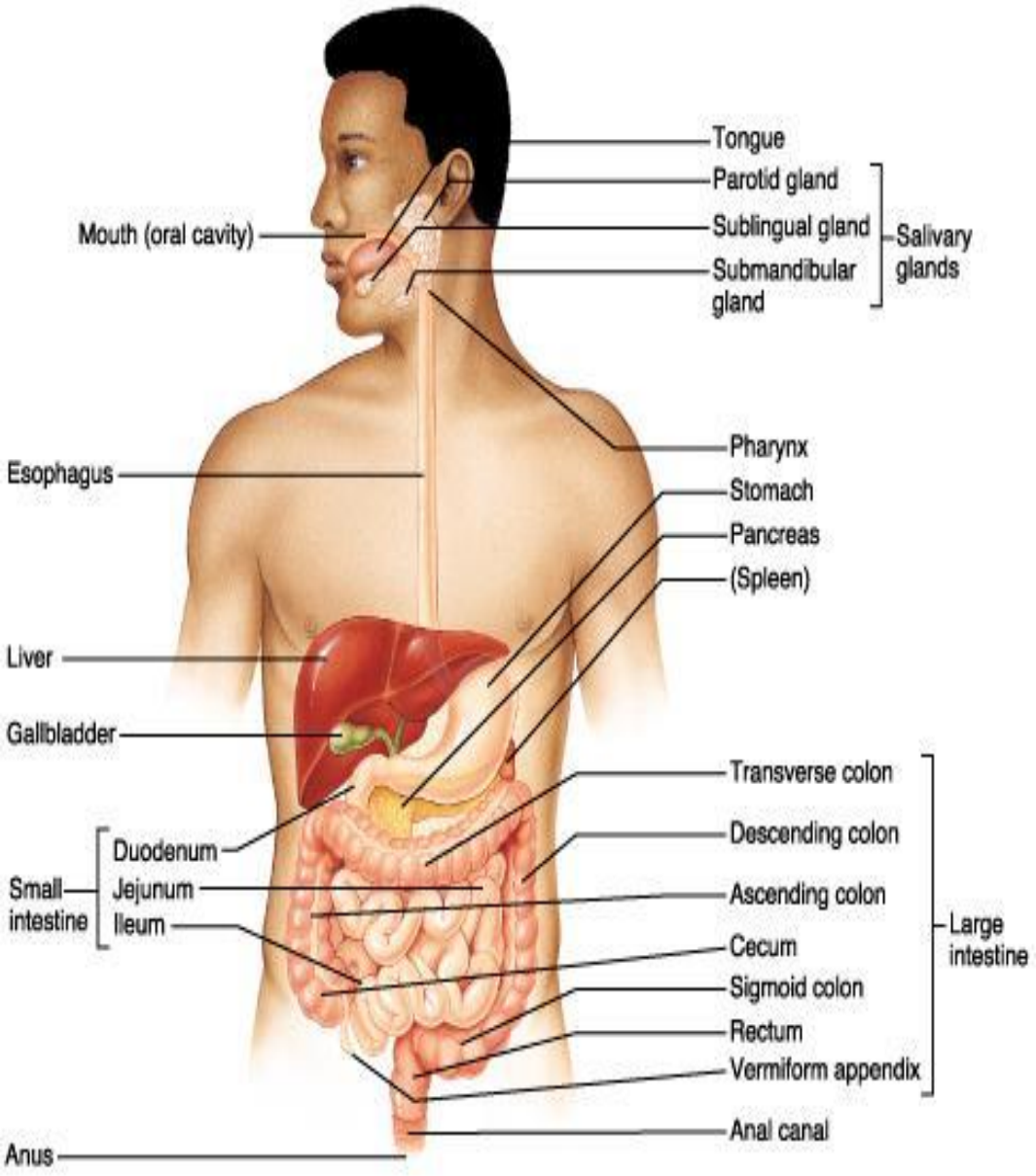
Digestive System

Digestive System

♣ Consists of digestive tract and associated glands

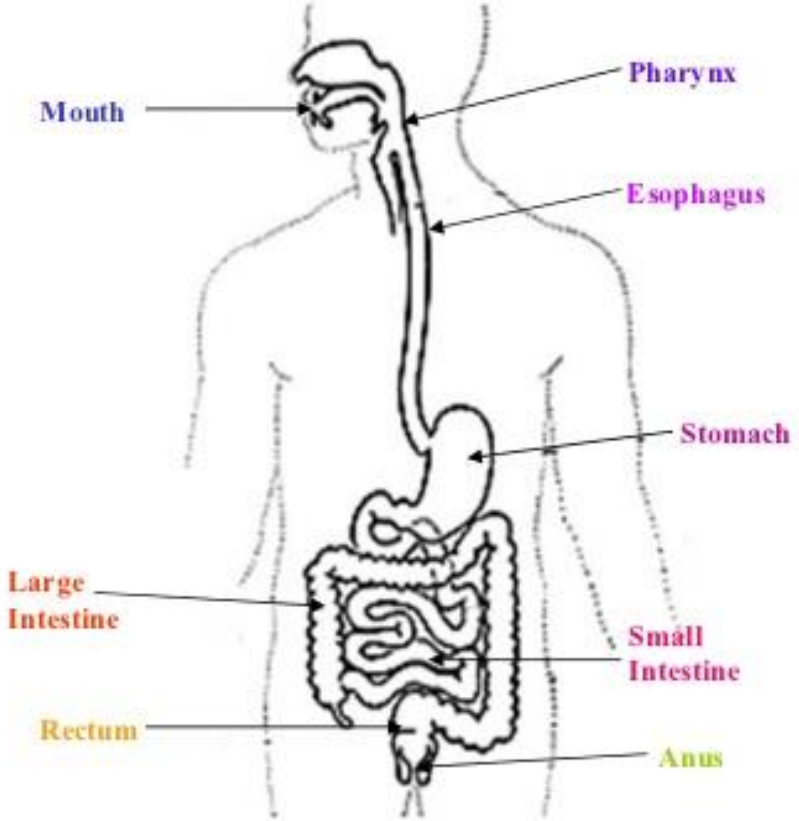
♣ **The digestive tract consists** of mouth, pharynx, esophagus, stomach, small intestine and large intestine

♣ **The digestive glands** include; salivary glands, liver, gall bladder and pancreas

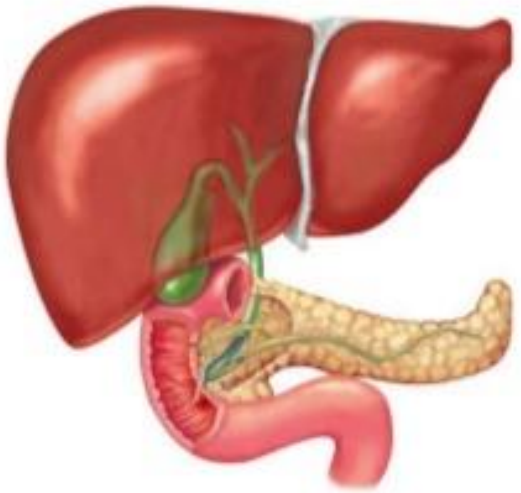


The **digestive system** is a collection of organs that can be divided into two parts:

1. The **alimentary** or **gastrointestinal tract**.



2. The **accessory organs**

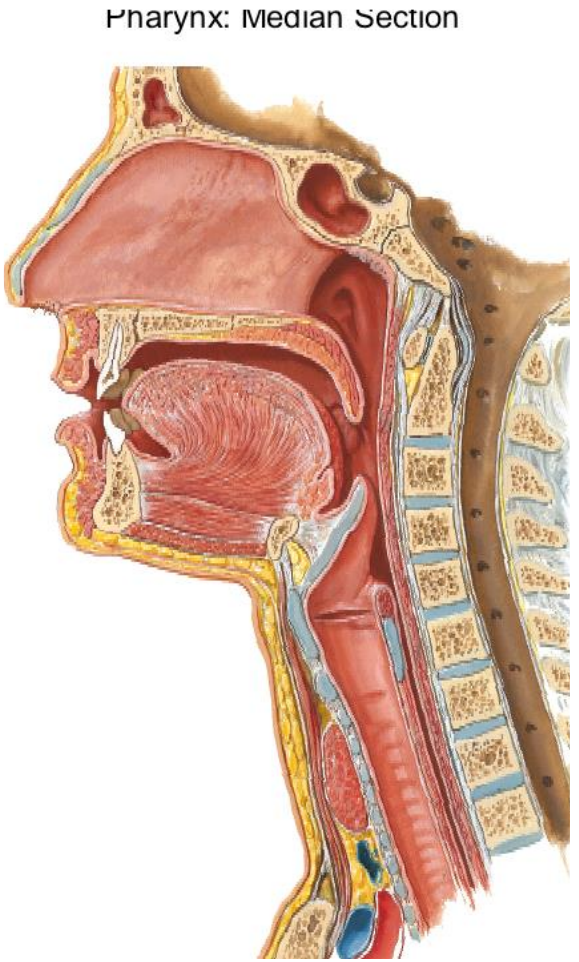


Alimentary Canal

- Alimentary canal (gastrointestinal tract) is a hollow muscular tube and is opened at both ends.

1- Mouth (oral cavity)

- Is a mucus membrane lined cavity . Lips protect its anterior opening,.
- The cheeks form its lateral walls.
- The palate forms its roof.
- The tongue is attached to the floor of the mouth.



♣ The mouth cavity proper has Roof and Floor

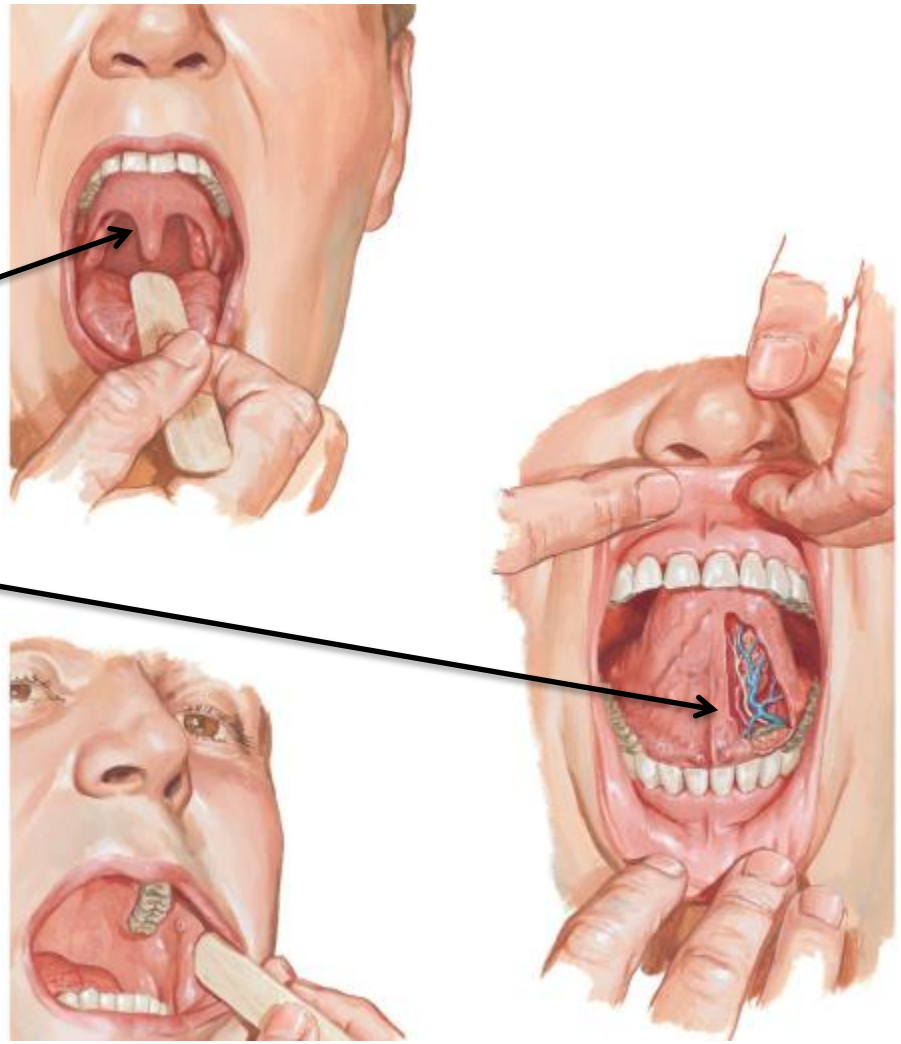
Roof :

Hard and soft palate.

Floor:

Tongue.

