

Chapter 8

The Digestive System

Part 1

Overview of Structures, Combining Forms, and Functions

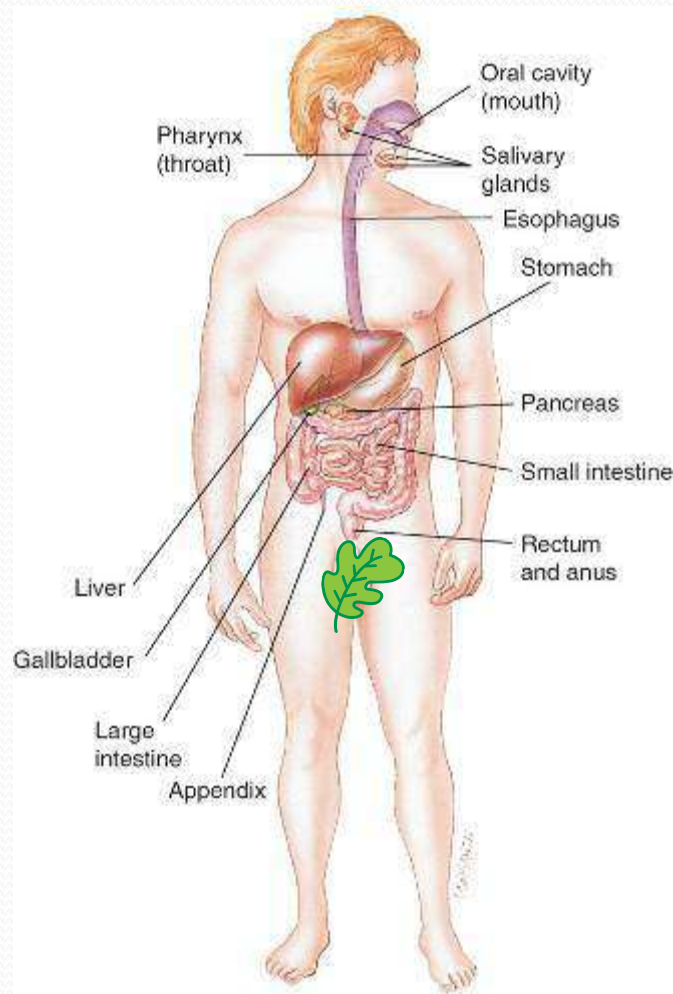


DELMAR

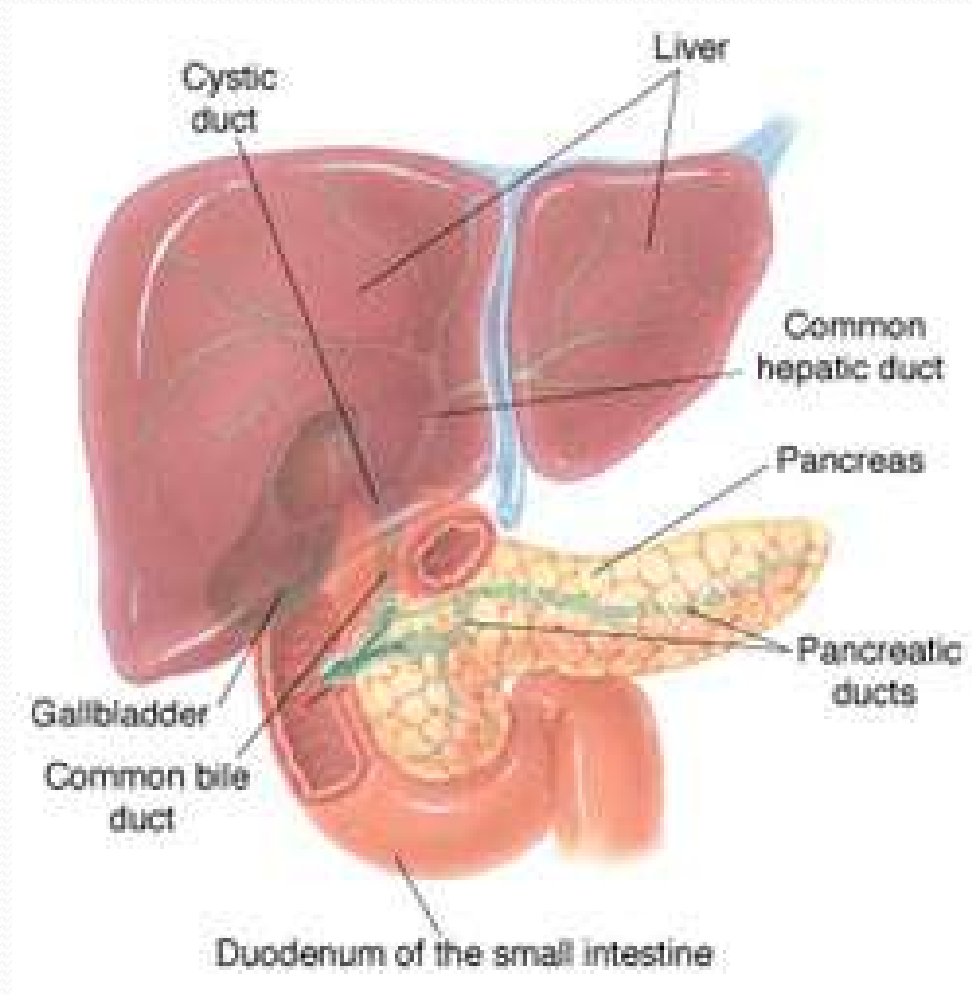
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Major Structures and Accessory Organs of the Digestive System



