

Anatomy of the Digestive system

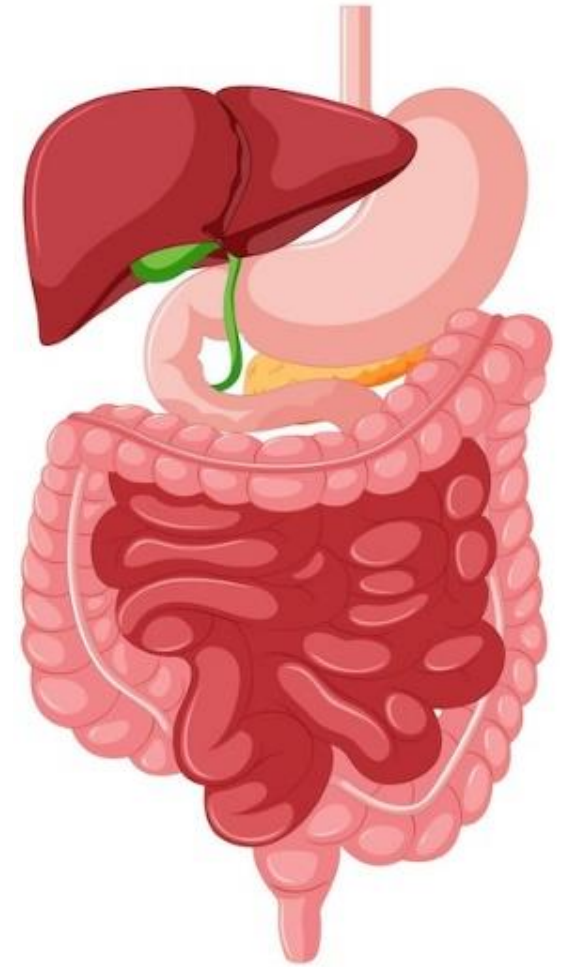
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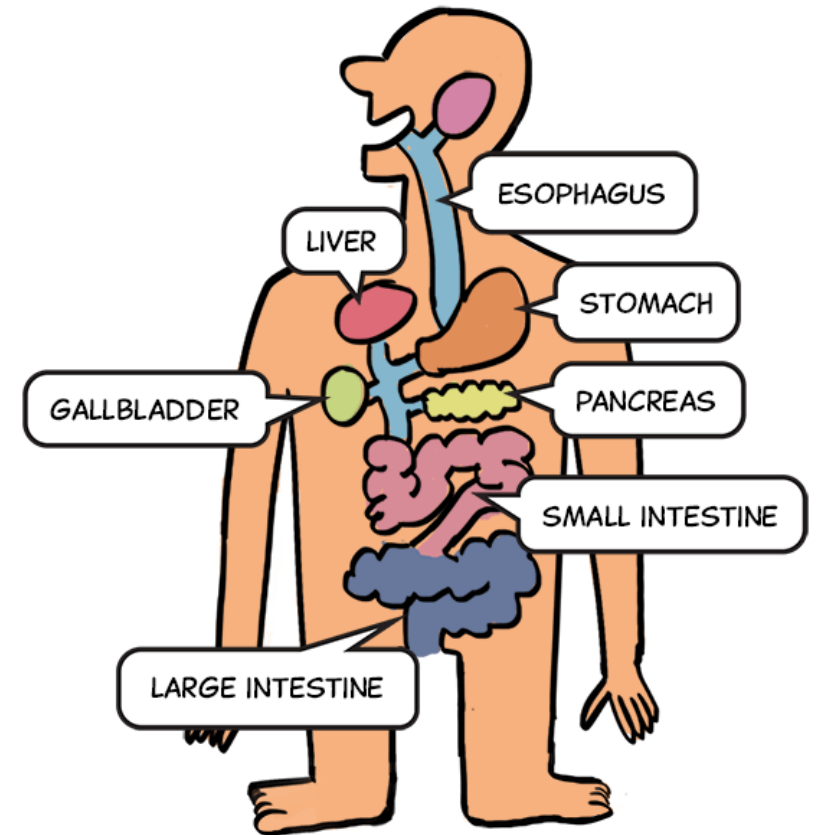
Digestive system

- Extending from the mouth to the anus, the digestive tract is one of the largest systems in the human body.
- It contains organs that regulate food intake, its digestion and absorption of the useful material that it contains.
- In addition to this, the digestive system also eliminates the waste products from food and products from various endogenous metabolic processes.