contains tongue, teeth, sublingual glands and openings of salivary ducts

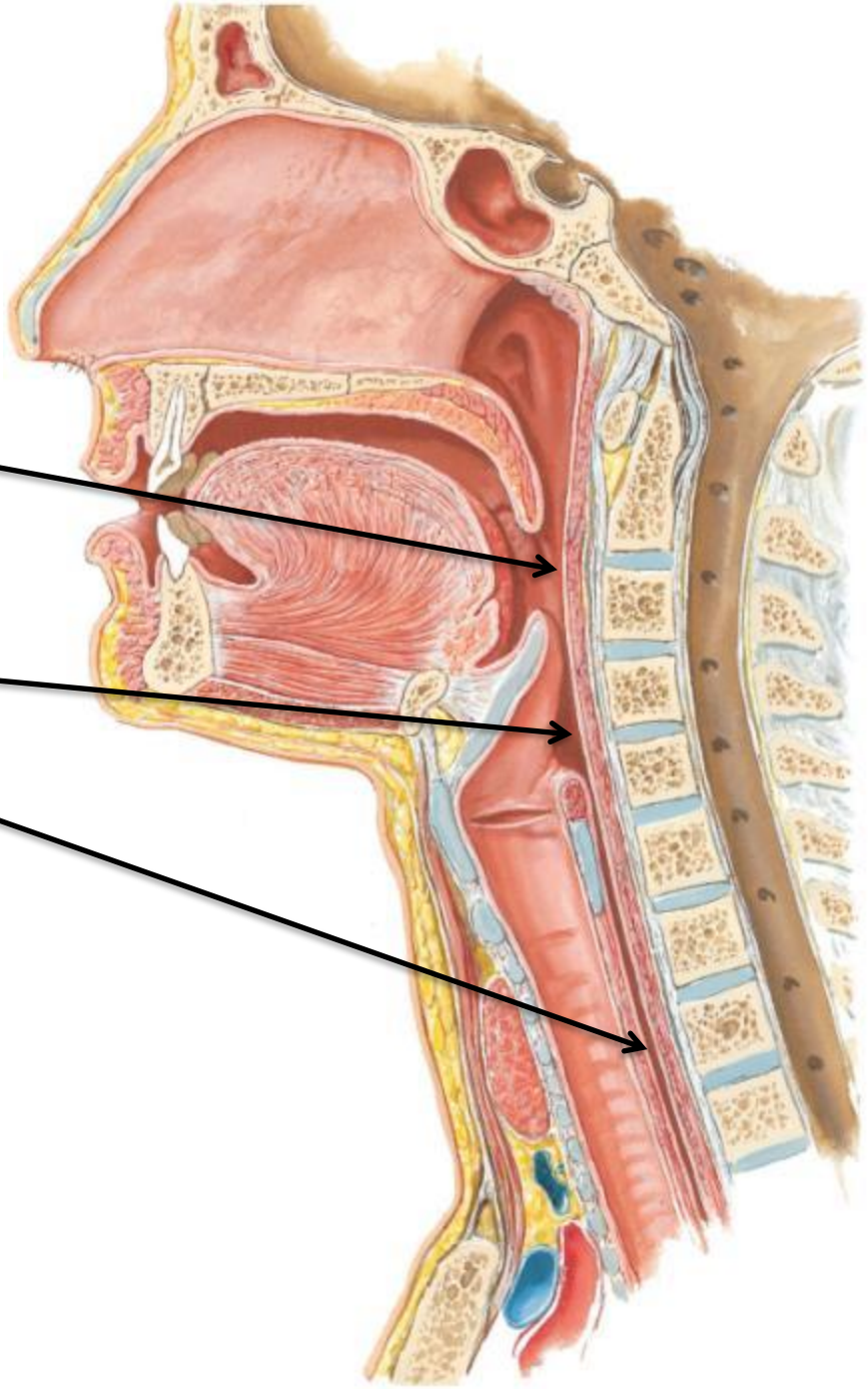


2- The Pharynx

The oral cavity ends into the **oropharynx**

The oropharynx continues as **laryngopharynx**

which leads to **esophagus**

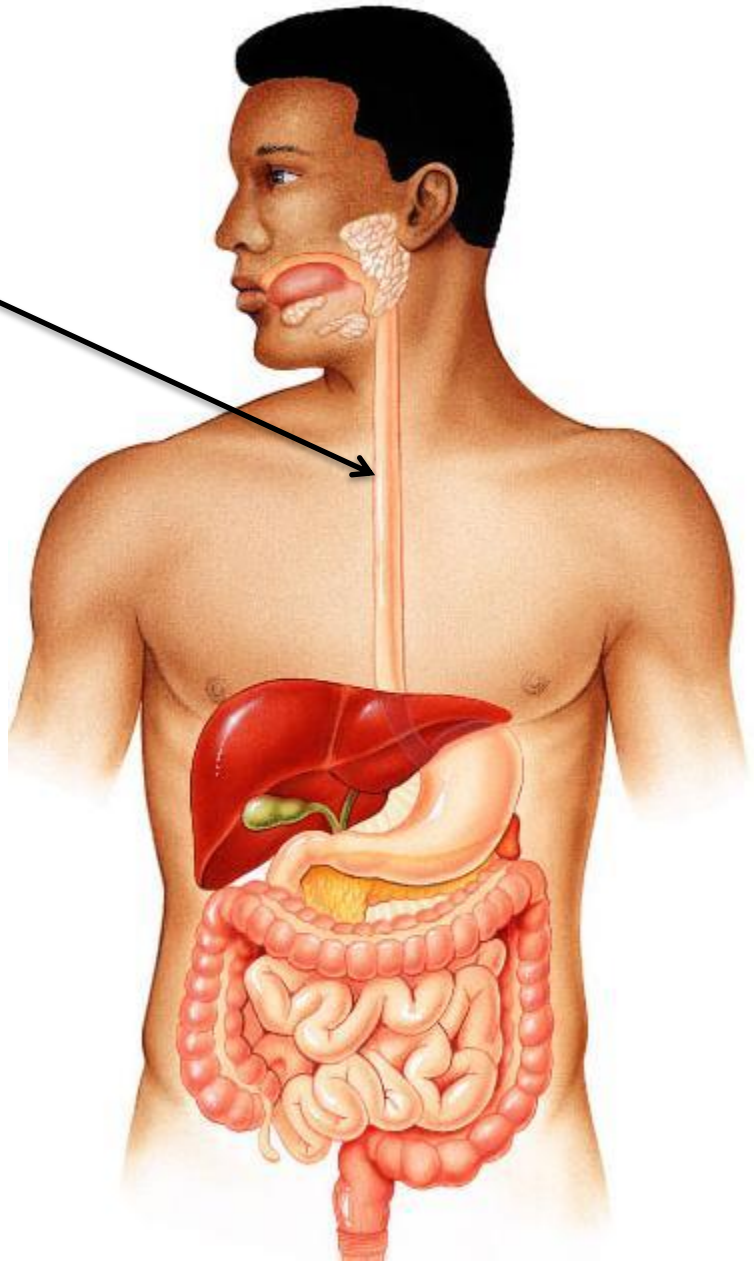


3-Esophagus

♣ 25 cm long muscular tube begins from the end of pharynx and ends in the stomach.

♣ It has cervical, thoracic and short abdominal parts

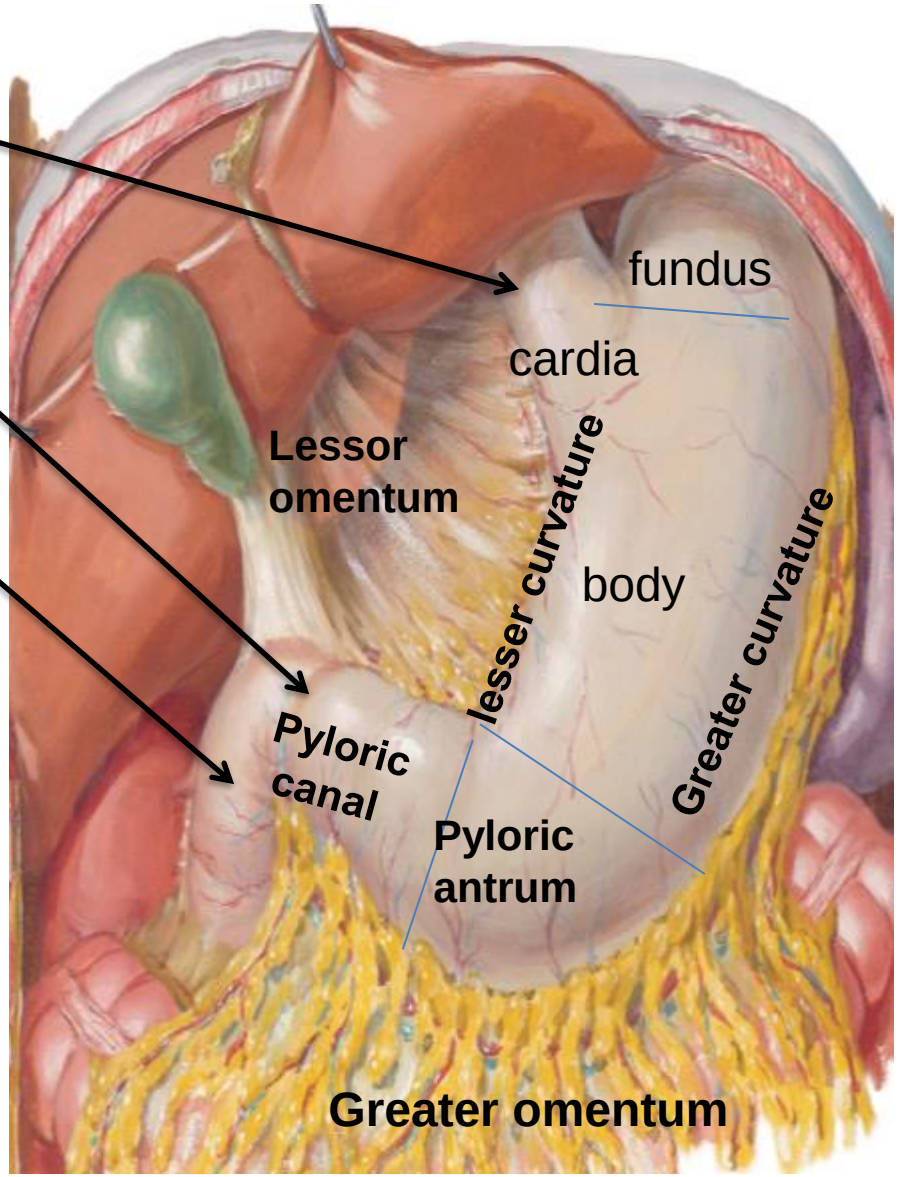
♣ It delivers the ingested food from pharynx to stomach by peristalsis movement