Accessory Digestive Organs



Mouth

- Primary Function
 - Begins preparation of food for digestion.
- Related Combining Forms
 - or/o
 - stomat/o

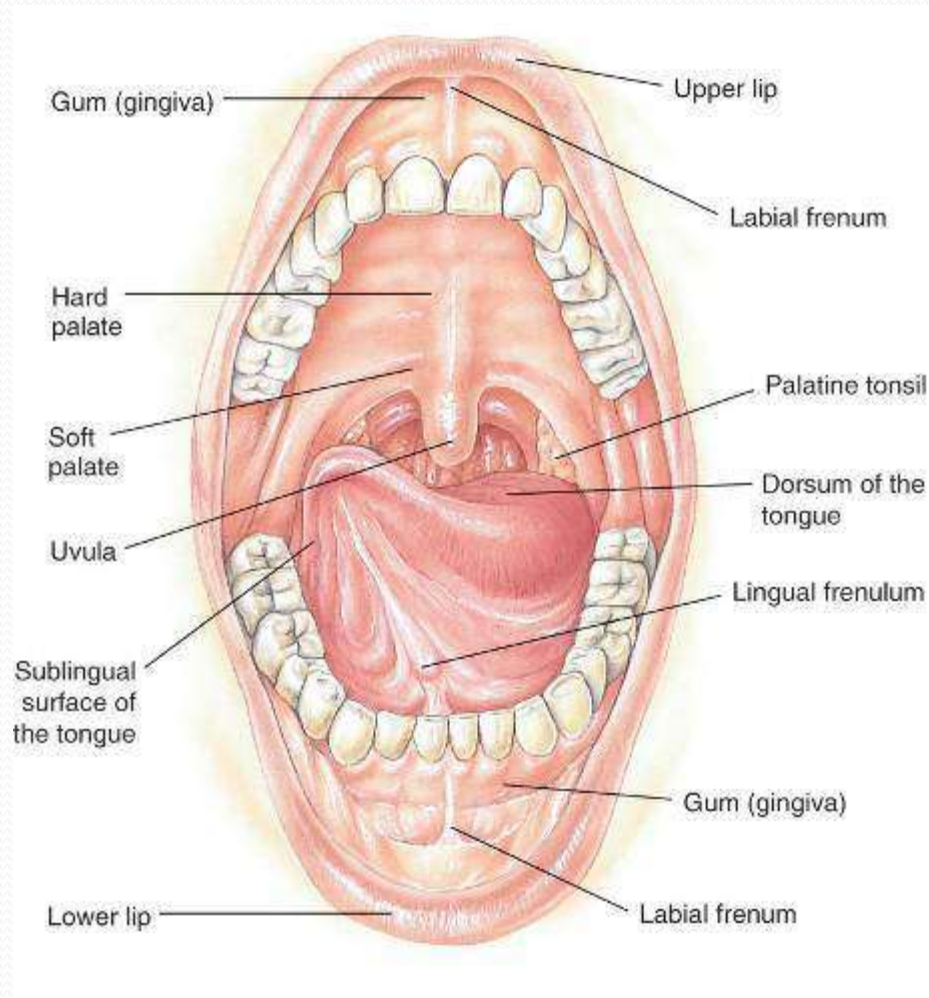
Structures of the Tongue and Oral Cavity

Teeth

- Deciduous dentition
- Permanent dentition
- Crown
- Enamel
- Root
- Pulp
- Odonti
- Gingiva

The Tongue

- Papillae



Lips

- Labia
- Cheil/o

Palate

- Hard palate
- Soft palate
- Rugae
- Uvula

Salivary glands

- Parotid
- Sublingual
- Submandibular

Pharynx

- Primary Function

- Transports food from the mouth to the esophagus.
- Epiglottis – closes the entrance to the trachea to prevent food from entering the lungs, allowing food to move safely from the pharynx to the esophagus.