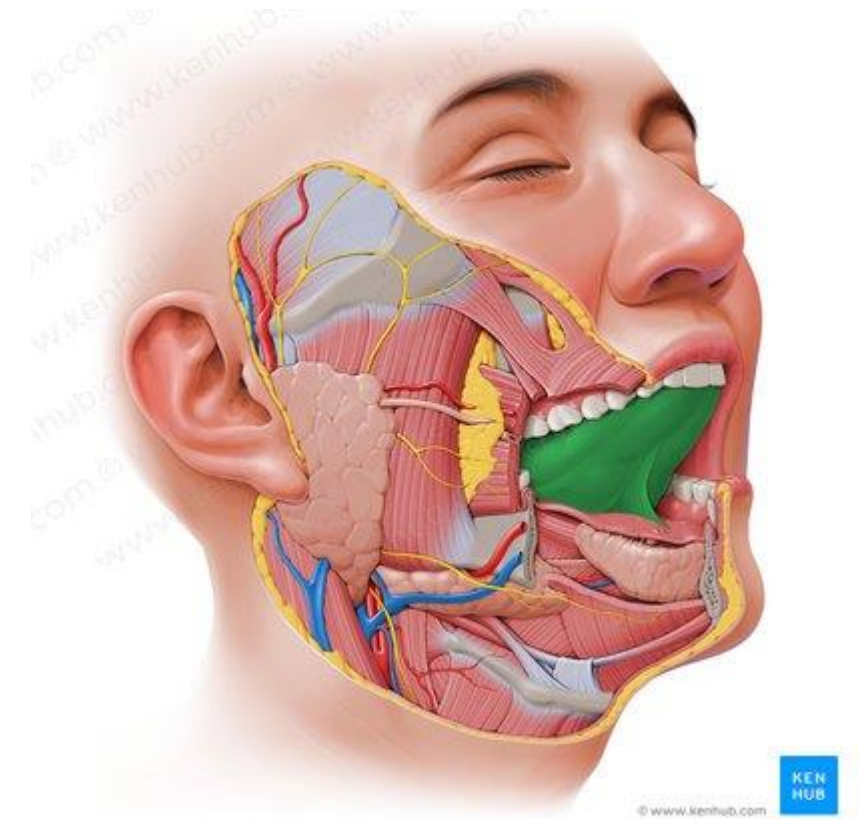
The digestive system is divided in to

- **1-Digestive canal (alimentary canal):** Which consist from {mouth, pharynx, esophageal, stomach, small intestine, large intestine, rectum and anal canal}.
- **2-Aditional digestive parts**
 - 1-Salivary gland. (a-parotid gland. b-submandibular gland c-sublingual gland).
 - 2-liver.
 - 3-Gall bladder.
 - 4-Pancreas.



The Digestive canal (alimentary canal):

- **1-Mouth (Buccal Cavity, Oral Cavity):** bordered above by hard and soft Palate forms partition between mouth and nasal passages.
- **2-Tongue:** lines ventral border of mouth cavity is skeletal muscle covered with mucous membrane contains taste buds.

