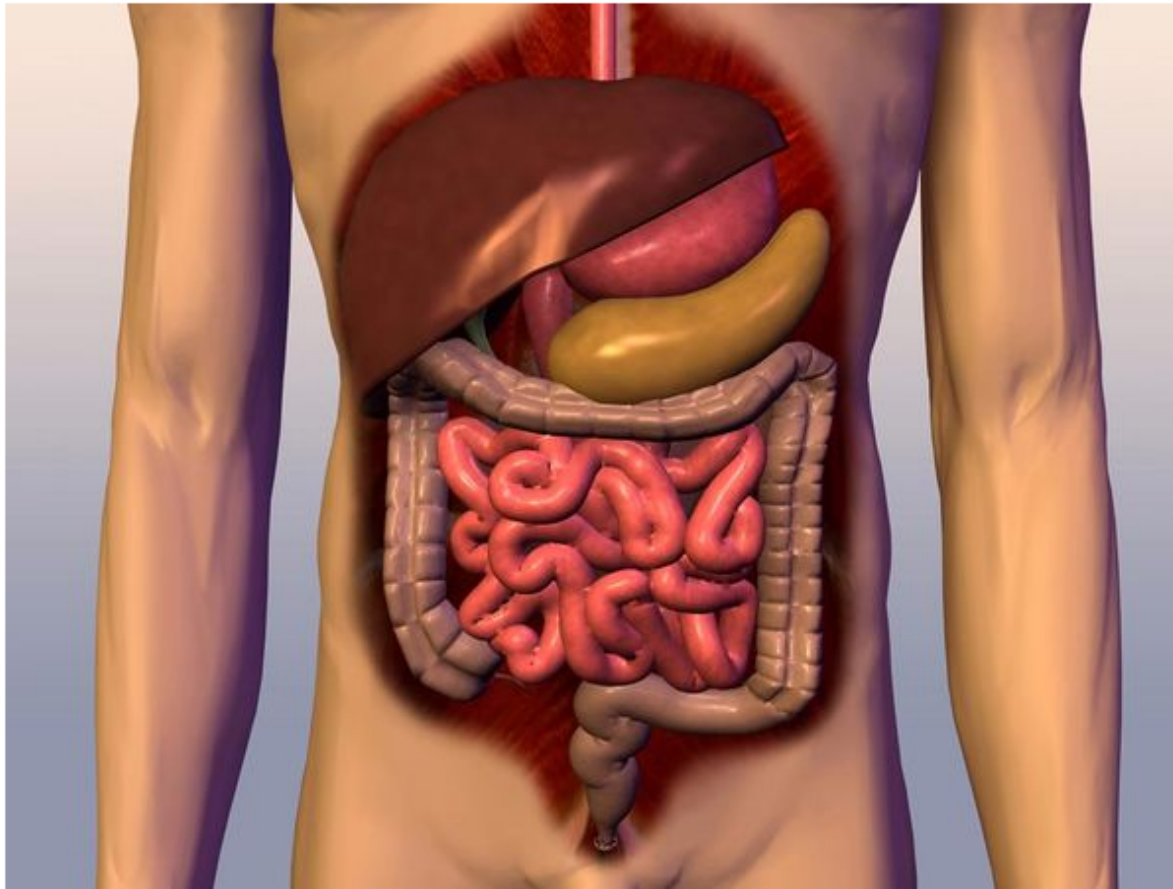
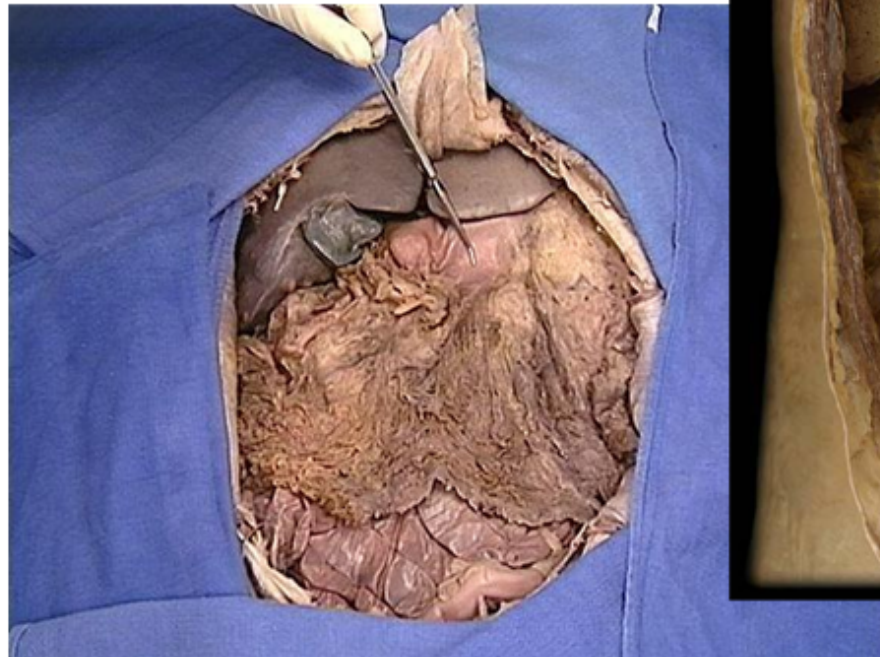