- Related Combining Form

- pharyng/o

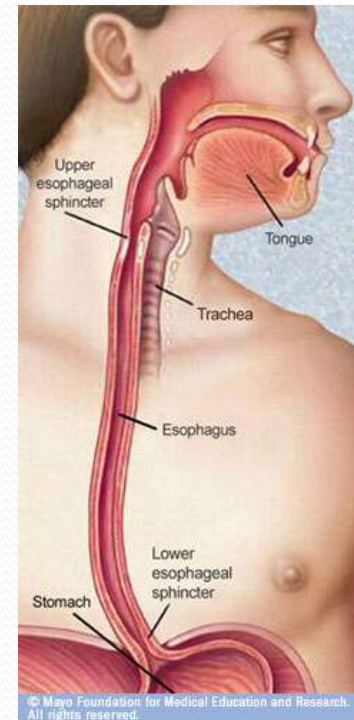
Esophagus

- Primary Function

- Transports food from the pharynx to the stomach.
- Lower esophageal sphincter – ringlike muscle that controls the flow between the esophagus and stomach.

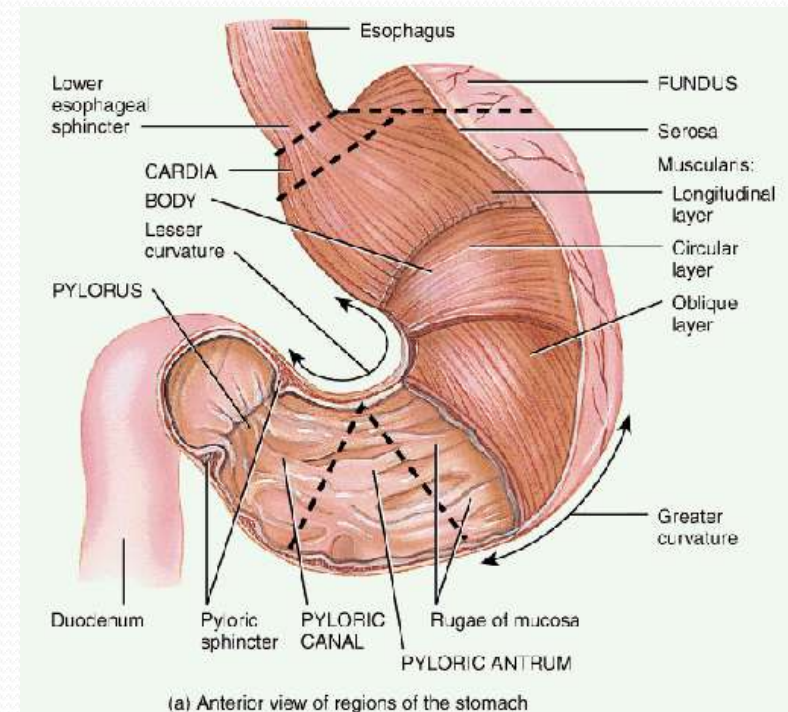
- Related Combining Form

- **esophag/o**



Stomach

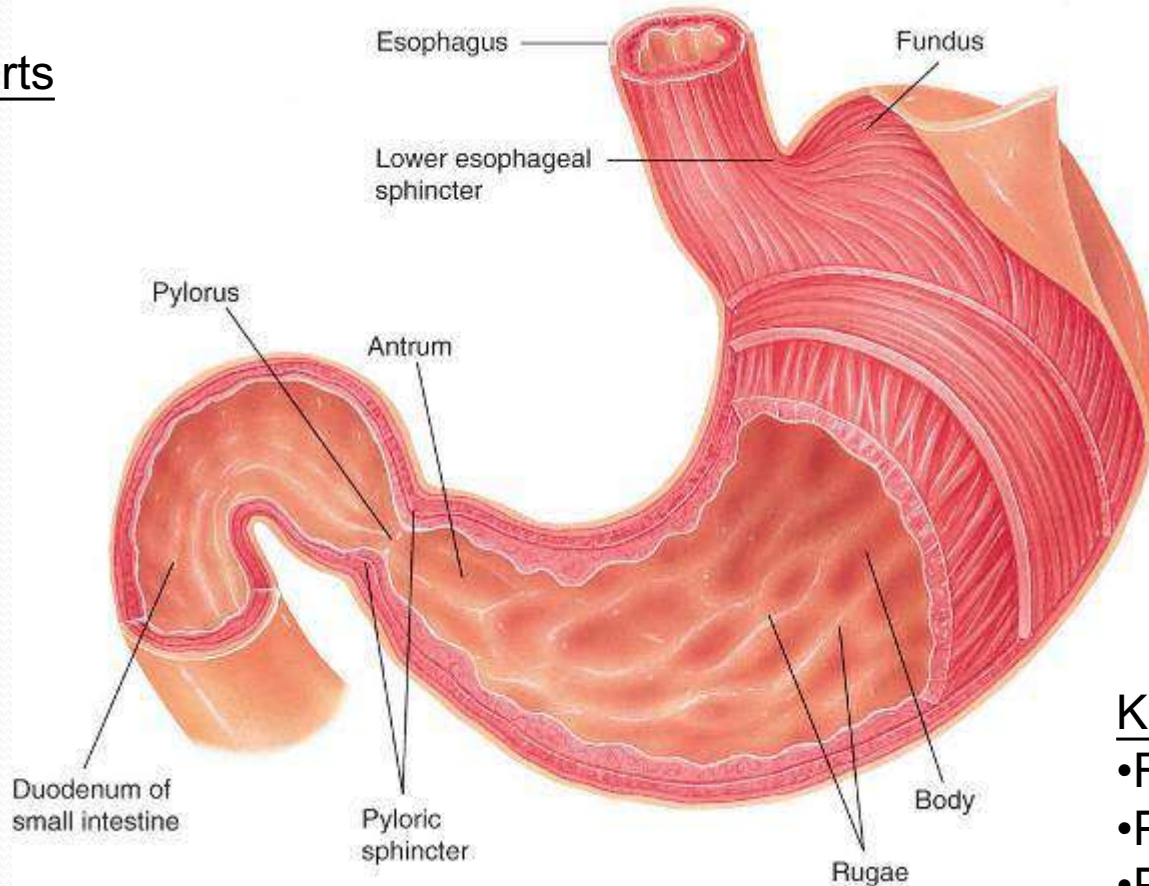
- Primary Functions
 - Breaks down food and mixes it with digestive juices.
- Related Combining Form
 - gastr/o