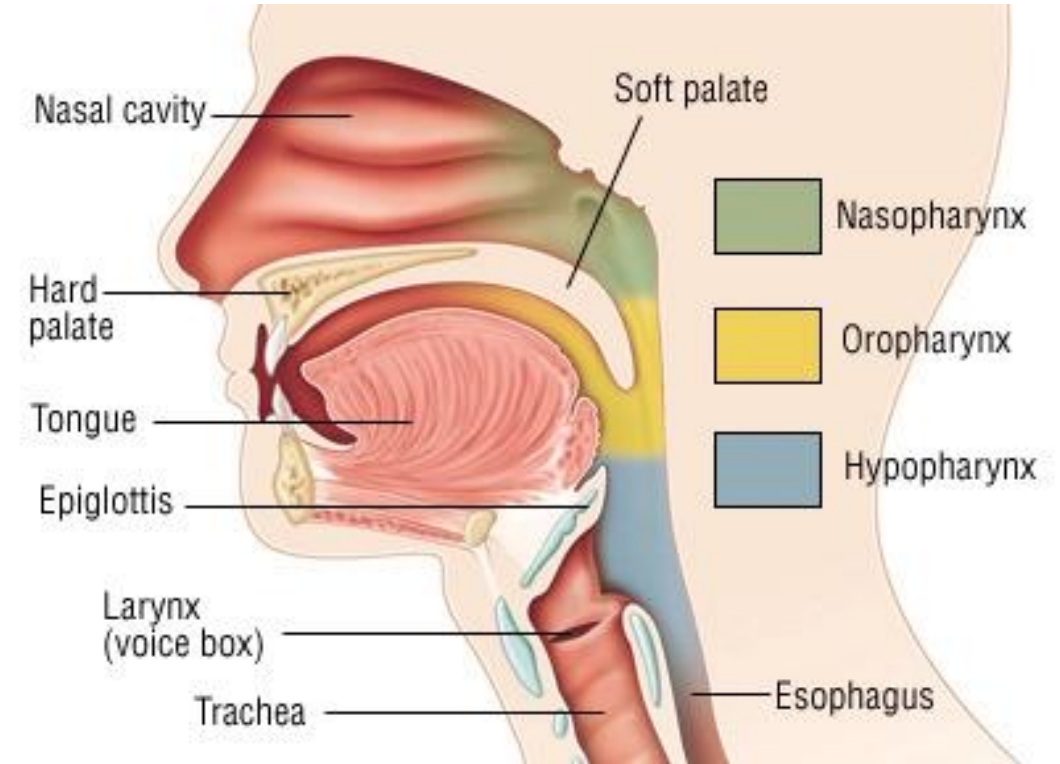


Teeth

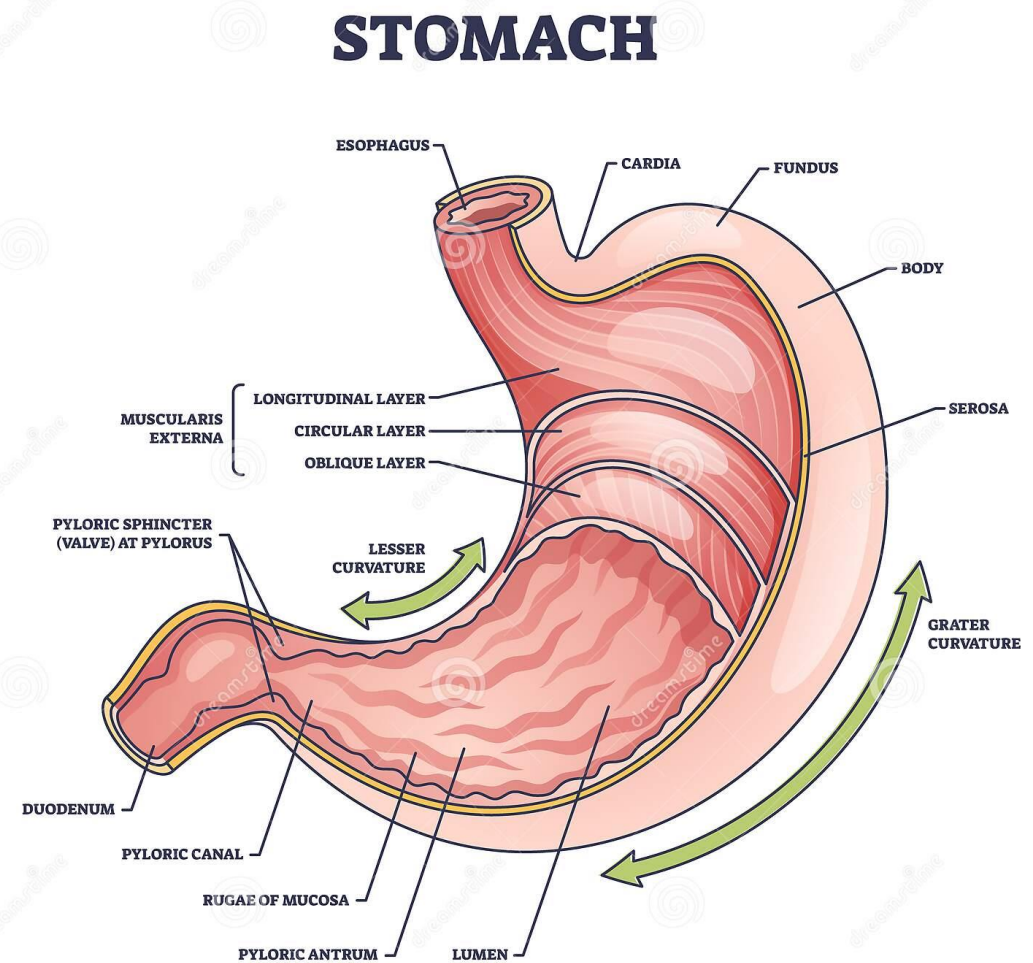
- **3-Teeth:** two types:
- -Deciduous (baby teeth) (20) begin at 6 months; shed 6-13 years
- -Permanent teeth (32).
- Each tooth has:
- =crown (above gum)
- = neck is where crown, gum and root meet
- = root (below gum)