Digestive System Accessory Organs



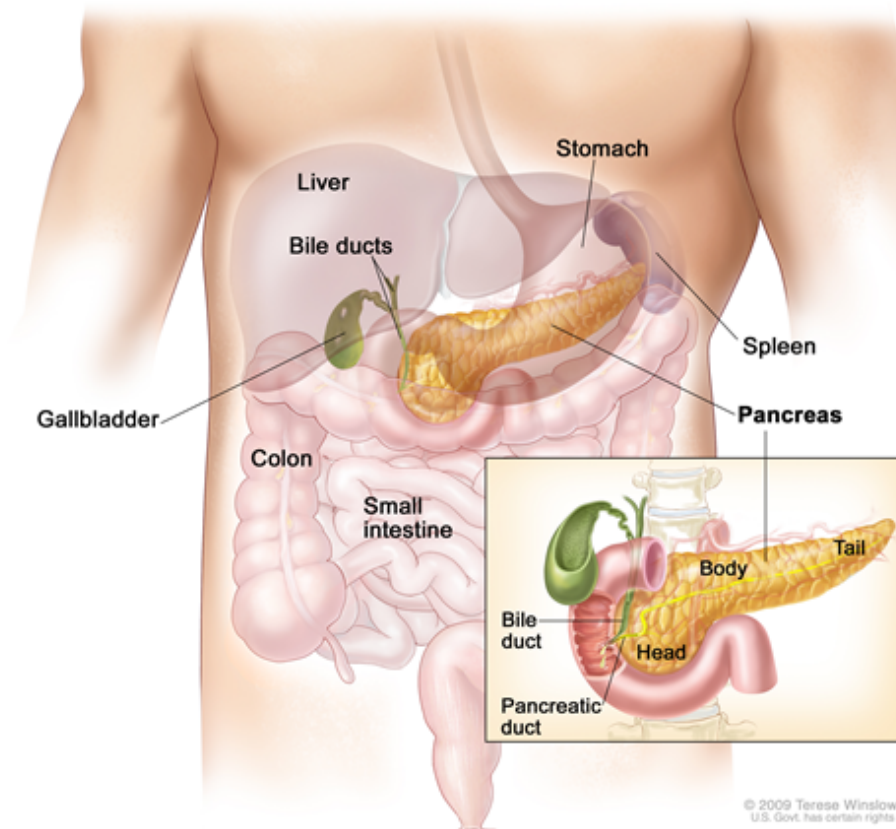
Pancreas

- Lies deep in the abdominal cavity, behind the peritoneum, resting on the posterior abdominal wall