Structures of the Stomach

Three Parts

- Fundus
- Body
- Antrum



Key Structures

- Rugae
- Pylorus
- Pyloric sphincter

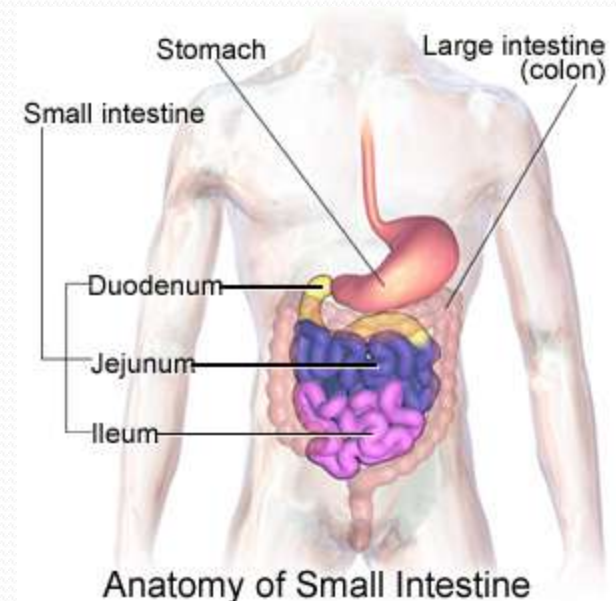
Small Intestines

- Primary Functions

- Completes digestion and absorption of most nutrients.
- Coiled organ up to 20 feet in length.
- Known as the small intestine because of its smaller diameter compared with the large intestine.

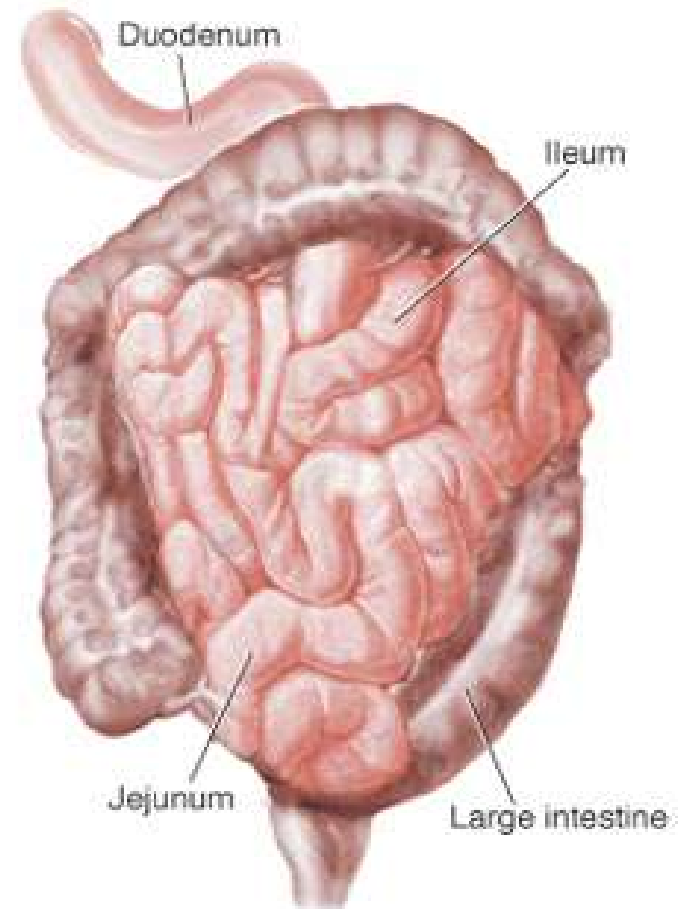
- Related Combining Form

- enter/o



Parts of the Small Intestine

- **Duodenum** – 1st part
- **Jejunum** – middle part
- **Ileum** – last part, connects to large Intestine
- **Ileocecal sphincter** – controls flow from small intestine and large intestine