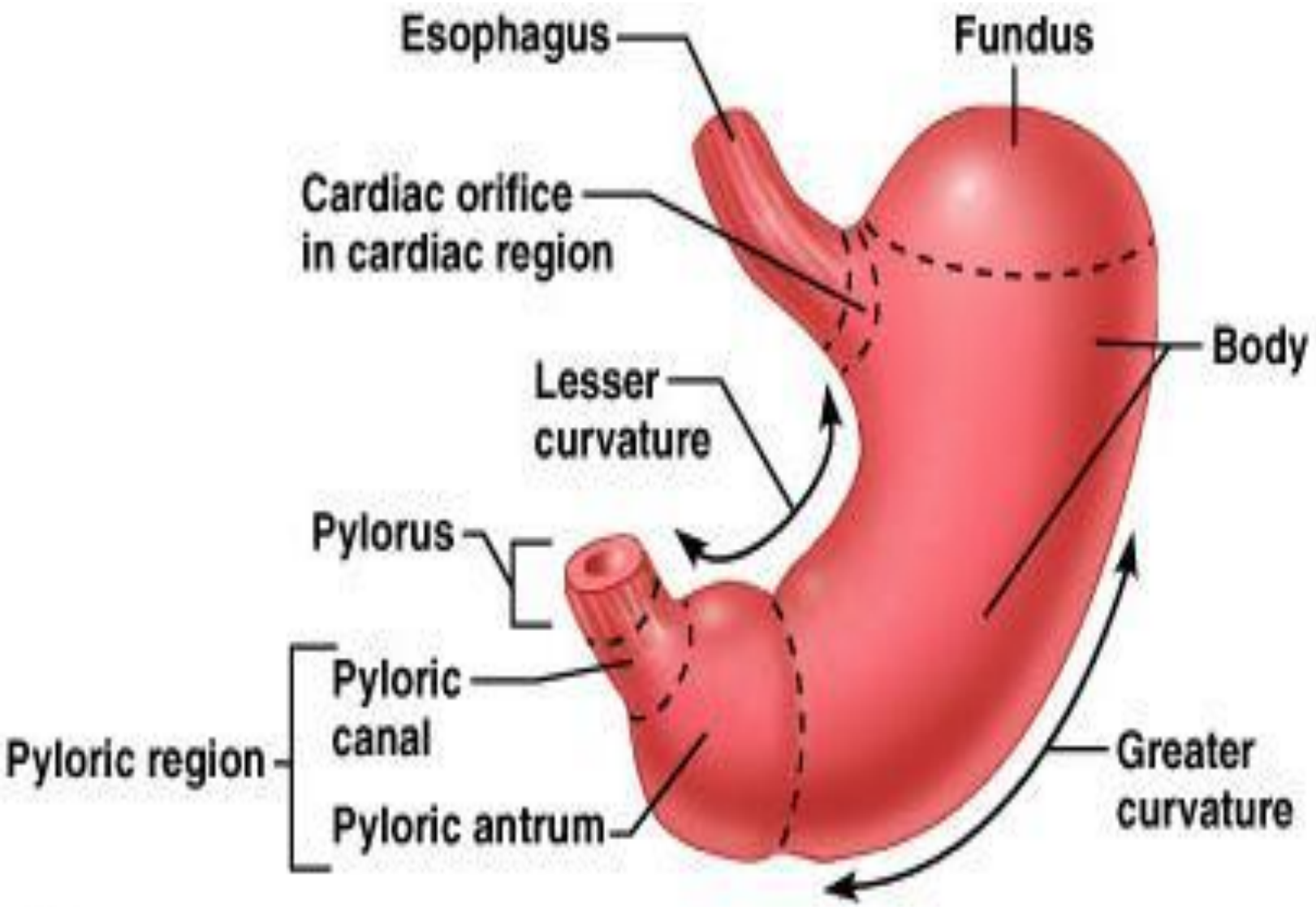
4- The Stomach

♣ Begins at the cardiac opening and ends at the pyloric opening (junction) with duodenum.

♣ It is descriptively divided into; cardia, fundus, body, antrum & pyloric canal



4- Stomach


Esophagus
Fundus
Cardiac orifice
in cardiac region
Body
Lesser
curvature
Pylorus
Pyloric
canal
Pyloric region
Pyloric antrum
Greater
curvature

Small intestine

- Is the longest portion of alimentary canal (6 meters)
- Is of three parts: duodenum, jejunum, ileum.
- It starts at pylorus and ends at iliocecal junction.
- Duodenum is 25 cm long, It receives the opening of bile duct and pancreatic ducts.
- Most of absorption of food happens in small intestine.
- The surface area of small intestine is increased by presence of microvilli and villi
- Plicea circularis are large circular folds of mucosa and submucosa.
- Peyers patches are lymphoid nodules in the submucosa of distal parts of small intestine

