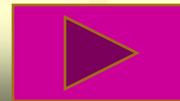
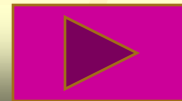
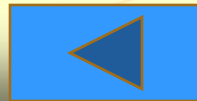
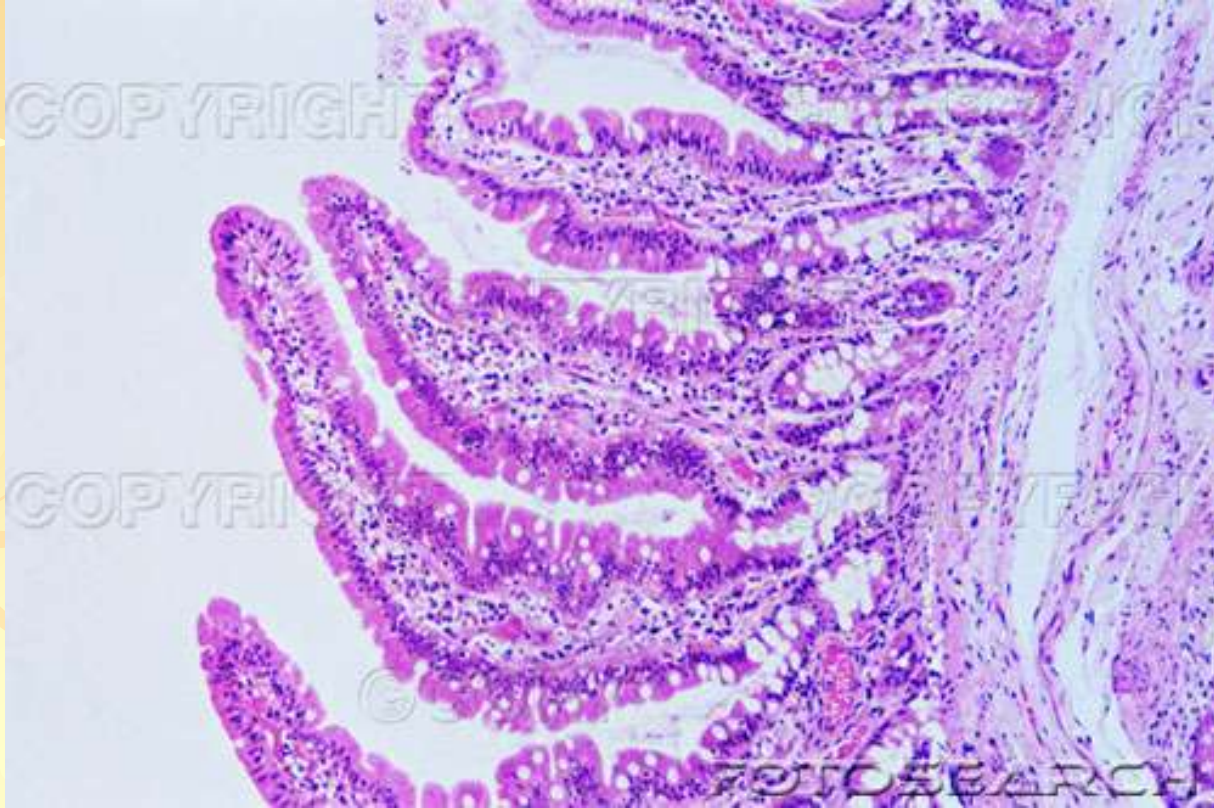


The stomach is formed of three parts: -

- (a) **CARDIAC STOMACH:** - It receives the oesophagus through Cardiac aperture guarded by a cardiac sphincter which prevents regurgitation of food.
 - (b) **FUNDIC PART:** - It is raised part that projects above the cardiac aperture and often contains gas or air.
 - (c) **PYLORIC ANTRUM:** - It is lower and narrow part which opens in the duodenum by pyloric aperture and is guarded by a pyloric sphincter which prevents the predigested food to enter the duodenum.
- *Inner mucosa of stomach is raised into large number of longitudinal folds called gastric rugae. These rugae dilate the stomach to store the food and also increase the surface area of digestion.*

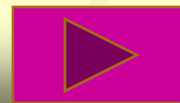


Mucosa of Stomach

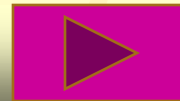
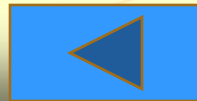


Stomach helps in mechanical churning and chemical digestion of food. It is also act as food reservoir.

