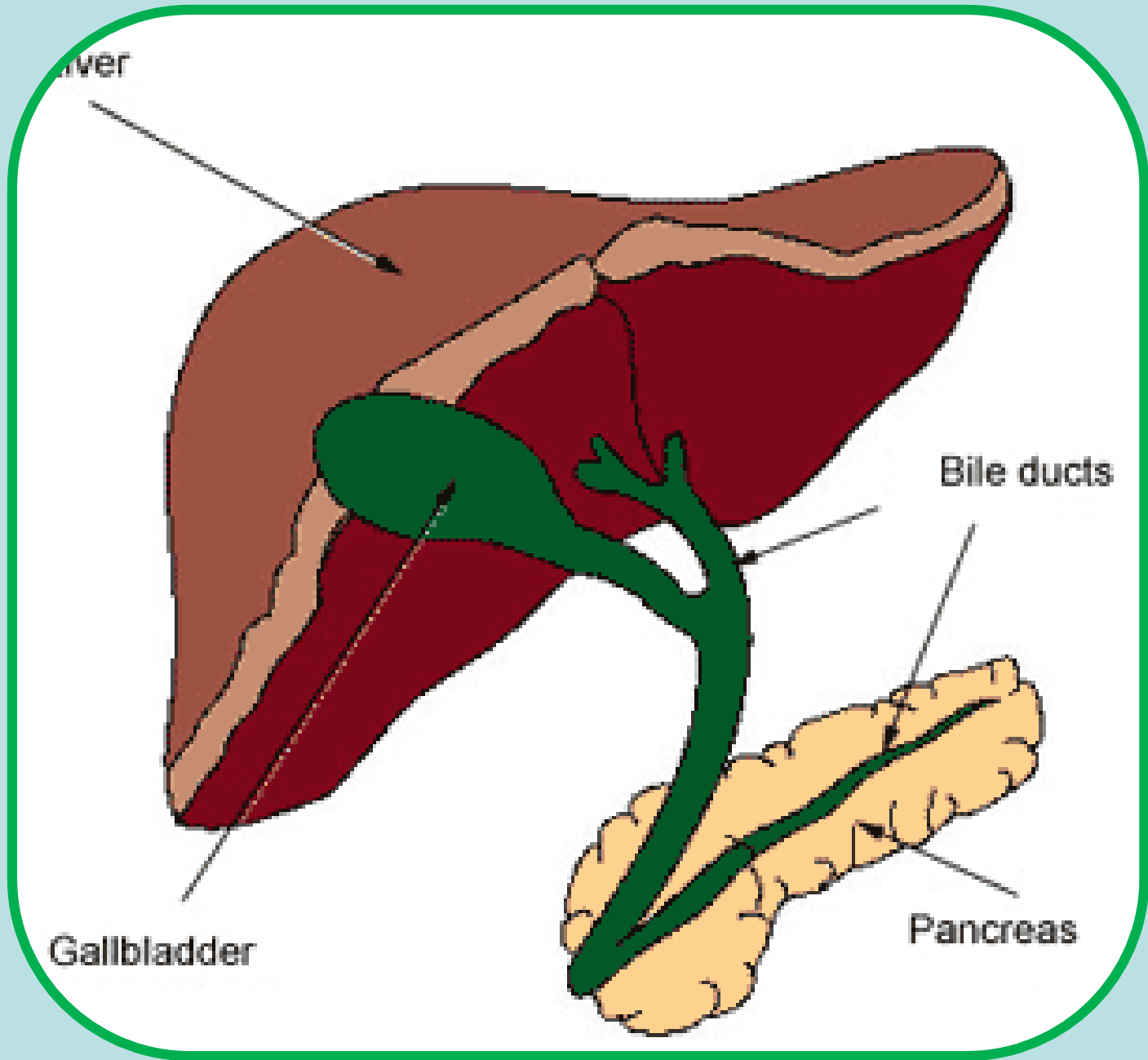
- Produces pancreatic juice which contains enzymes that help break down food chemically.

2. The Liver

- Produces bile (helps to break down fat)
- Stores excess glucose to help maintain blood glucose levels

3. The Gallbladder

- Attached to the liver.
- Stores the bile produced by the liver and secretes it into the duodenum.



Salivary Glands

Parotid

Submandibular

Sublingual

Oral cavity

Pharynx

Tongue

Esophagus

Liver

Gallbladder

Duodenum

Common
bile duct

Pancreas

Stomach

Pancreatic duct

Colon

Transverse colon

Ascending colon

Descending colon

Ileum
(small intestine)

Cecum

Appendix

Rectum

anus