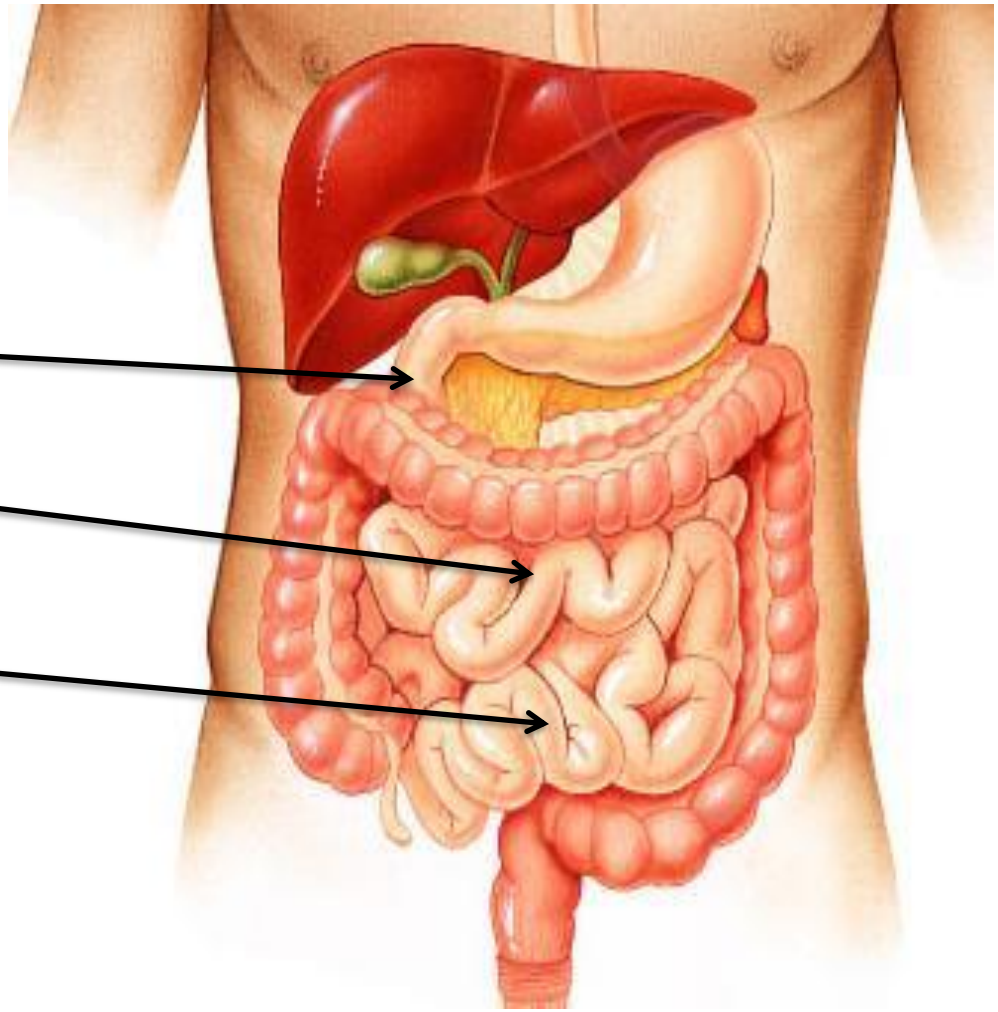
5- The Small Intestine

5-6 m long, consists of

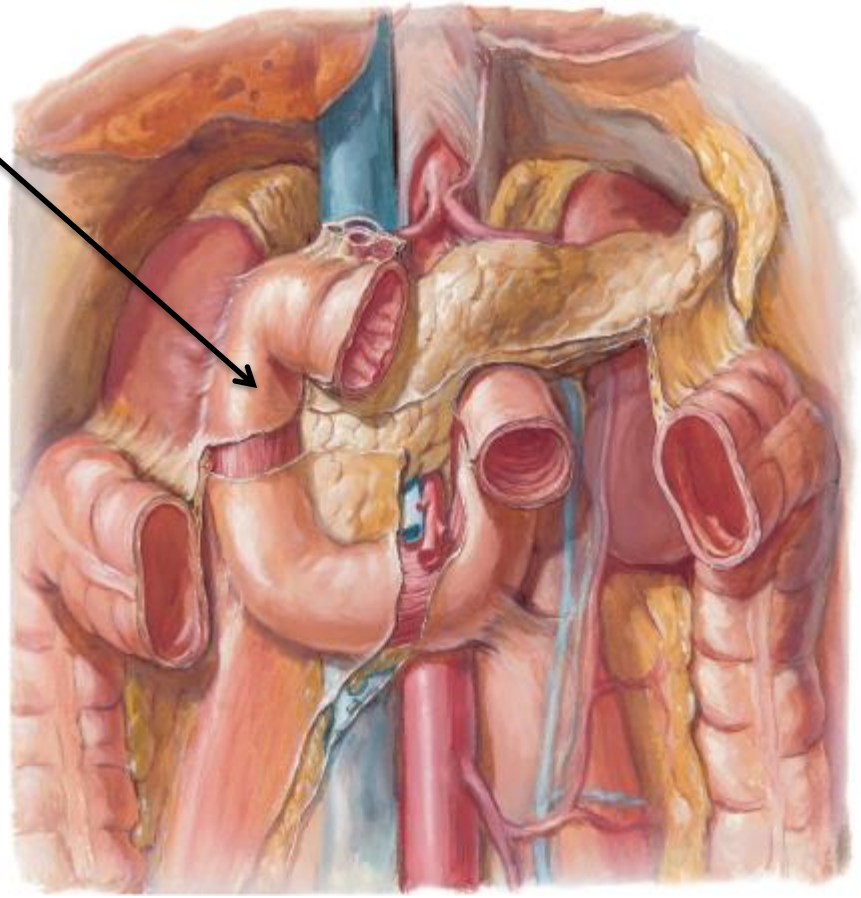
Duodenum

Jejunum and

Ileum



A-Duodenum



♣ It has the openings of bile and pancreatic ducts
♣ it digests the food particles by bile from liver, and pancreatic enzymes.

Large intestine

- Larger in diameter than small intestine but much shorter.
- It extends from the iliocecal junction to the anal canal

Parts of the Large Intestine:

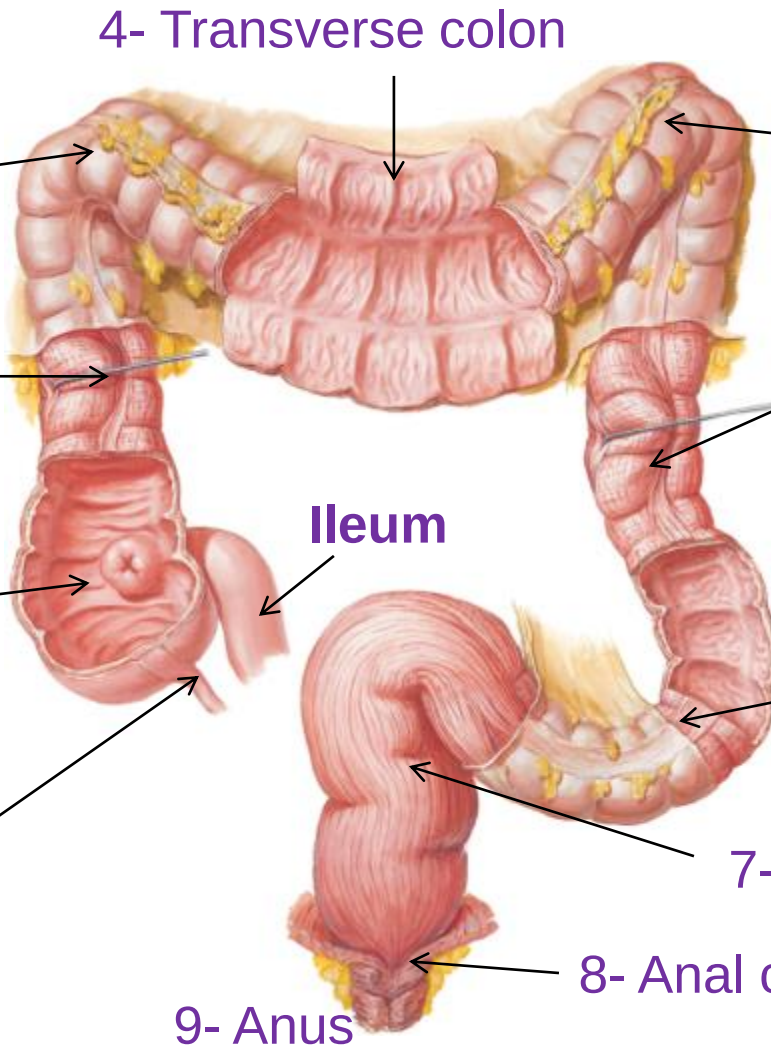
- Cecum
- Ascending colon
- Descending colon
- Rectum
- Appendix
- Transverse colon
- Sigmoid colon
- Anal canal

- The main function of large intestine is to absorb water and electrolytes and to store the residues of digestion and its elimination from the body as feces.
- Appendix is commonly inflamed and infected (appendicitis) and then appendectomy may be necessary.

6- The Large Intestine

♣ 1.5 m long, surround the coils of small intestine

Consists of



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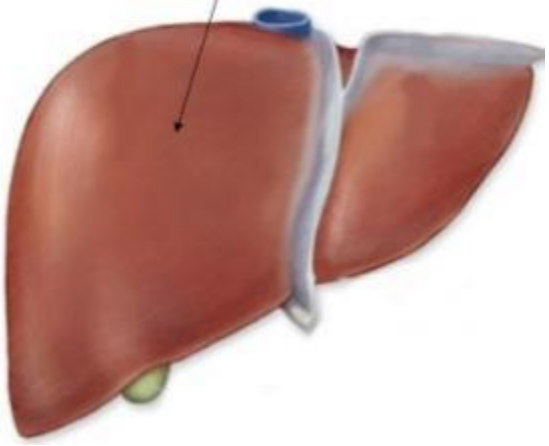
The second group of organs are the **accessory organs**. These contribute to the break down of food into usable components (digestion) but are not part of the alimentary tract. The ***accessory organs*** are:

1. Tongue

2. Teeth

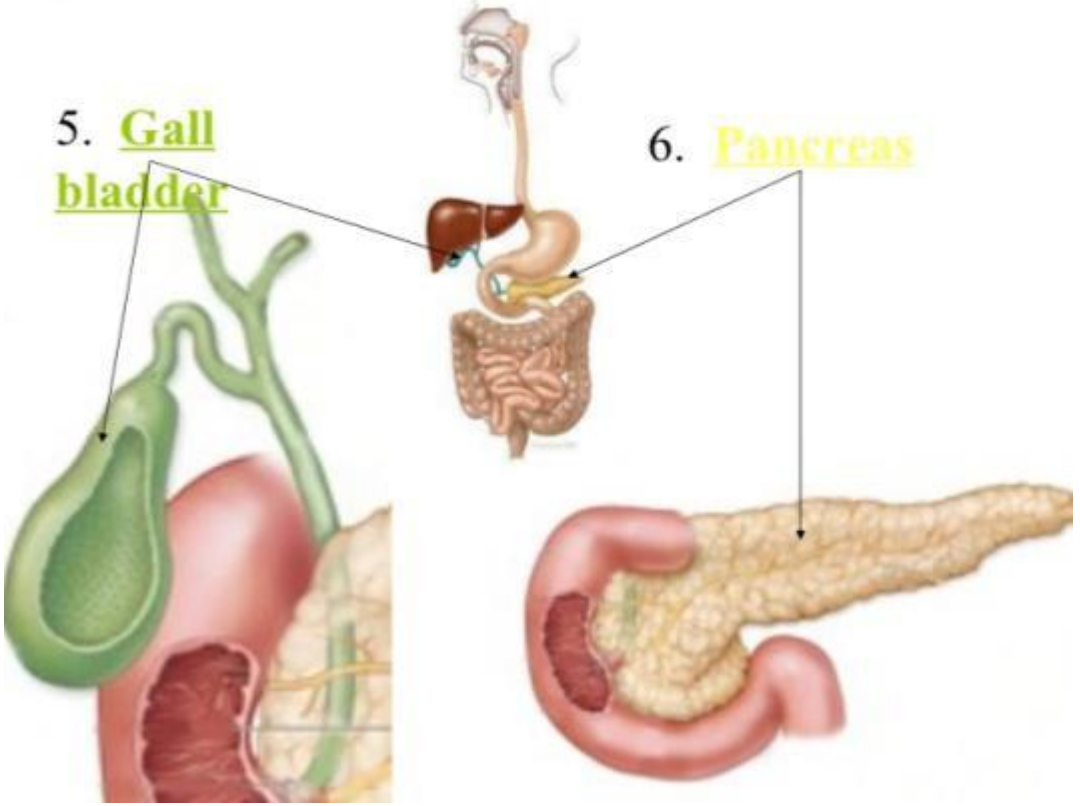
3. Salivary glands

4. Liver



5. Gall bladder

6. Pancreas



Associated digestive Glands

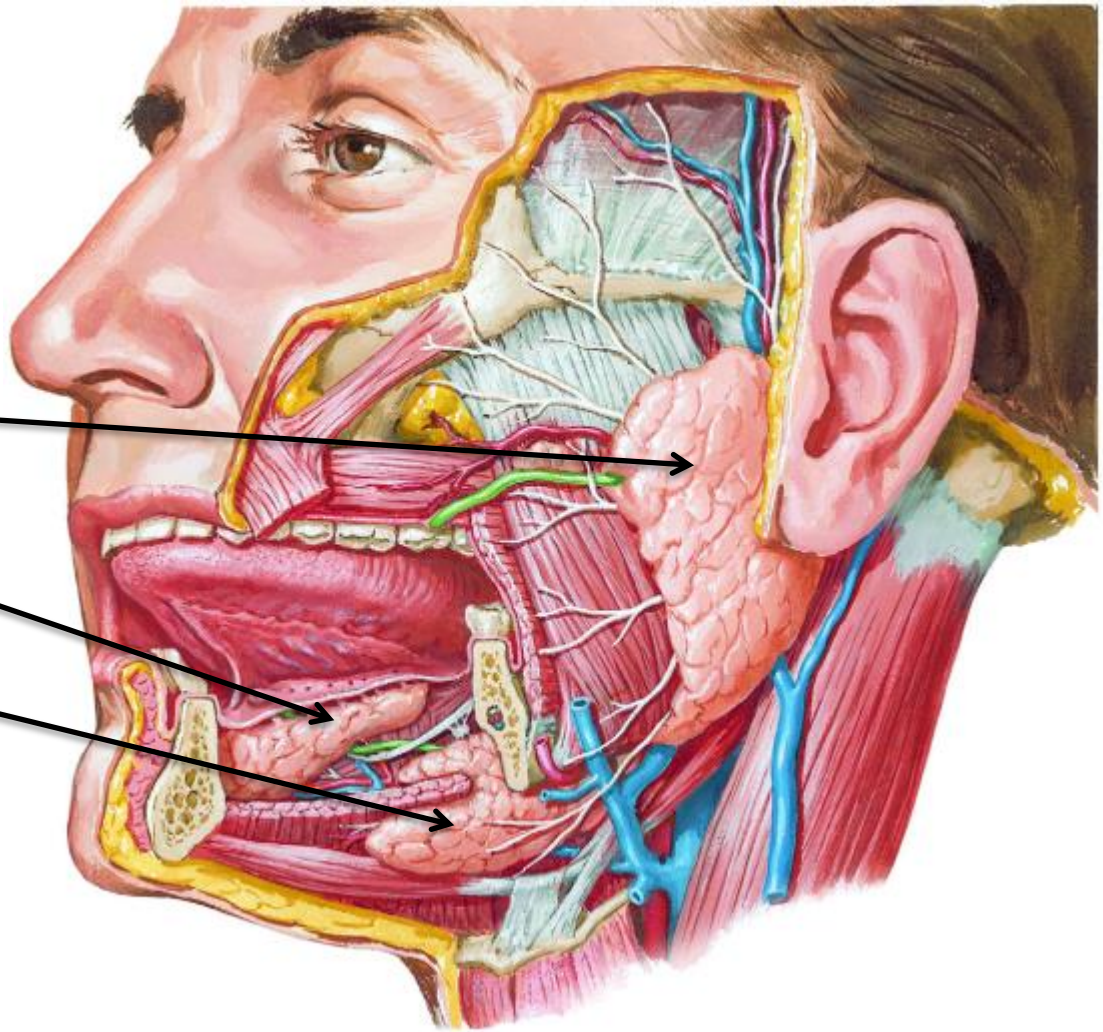
1- The Salivary Glands

♣ Include three pairs;

Parotid

Sublingual and

Submandibular



♣ Their ducts open in the oral cavity

The Teeth

- The **deciduous teeth** of childhood are 20;
- The **permanent teeth** are 32

The Tongue

- A mass of skeletal muscles covered by mucus membrane, located in oral cavity and oropharynx.
-