- **3-Pharynx:** (throat). connect the nasal and oral cavities with the larynx and esophagus. Its function is Swallowing moves the food mass, or bolus, from the mouth into the pharynx.
- **4-Esophagus:** collapsible tube 25 cm long extends from pharynx to stomach gets food through thorax to abdominal cavity posterior to trachea and heart.

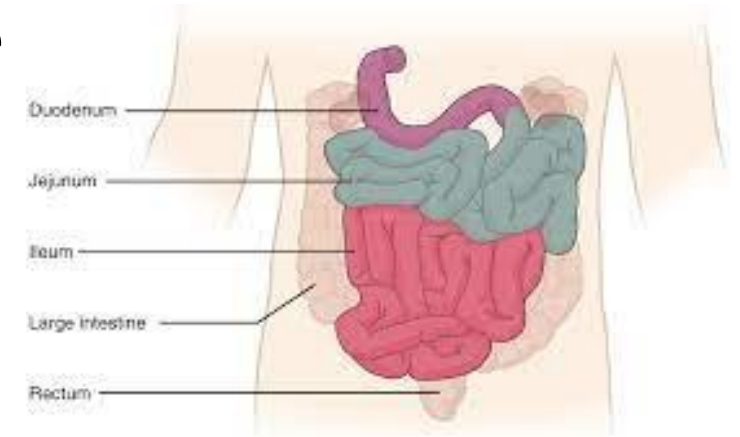


- **5- The stomach:** is a muscular organ and the widest part of the gastro intestinal tract.
- It lies in epigastric region, between the esophagus and the small intestine.
- Empty stomach is J-shaped.
- **The stomach consists of:**
 - 1. Cardiac orifice
 - 2. Fundus
 - 3. Body
 - 4. Pylorus and pyloric orifice
 - 5. two curvature greater and lesser curvature