- **SMALL INTESTINE:** - It is longest part (about 20 ft or 6 meters) of alimentary canal. It is narrow and tubular part occupying the central and lower parts of abdominal cavity. It is divided into three parts: -
 - (a) **DUODENUM:** - It is widest, shortest (about 25 cm) and most flexed part of small intestine. It forms a C-shaped curve. It receives the bile-pancreatic duct.
 - (b) **JEJUNUM:** - is the middle part and is about 8 ft long.
 - (c) **ILEUM:-** is longest part (12 ft) of small intestine. It finally opens in the caecum & then lower part of the abdominal cavity.

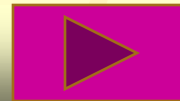


Villi of Intestine



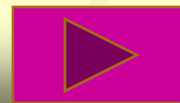
There are about four millions of small finger-like projections called **Villi**. Villus is the unit of absorption of food. These modifications increase the surface area of small intestine enormously.

- **LARGE INTESTINE:** - It is about 5 feet (1.5 meters) long, shorter but wider than small intestine which forms an arc around the small intestine. It is formed of three parts: -
 - (a) **CAECUM:** - It is small pouch like structure which ends into a tubular structure (13 cm long) called vermiform appendix.

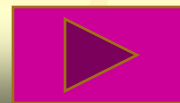


(b) COLON: - It is long sized sacculated structure which is differentiated into three regions: **ASCENDING COLON** extending up to liver on the right side then bends (called hepatic flexure) to become **TRANSVERSE COLON** which crosses the abdominal cavity below the pancreas; **DESCENDING COLON** running downward on the left side and sigmoid or pelvic colon. It is concerned with conservation of water sodium or other minerals and formation of faeces.

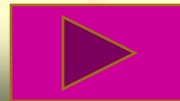
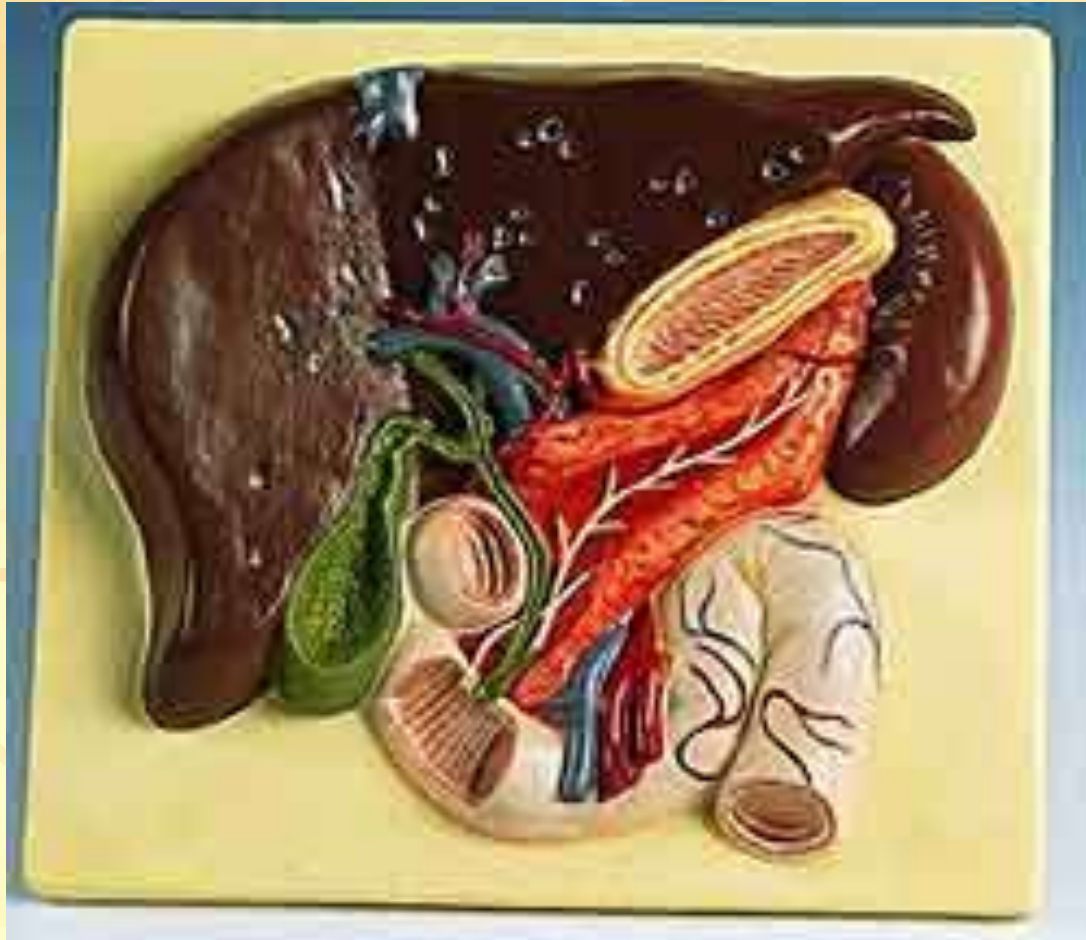
(c) RECTUM: - It is slightly dilated part and concerned with temporary storage of faeces. It leads into an anal canal which opens out by anus present at the base of trunk and guarded by two anal sphincter muscles.