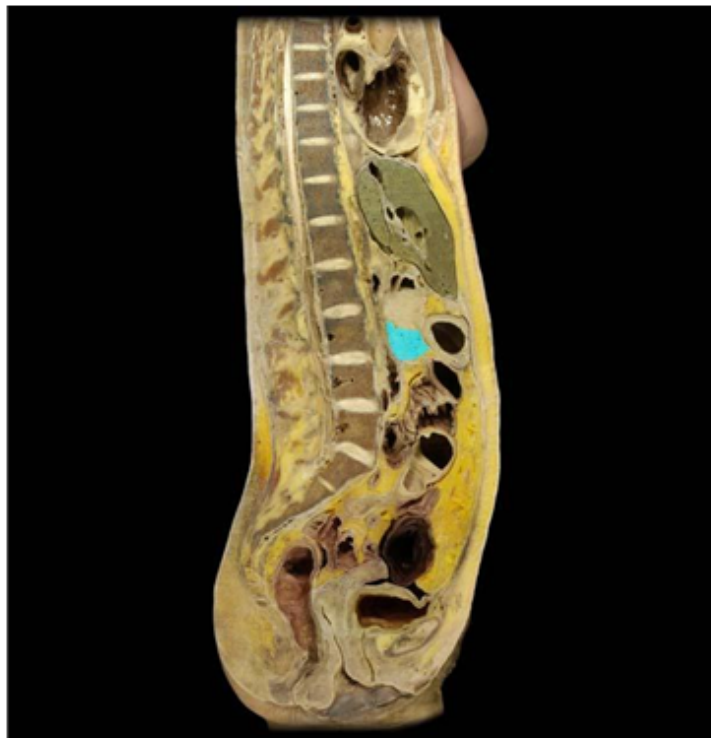
Pancreas

- Broad end is called the head and fills the loop formed by the duodenum, its tail extends in the opposite direction



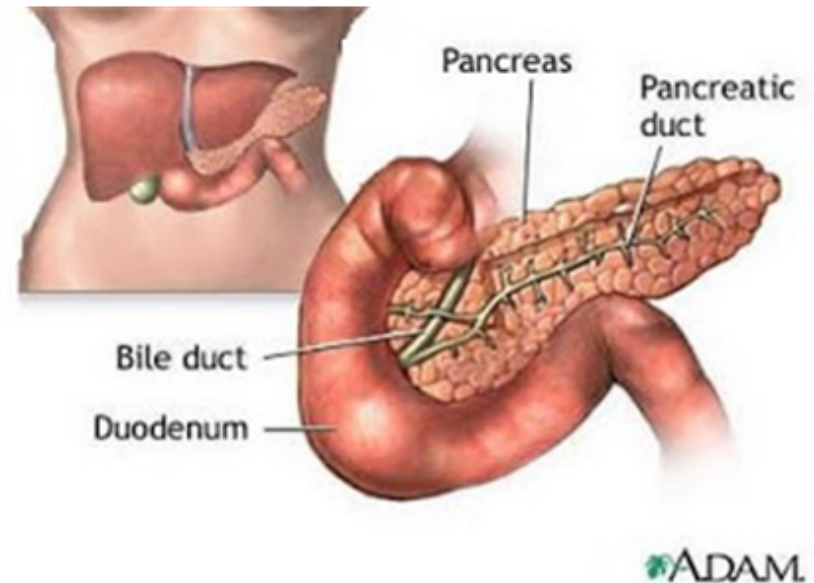
Pancreas

- Has both endocrine and exocrine function (creates insulin and glucagon and hormones that help keep the blood sugar level within normal limits)



