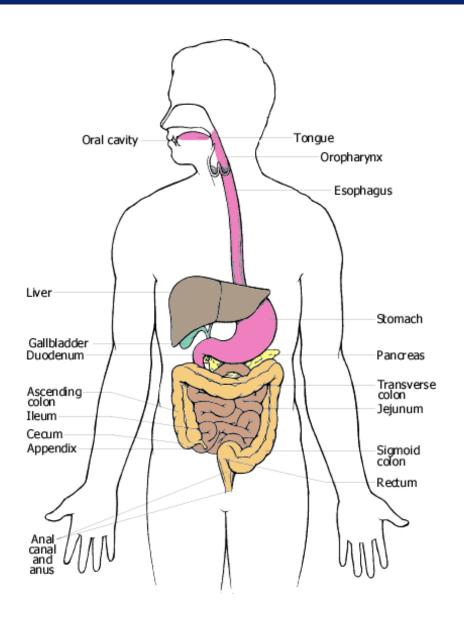
Physiology of Digestion and Absorption



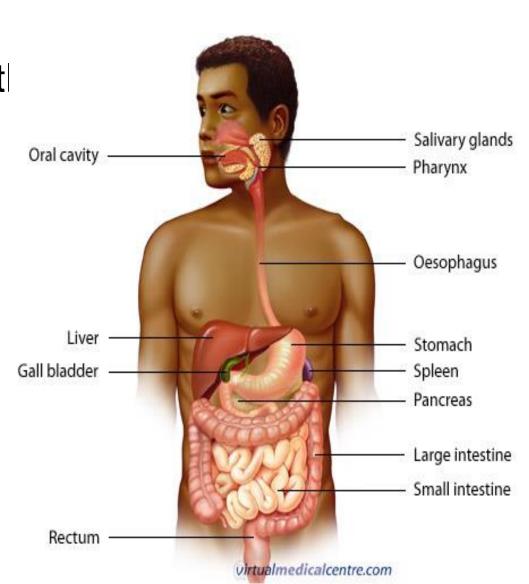
Overview of the Digestive System

- The Digestive System Consists of;
- a) Long hollow muscular tube or canal or tract called gastrointestinal tract or (GIT): it is about 5 meters long
- b) Accessory glands: include:
 - Salivary glands
 - Liver and gall bladder
 - Pancreas

Overview of the Digestive Tract

GIT consists of;

- Oral cavity or mout
- Pharynx
- Esophagus
- Stomach
- Small intestine
- Large intestine
- Rectum
- Anus



Components of Digestive System and Their Functions

ORAL CAVITY, TEETH, TONGUE

Mechanical processing, moistening, mixing with salivary secretions

LIVER

Secretion of bile (important for lipid digestion), storage of nutrients, many other vital functions

GALLBLADDER

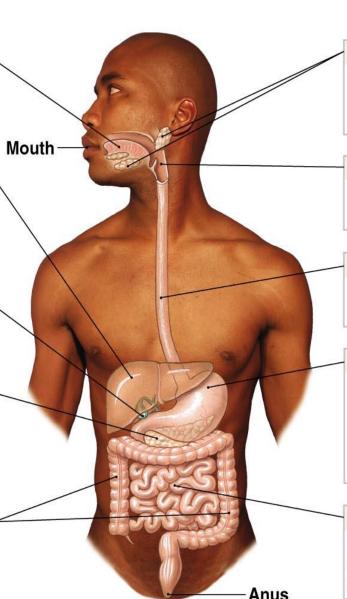
Storage and concentration of bile

PANCREAS

Exocrine cells secrete buffers and digestive enzymes; endocrine cells secrete hormones

LARGE INTESTINE

Dehydration and compaction of undigestible materials in preparation for elimination



SALIVARY GLANDS

Secretion of lubricating fluid containing enzymes that break down carbohydrates

PHARYNX

Muscular propulsion of materials into the esophagus

ESOPHAGUS

Transport of materials to the stomach

STOMACH

Chemical breakdown of materials by acid and enzymes; mechanical processing through muscular contractions

SMALL INTESTINE

Enzymatic digestion and absorption of water, organic substrates, vitamins, and ions

Main Functions of Digestive System

4 major activities of GI tract

1. Motility

Propel ingested food from mouth toward rectum

2. Secretion of juices e.g. saliva

Aid in digestion and absorption

3. Digestion

Food broken down into absorbable molecules

4. Absorption

 Nutrients, electrolytes, and water are absorbed or transported from lumen of GIT to blood stream