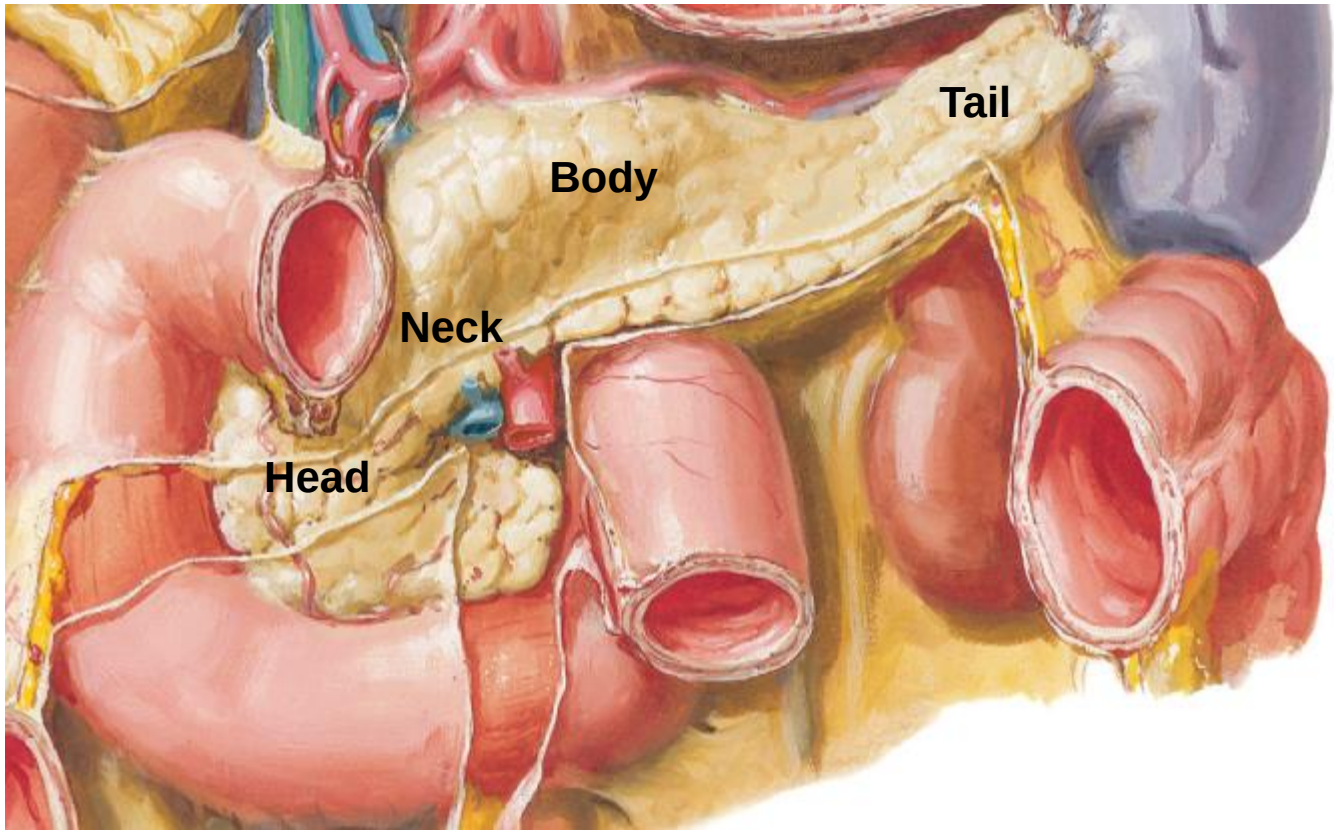
The Pancreas

- Is a soft, pink triangular gland located on the posterior abdominal wall.
- It produces digestive enzymes which are secreted into the duodenum.
- It is also an endocrine gland secreting insuline and glucagon.

The Pancreas

- ♣ Large gland surrounded by duodenum
- ♣ It is an endocrine and exocrine

Divided into
Head, Neck,
Body and Tail

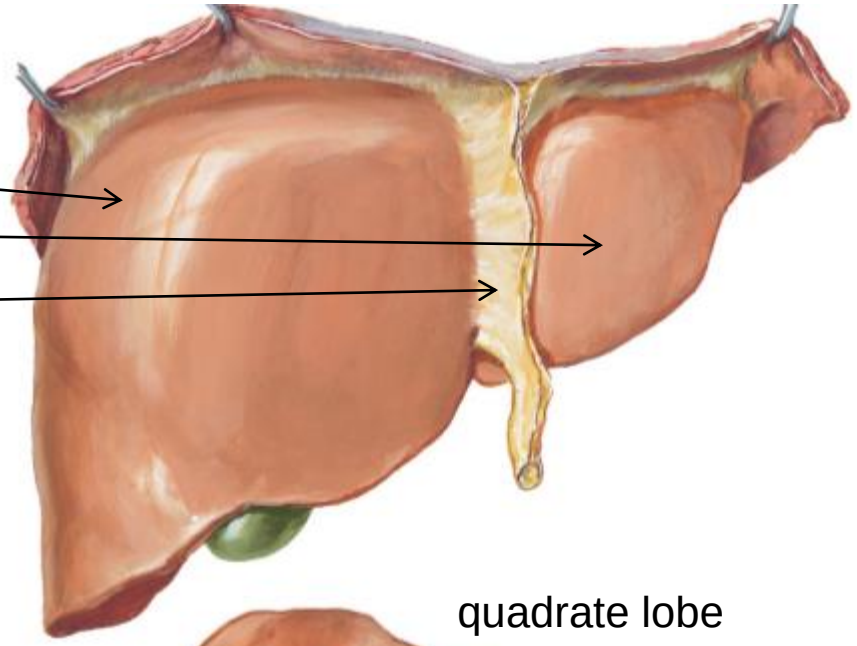


Liver

- Liver is the largest gland in the body. It is located under the diaphragm, more to the right side of the body
- It has many metabolic functions.
- The digestive function of liver is by secretion of bile through the biliary ducts to the duodenum.
- The liver lobes are:
- Right lobe
- Left lobe
- Caudate lobe
- Quadrate lobe.

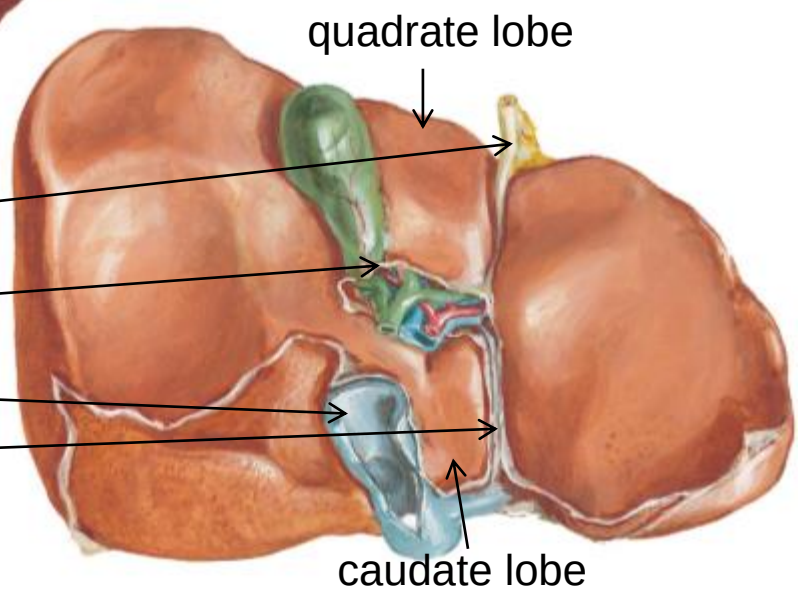
3- The Liver & Gall Bladder

♣ The liver is large organ
♣ Anteriorly right
and left lobes
By the Falciform lig



Visceral surface
The right is subdivided into

quadrate lobe
and a caudate lobe
by the ligamentum teres,
gallbladder
the inferior vena cava,
and liqamentum venosum