Liver

- Primary Function

- Secretes bile and enzymes to aid in the digestion of fats.
- Removes excess glucose from blood and stores it as glycogen.
- Destroys old red blood cells, removes poisons from blood.
- Bilirubin is released by the liver.
- Secretes bile
- Common hepatic duct
- Cystic duct

- Related Combining Form

- hepat/o

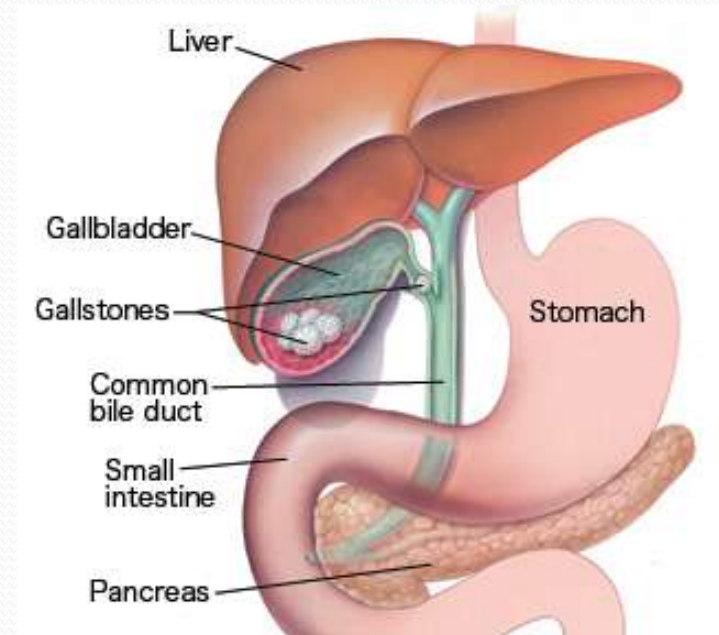
Gallbladder

- Primary Functions

- Stores bile and releases it to the small intestine as needed.
- Common bile duct
- Cystic bile duct

- Related Combining Form

- **cholecyst/o**



Pancreas

- Primary Functions

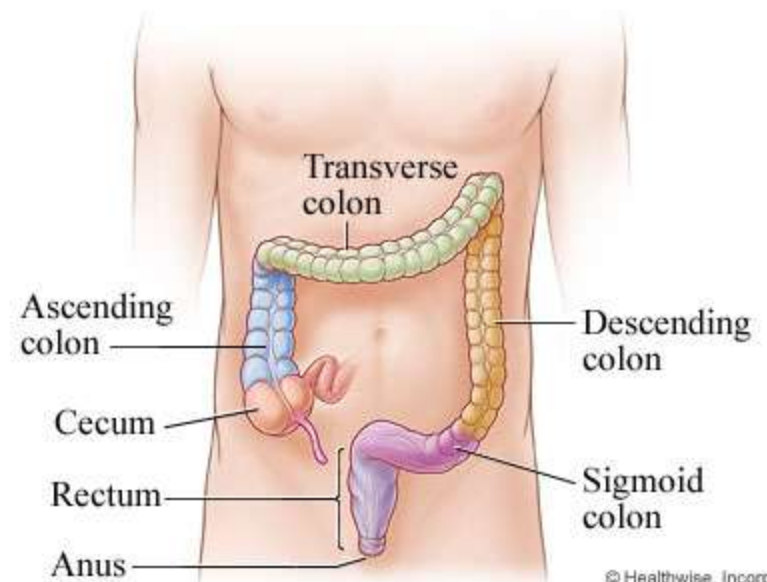
- Secretes digestive juices and enzymes into small intestine as needed.
- Pancreatic juices leave via pancreatic ducts to the duodenum.

- Related Combining Form

- pancreat/o

Large Intestines

- Primary Functions
 - Absorbs excess water.
 - Prepares solid waste for elimination.
- Related Combining Forms
 - col/o, colon/o