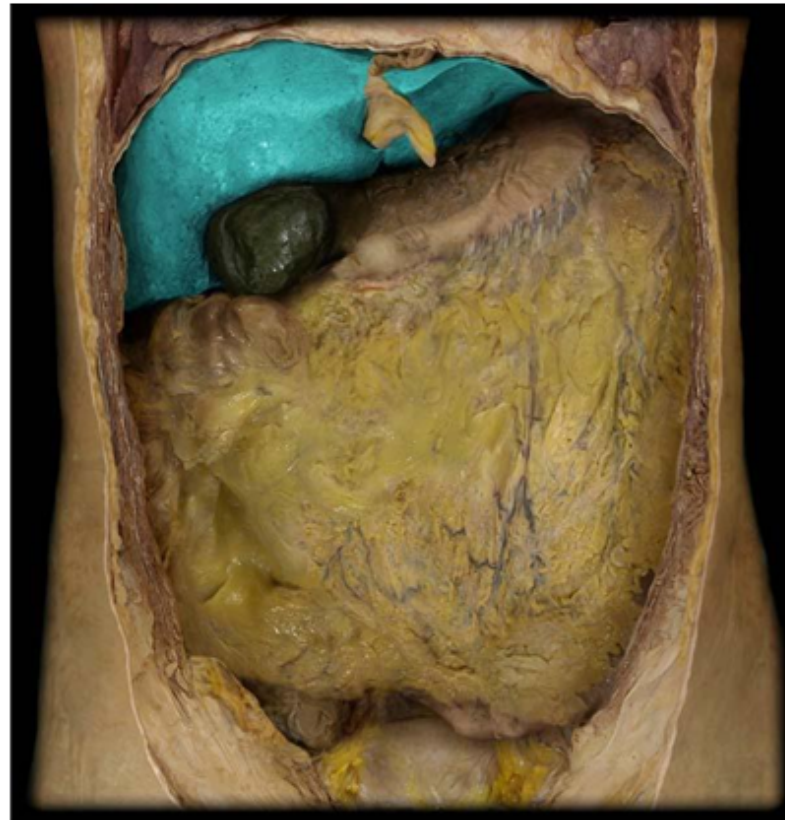
Pancreatic Juice

- contains sodium bicarbonate and digestive enzymes to break all types of food
- neutralizes acidic chyme from the stomach
- Pancreatic Amylase - digests starches
 - Lipase - digests fats
 - Trypsin, chymotrypsin, carboxypeptidase - digest proteins