- ◆ The wall of alimentary canal from oesophagus of rectum possesses four layers namely serosa, muscularis, sub-mucosa and mucosa.
- ◆ Serosa is the outermost layer and is made up of a thin mesothelium (epithelium of visceral organs) with some connective tissues. Muscularis is formed by smooth muscles usually arranged into an inner circular and an outer longitudinal layer.
- ◆ The sub-mucosal layer is formed of loose connective tissues containing nerves blood and lymph vessels. In duodenum glands are also presents in sub-mucosa.
- ◆ The intermost layer lining the lumen of the alimentary canal is the mucosa.
- ◆ All the four layers show modifications in different parts of the alimentary canal.



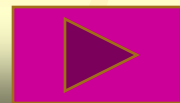
Duct System



Digestive Glands

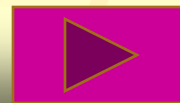
Digestive glands are those glands which secrete digestive juices for the digestion of food. These are following types: -

1. **Salivary Gland** – These are three pairs of glands which secrete saliva. The saliva is carried to buccal cavity by the salivary ducts. These are three types: -
 - (a) Parotid glands
 - (b) Submaxillary or Submandibular glands
 - (c) Sublingual glands
2. **Gastric glands:** - These are numerous simple or branches tubular glands present in the mucosa of the stomach. These are the three types: -
 - (a) Cardiac glands,
 - (b) Pyloric glands
 - (c) Fundic glands.

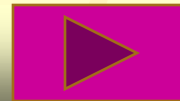
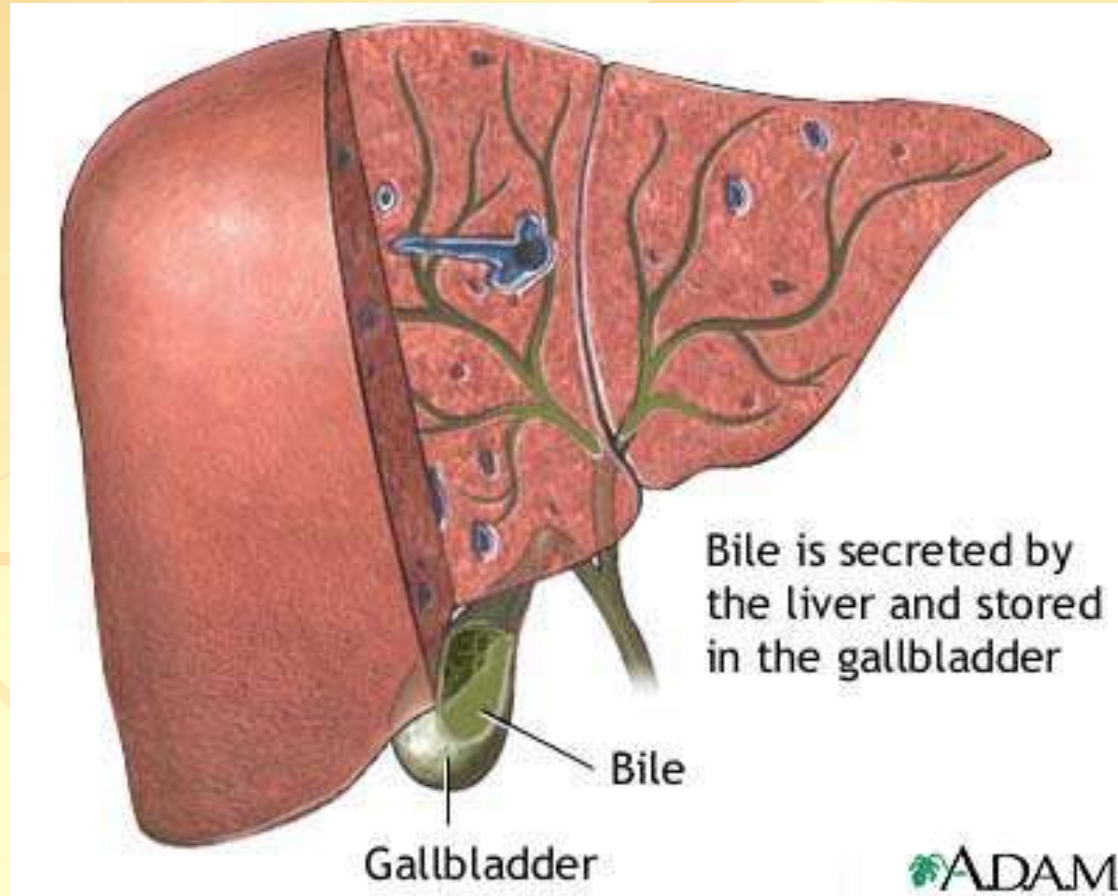