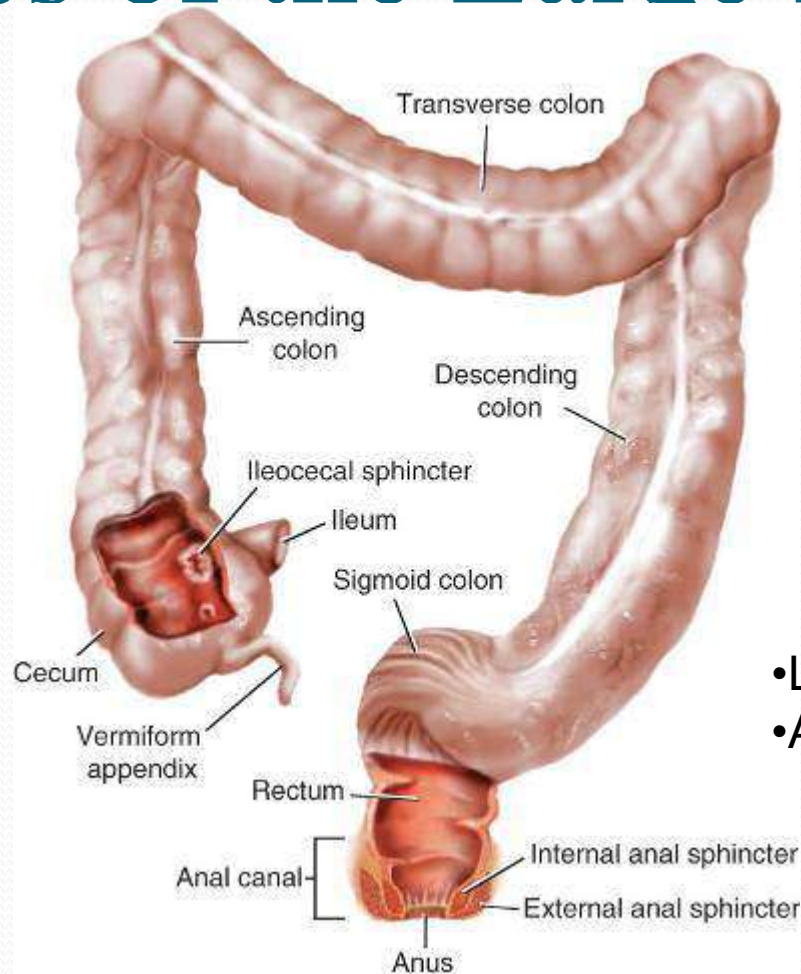
Structures of the Large Intestine

The Cecum

- Appendix

The Colon

- Ascending colon
- Transverse colon
- Descending colon
- sigmoid colon



The Rectum

- Last division of large intestine, ends at anus.

The Anus

- Lower opening
- Anal sphincter muscles

Rectum and Anus

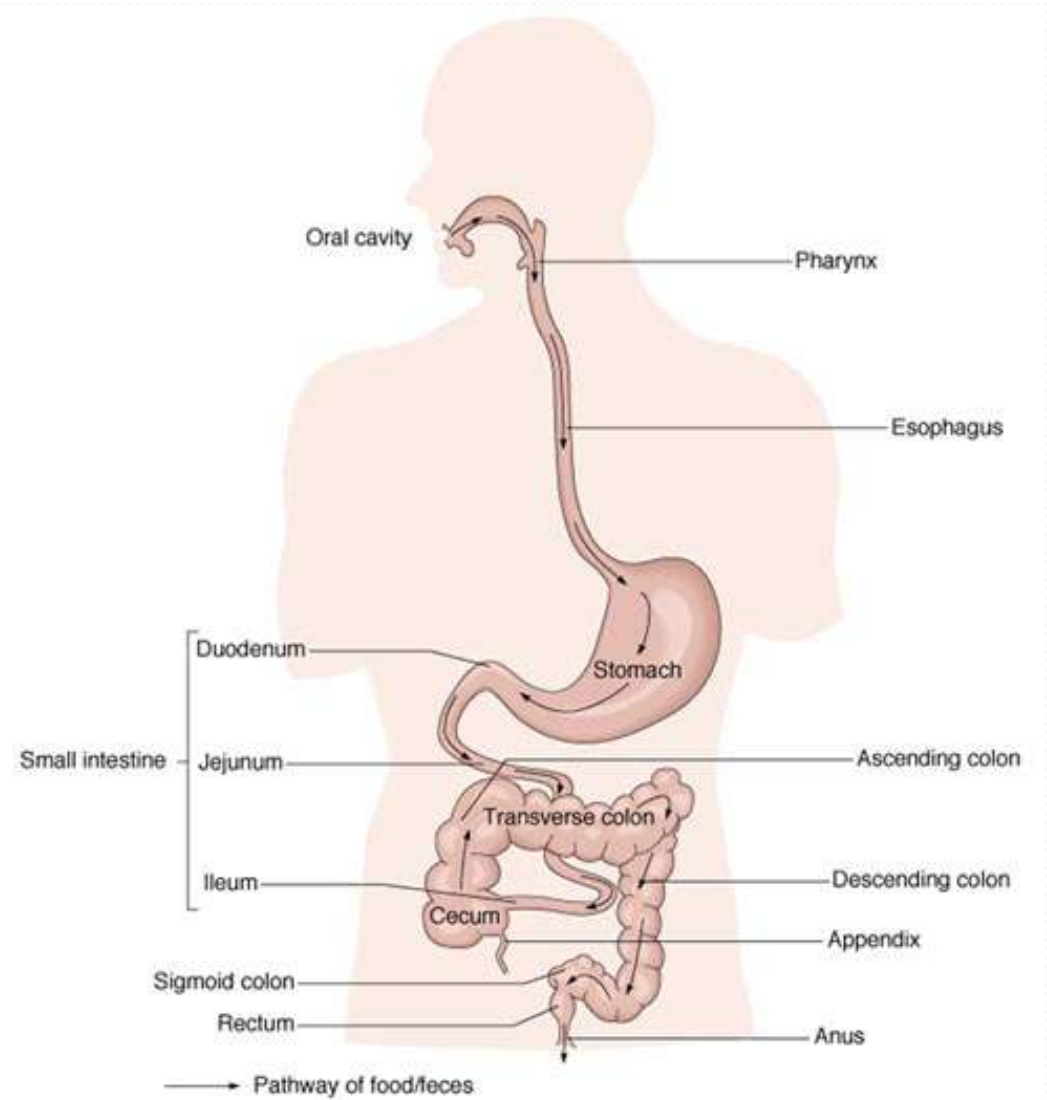
- Primary Function
 - Controls the excretion of solid waste.
- Related Combining Forms
 - an/o
 - proct/o
 - rect/o

