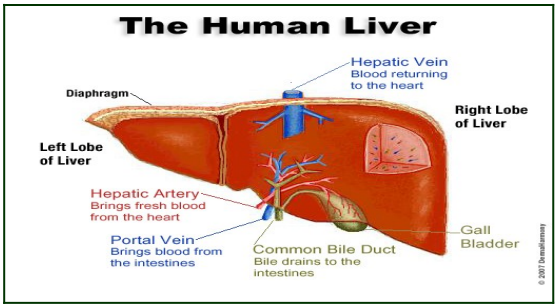
Quick Review of Liver, Gall Bladder and Pancreas

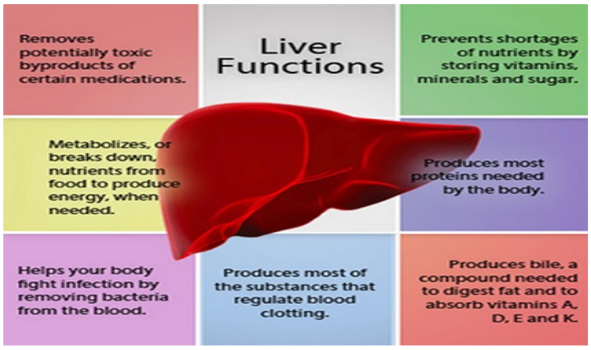
testable material

Liver

Anatomy:

- Largest internal organ size of football about 3 lbs.
- Right upper portion of abdomen behind ribs
- Blood supply 1/3 from hepatic artery & 2/3 from portal vein
- Portal circulatory system enterohepatic brings blood to liver from stomach, intestines, spleen, pancreas
- Blood enters directly thru portal vein which carries absorbed products of digestion
- Fibrous capsule divides into left & right lobes
- Interlobular bile ducts form from bile capillaries
- Hepatic cells make bile
- In intestines bile is reduced to stercobilinogen & urobilinogen (brown stool color) by bacterial action
- Small amount conjugated bilirubin reabsorbed by blood
- Some Urobilinogen reabsorbed by blood returned to liver via portal circulation & excreted in bile
    - Insignificant amount excreted in urine
- Sphincter of Oddi controls amount of bile release



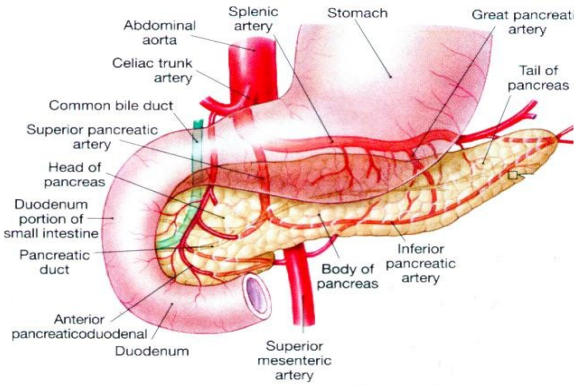


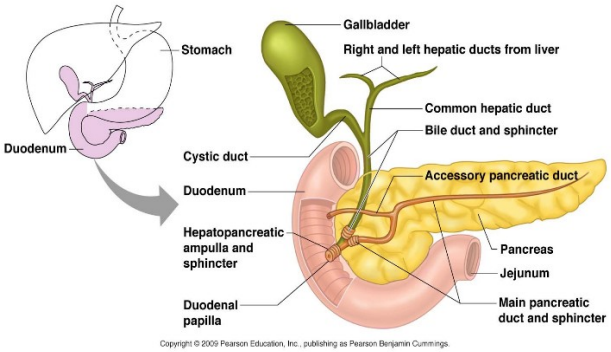
Functions:

- Detoxification of hormones, drugs, & other substances
- Metabolism of carbs, fats, & proteins
- Bile Synthesis via production & excretion
- Immune system via phagocytosis
- Hematological role-storage & synthesis of clotting factors
- Storage of glucose and vitamins

Pancreas

- Long slender gland lies behind stomach & in front of 1st & 2nd lumbar vertebrae
- Endocrine and exocrine function
    - Focusing on exocrine function for this unit
- Consists of head, body, & tail
- Makes enzymes that help digest foods & sends them into small intestine
    - Enzymes process food into molecular material that can be absorbed in the small intestine
    - Amylase aids in digestion of carbohydrates
    - Lipase breaks down fats





Gallbladder

- Small sack-like teardrop shaped organ size of chicken egg
- Located on undersurface of the liver
- Stores and concentrates bile
- Releases bile when chime is passing from stomach to duodenum
- Bile helps break up fats
- Drains waste products form the liver into duodenum