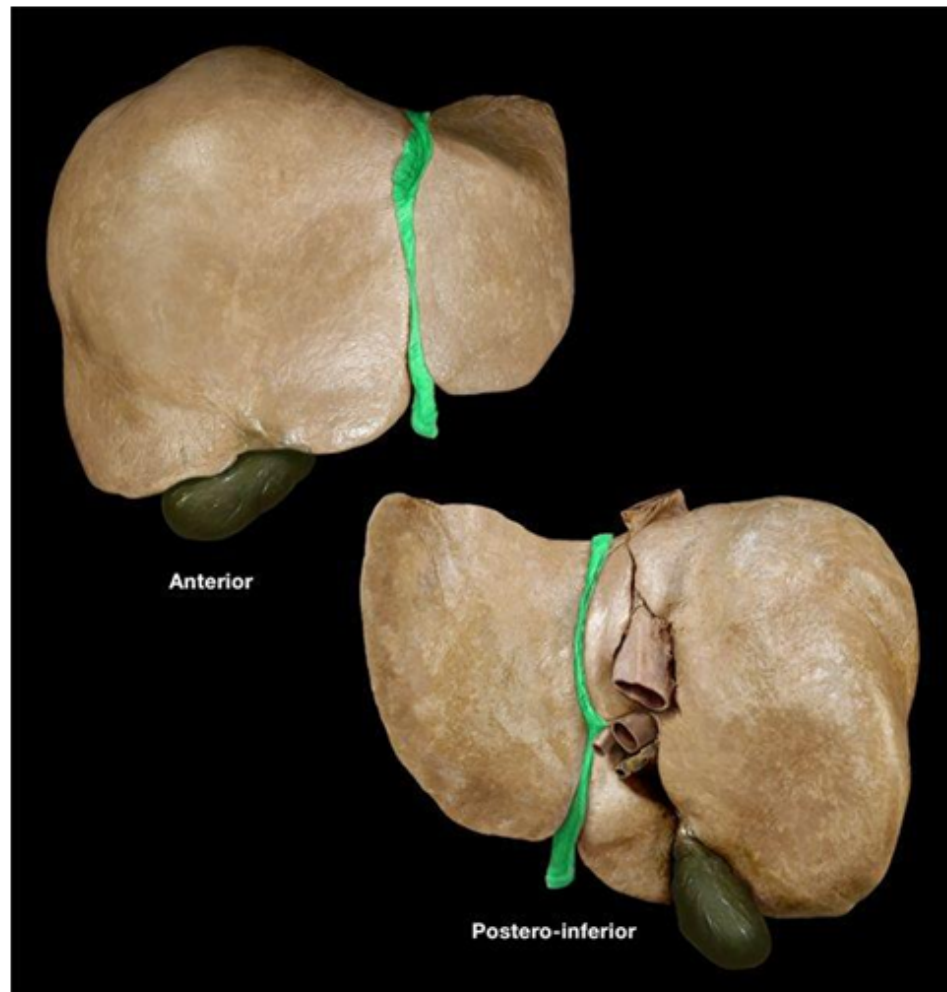
Liver

- large organ of the body
- lies mainly in the upper right section of the abdominal cavity inferior to the diaphragm