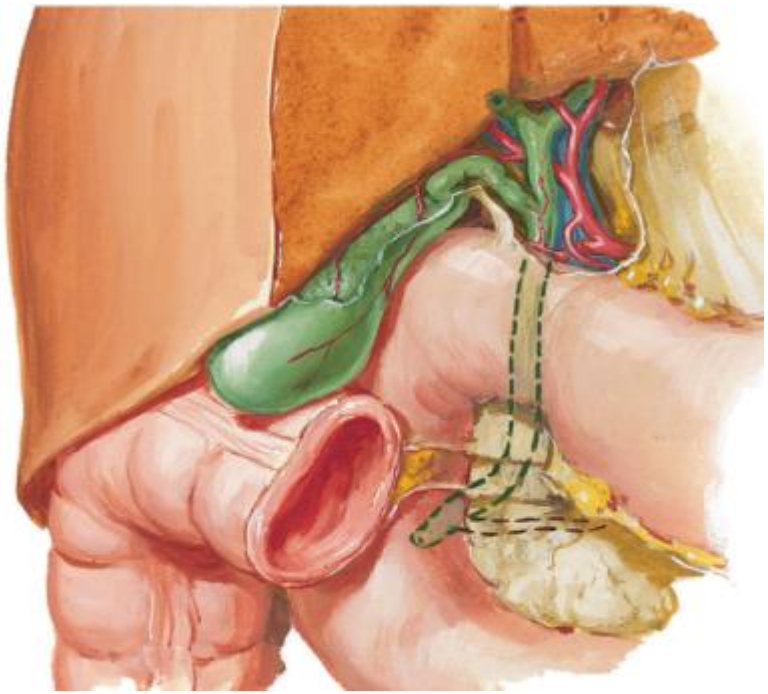


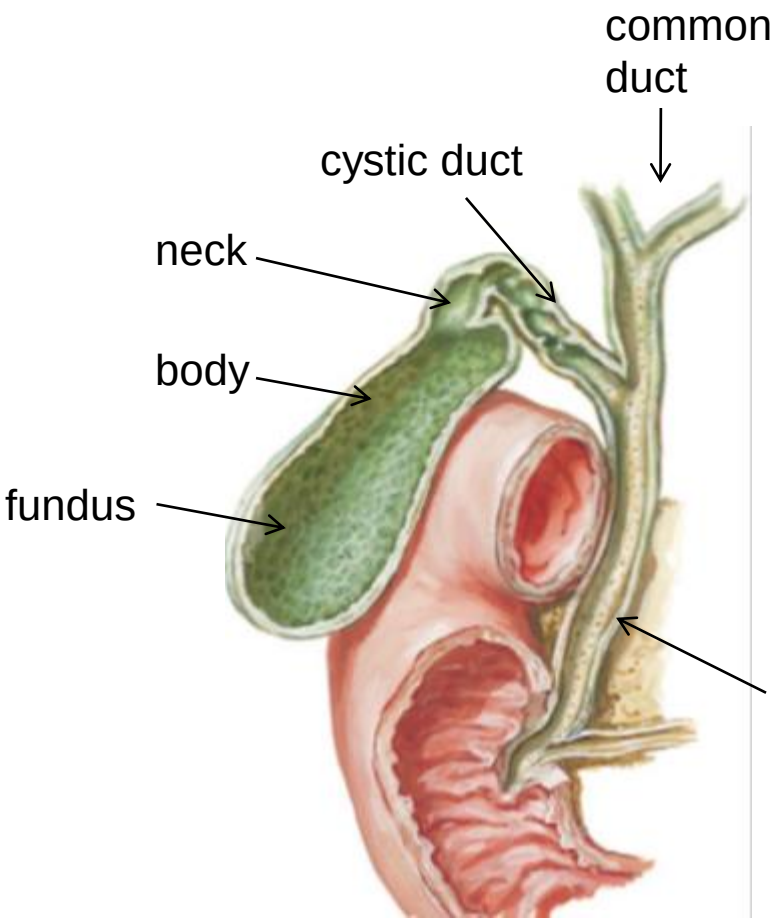
Gall bladder

- Gall bladder is a small thin walled green sac. Right and left hepatic ducts unites to form the common hepatic duct which unites with the cystic duct to form the common bile duct.
- Common bile duct opens in the duodenum.

4- Gall bladder

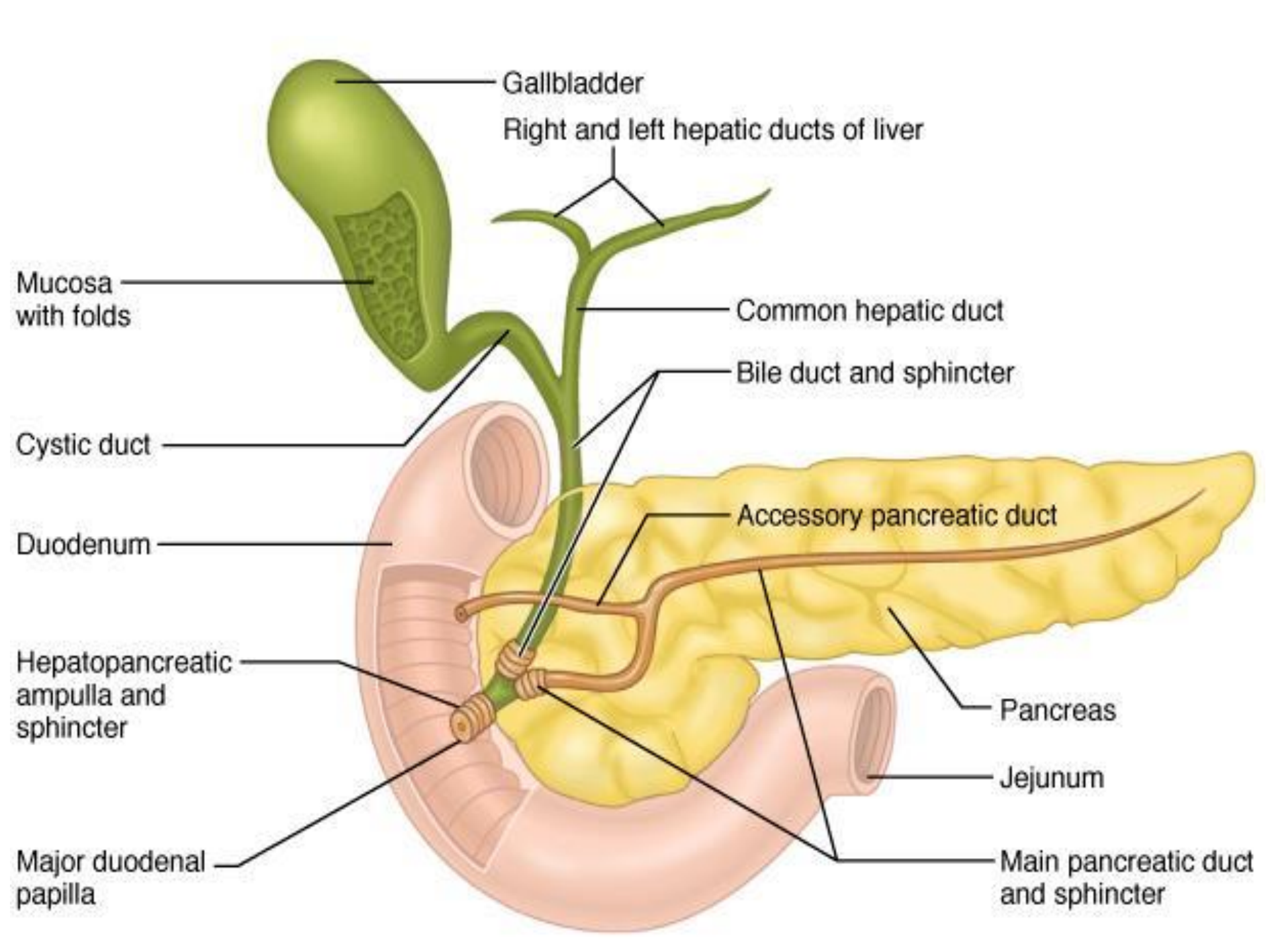
♣ is muscular sac attached to inferior of visceral surface of liver





The gallbladder is divided into the fundus, body, and neck.

♣ Its duct is called cystic duct joins common bile duct to form common bile duct


Gallbladder
Right and left hepatic ducts of liver
Mucosa with folds
Common hepatic duct
Bile duct and sphincter
Cystic duct
Accessory pancreatic duct
Duodenum
Hepatopancreatic ampulla and sphincter
Pancreas
Jejunum
Major duodenal papilla
Main pancreatic duct and sphincter

Peritoneum

- Is the largest serous membrane in the body.
- **Parietal peritoneum** is that portion of peritoneum that lines the walls of abdominopelvic cavity.
- **Visceral peritoneum** covers the organs.
- The slim space between visceral and parietal peritoneum is called **peritoneal cavity** which contains peritoneal fluid.
- **Ascitis** is accumulation of excess fluid inside the peritoneal cavity.

- There are five major peritoneal folds: the *greater omentum, falciform ligament, lesser omentum, mesentery, and mesocolon..and others.*