Small Intestine

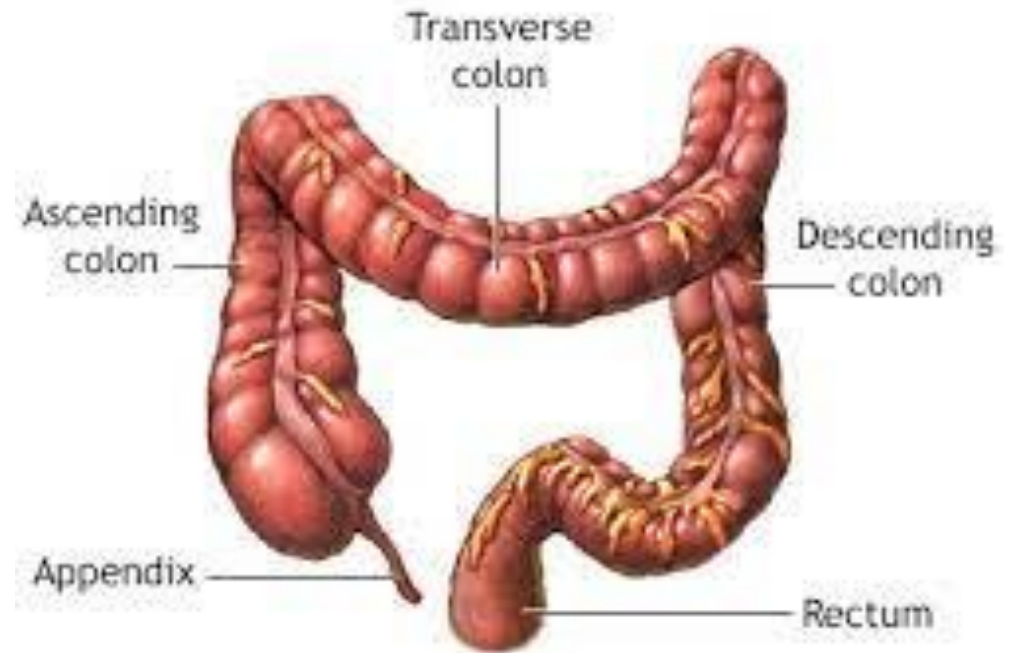
- **6- Small Intestine:** It is tubular organ that extend from pyloric to the beginning of the large intestine longest part of alimentary canal: 3 divisions:
- **1) Duodenum:** 20-25 cm. long 5 cm. in diameter, drains pyloric stomach receives ducts from gall bladder and pancreas
- **2) Jejunum:** 2.5- 3m long. central portion, mostly in umbilical region, rich blood supply, most digestion and absorption occur here, absorbs most nutrients, water & salts.



- **3) ileum:** 3-4 m. mainly in hypogastric region, joins to caecum of large intestine, absorbs and reclaims bile, salts and some additional nutrients.
- -The intestinal mucosa also contains small finger-like projections = villi:1mm tall each villus contains absorptive epithelial cells.
- (villi “functional units” of the digestive system).
- Ileocecal valve allows material to move from SI (small intestine) to LI (large intestine). So that valve-like sphincter separates small from large intestine = ileocecal valve.