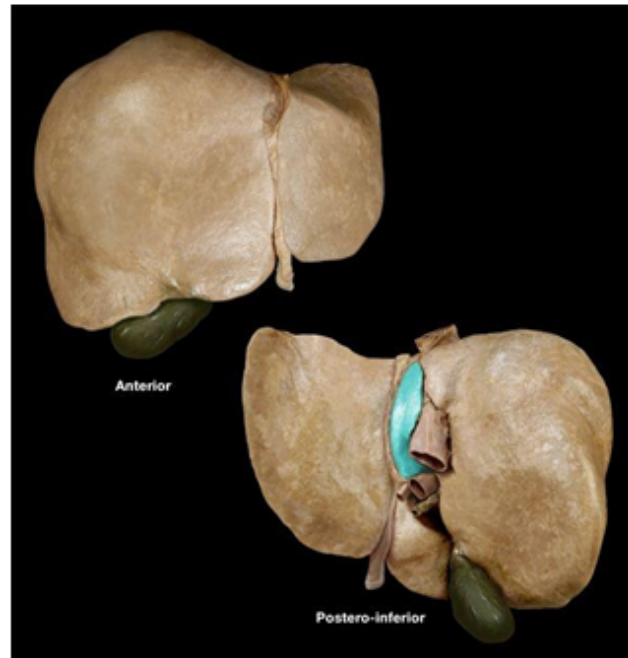
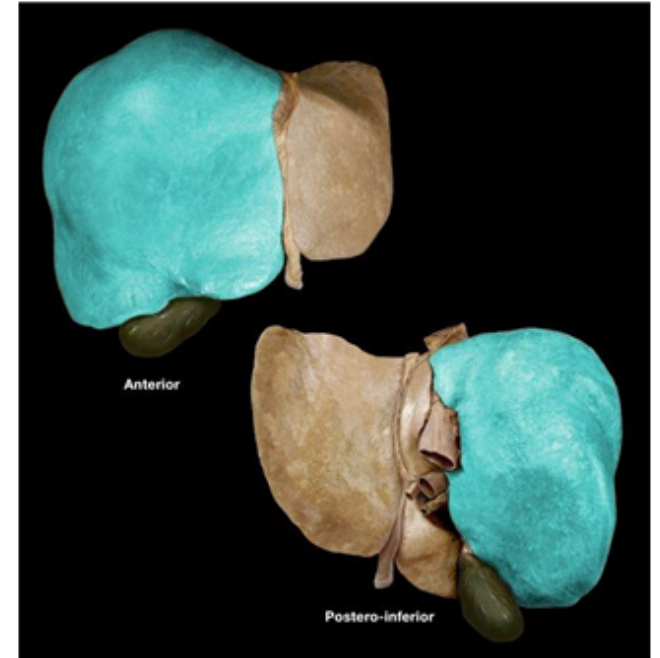
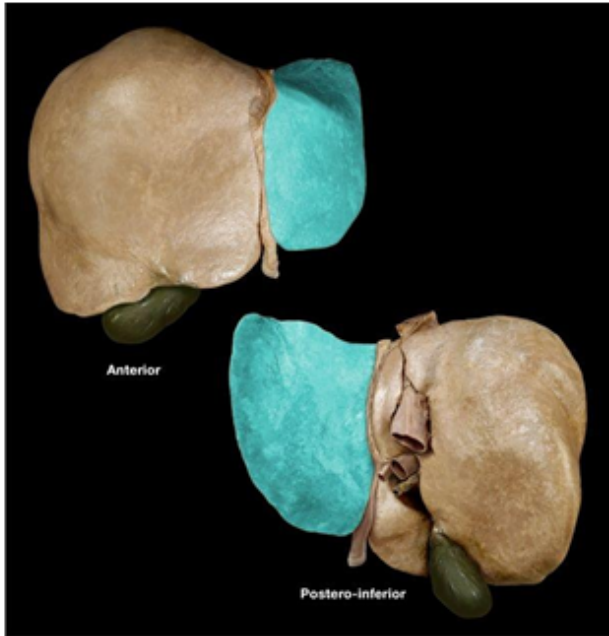
Liver