Chapter 8

The Digestive System

Part 2

Digestion

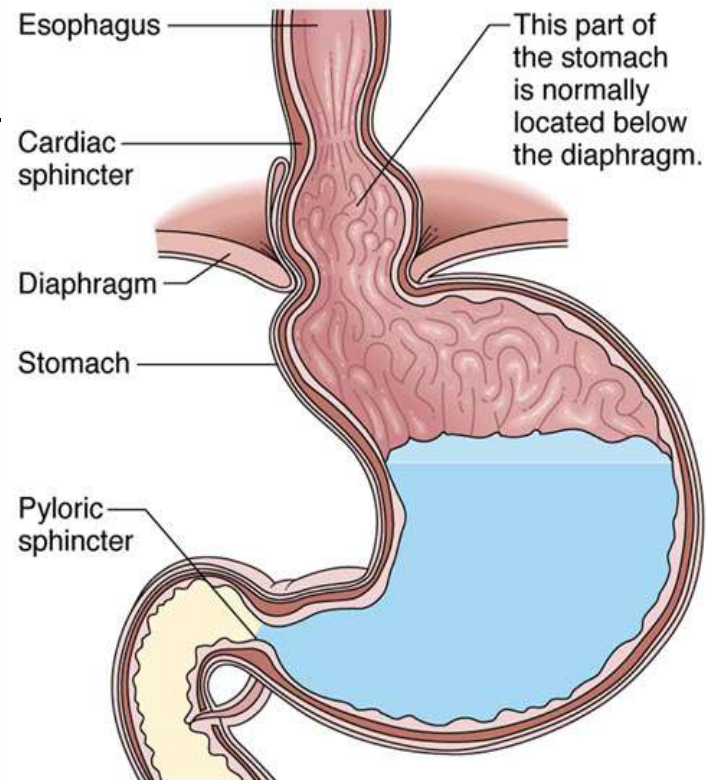


Dental Diseases

- Dental caries: _____ cavities
- Dental plaque: _____ plaque
- Periodontitis: _____ Inflammation of tissues that support teeth
- Gingivitis: _____ Inflammation of gums
- Halitosis: _____ Bad breath
- Temporomandibular disorders (TMD):
_____ Disfunction of joint

Esophagus Disorders

- Dysphagia: Difficulty swallowing
- Esophageal reflux: Stomach contents come up esophagus
- Pyrosis: heartburn
- Hiatal hernia: Can cause pyrosis and reflux



Stomach Disorders

- Gastritis: Inflammation of stomach
- Gastroenteritis: Inflammation of stomach and intestines
- Gastro-
 - rrhagia: Bleeding from the stomach
 - rrhea: Excessive flow of gastric secretions
 - rrhexis: Rupture of the stomach

Peptic Ulcers

➤ Often caused by the bacteria *Helicobacter pylori*

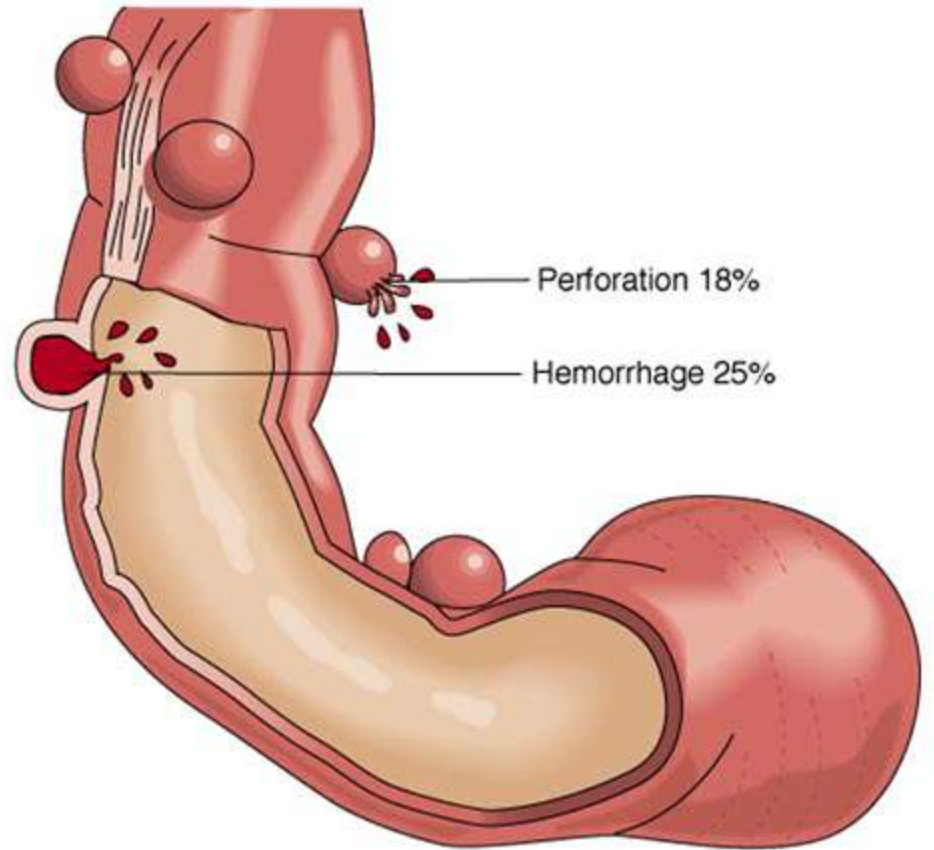
- Gastric ulcers: _____
Found in stomach
- Duodenal ulcers: _____
~~Found in duodenum (sm intest)~~
- Perforating ulcers: _____
~~Erosion through organ~~