LIVER

- **POSITION** –Liver is the largest gland of the body weighing about 1.2-1.5kg in adult human. It is situated in the abdominal cavity just below the diaphragm.
- **STRUCTURE**- It has two lobes, the hepatic lobe is the structural & functional unit of liver containing hepatic cells arranged in the form of cord. Each lobule is covered by a thin connective tissue sheath called the Glisson's capsule.
- **FUNCTION**- The bile secreted by the hepatic cells passes through the hepatic ducts & is stored concentrated in Gall Bladder. The duct of gall bladder (cystic duct) along with the hepatic duct from the liver forms the common bile duct.

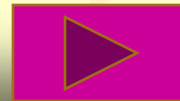
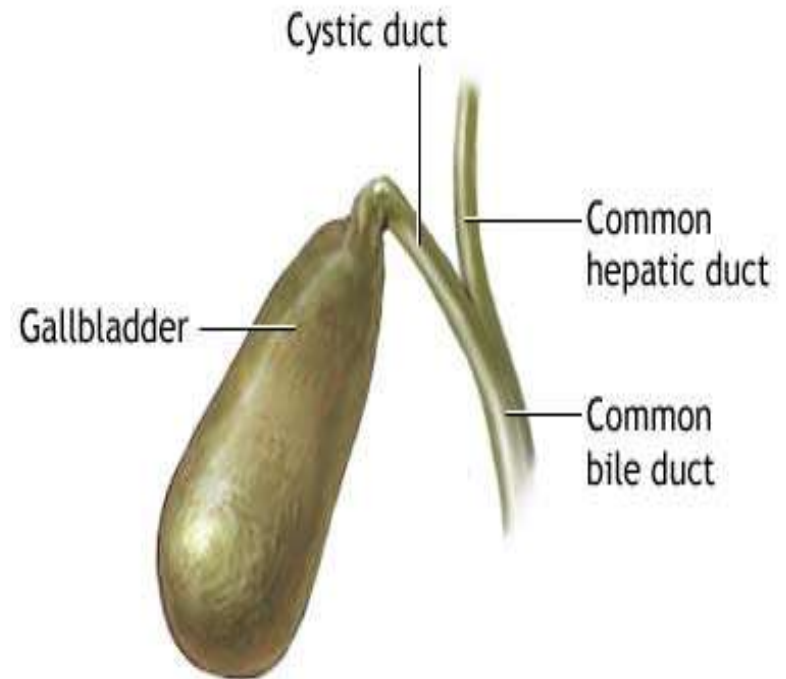


Bile produced in Liver



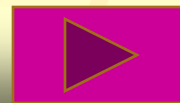
Gall Bladder

It is a thin muscular sac in liver which stores bile.



- The bile duct & the pancreatic duct open together into the duodenum as the common hepato-pancreatic duct which is guarded by a sphincter called the sphincter of Oddi

4. **PANCREAS:-** The pancreas is the compound (both endocrine & exocrine) elongated organ situated between the limbs of the U shaped duodenum. The exocrine portion excretes an alkaline pancreatic juice containing enzymes & the endocrine portion secretes hormones insulin & glucagons.



Pancreas