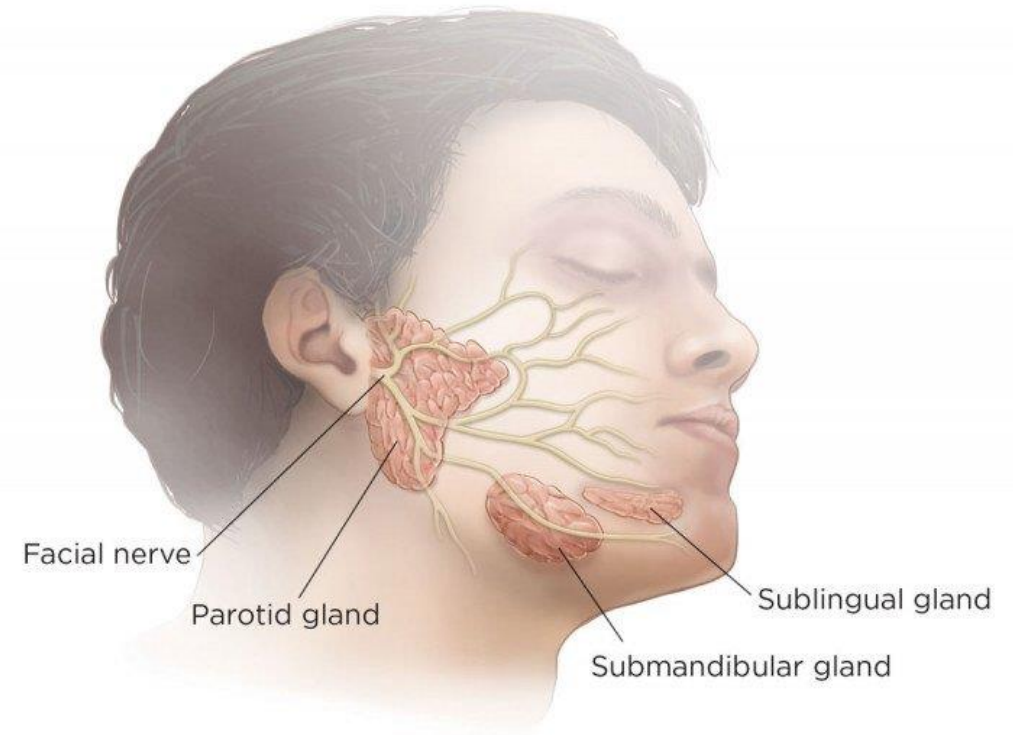
Large Intestine

- **7-Large Intestine:** Large intestine, posterior section of the intestine, 1.5 m. long and 6 cm. diameter and consist of
- 1.Cecum
- 2.appendix :3.5” (9cm) long.
- 3.ascending colon
- 4.hepatic flexure.
- 5.transverse colon
- 6.splenic flexure
- 7.descending colon
- 8.sigmoid colon
- 9.rectum: last 7-8” cm, ends at anus •

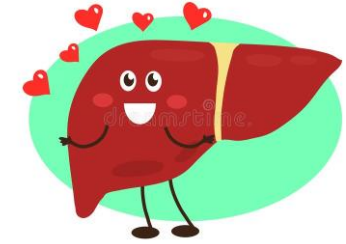


Additional digestive parts

- **1-Salivary Glands:** 3 Pairs of salivary glands:
- **sublingual,**
- **submandibular,**
- **parotid**



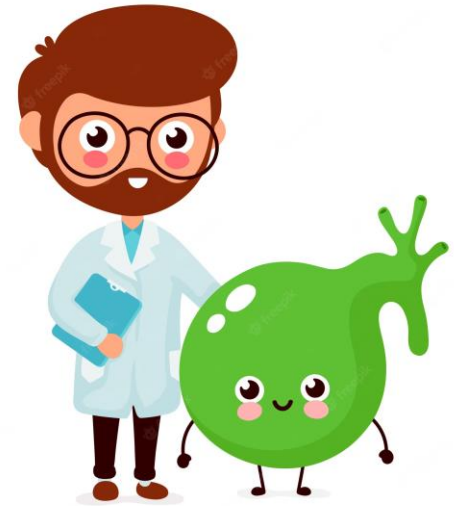
Liver



- Is the largest gland and the largest visceral organ in the body.
- It is a reddish-brown color; a human liver normally weights 1.44-1.66 kg and is a soft organ.
- It lies in the right upper quadrant of the abdomen immediately beneath the diaphragm at right of the stomach. (right hypochondrium region).
- It consists of two lobes right(large) and left Lobe (small)

Gallbladder

- It is pear-shaped sac lying on the inferior surface at the right lobe of the liver.
- **The functions of the gall bladder:**
 - 1-Storage of the bile.
 - 2-Increase the concentration of the bile.
 - 3-Excretion of the bile on need.



Pancreas



- The pancreas is an elongated, tapered organ located across the back of the belly, behind the stomach.
- The right side of the organ—called the head—is the widest part of the organ and lies in the curve of the duodenum, the first division of the small intestine .
- Pancreas both **endocrine and exocrine**
- **-Endocrine: pancreatic islets.** Produce **insulin, glucose**
- **-Exocrine:** form lobules separated by septa, produce digestive enzymes.
- Anatomical position: - **Epigastric - left upper hypochondrium region.**



Thanks