- two main lobes and a smaller left lobe separated by the falciform ligament



Liver

- The Lobes: Left, Caudate and Right



Liver

- Portal Triads are three structures located between the lobes
 1. a bile duct (takes bile away from liver)
 2. a branch of the hepatic artery (brings O₂ rich blood to the liver)
 3. and a branch of the hepatic portal vein (transports nutrients from the intestines)

Liver Functions

- as blood flows through the liver, it removes poisonous substances and detoxifies them
- removes and stores nutrients and works to keep the contents of blood constant (maintains blood glucose level)
- removes and stores iron and the fat soluble vitamins (A, D, E, K)
- makes the plasma proteins from amino acids
 - helps control the cholesterol in blood

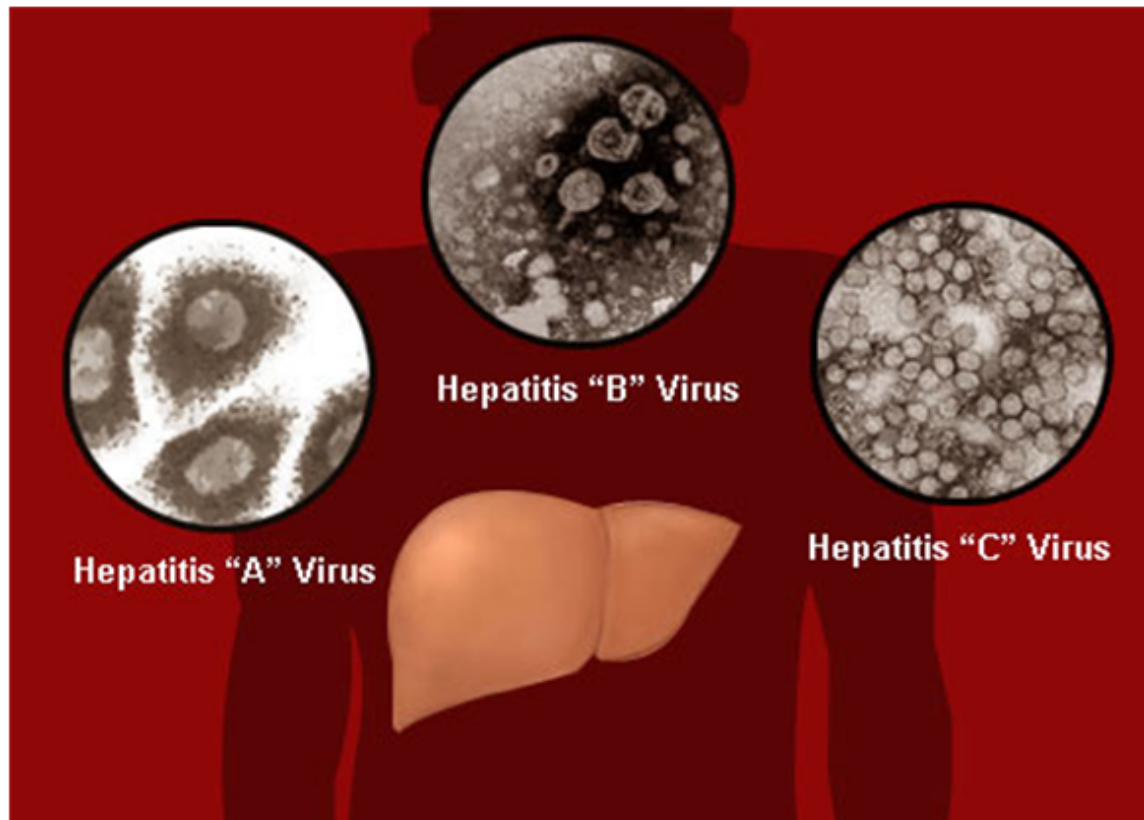
Liver Disorders

- Jaundice - a yellowish tint to the whites of the eyes and also the skin, results when bilirubin is deposited in the skin due to an abnormally large amount in the blood - blocked bile ducts or damaged liver cells



Liver Disorders

- Hepatitis - inflammation of the liver, blood born pathogen, can lead to liver cancer and death



Liver Disorders

- Cirrhosis - fatty degeneration of the liver, the liver tissue is then replaced by inactive fibrous scar tissue, often seen in alcoholics as the body treats alcohol as a toxin



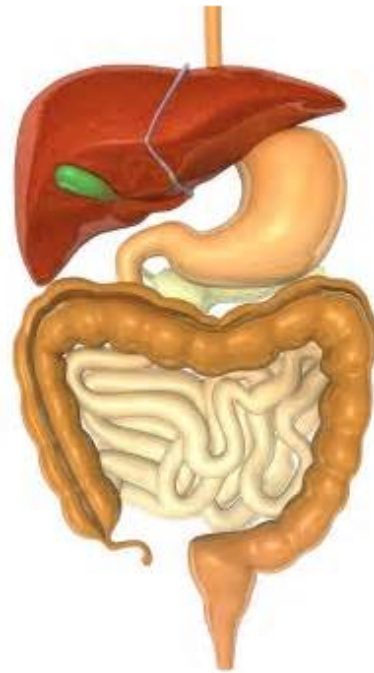
Gallbladder

- pear shaped, muscular sac located in a depression on the inferior surface of the liver
- stores bile that is produced by the liver



Gallbladder

- reabsorbs water so that bile (discussed on next slide) becomes thick and mucous like
- when needed, bile leaves the gallbladder by way of the cystic duct



Gallbladder - Bile Salts

- carry out emulsification (break up masses of fat into droplets that can be acted on by enzymes that digest fat)
- make fats interact with water enhancing absorption of fatty acids, cholesterol and fat soluble vitamins (A, D, E, K)

Digestion Song



<http://www.youtube.com/watch?v=8sDMVgw9d-c>