Digestion Disorders

- Eructation: belching
- Dyspepsia: indigestion
- Emesis: vomit
- Hematemesis: Vomit blood
- Nausea: Urge to vomit
- Regurgitation: Return of swallowed food to mouth

Intestinal Disorders

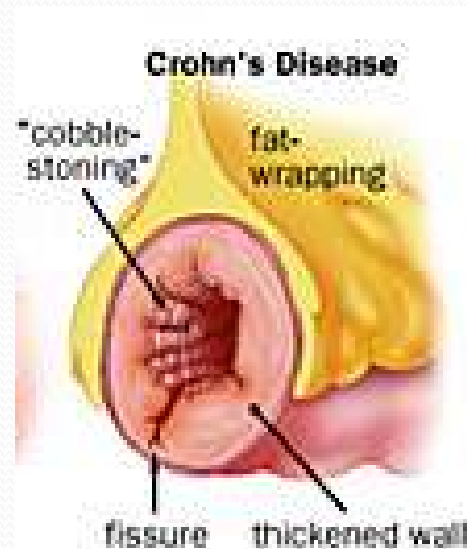
- Colorectal cancer
- Diverticulitis
 - Diverticulum



Inflammatory Bowel Diseases

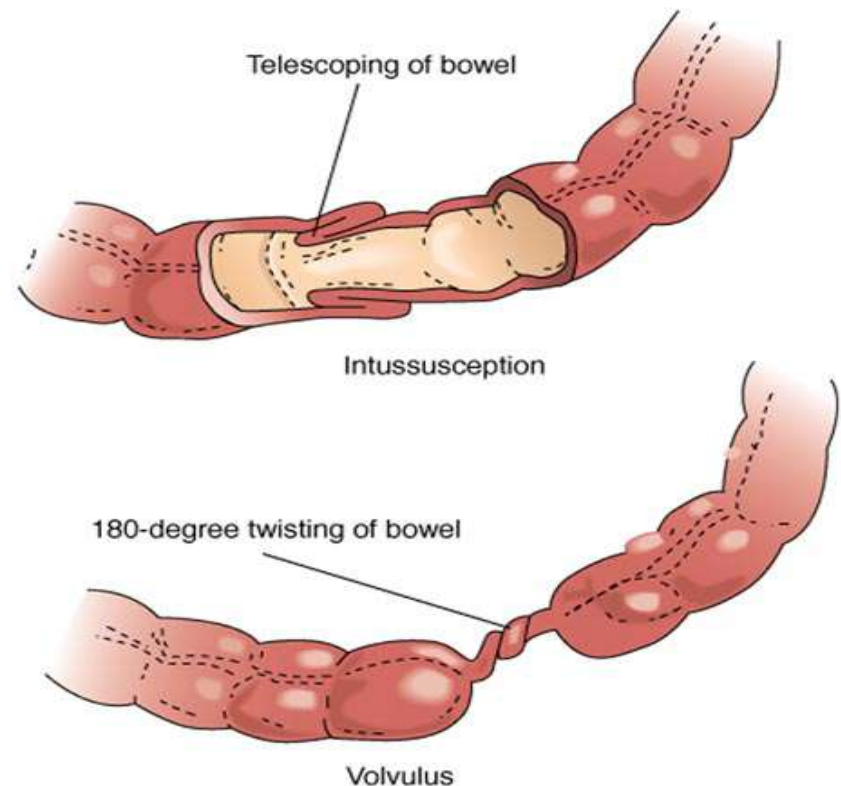
- Colitis: Inflammation of the colon
- Enteritis: Inflammation of intestines
- Ileitis: Inflammation of ileum
- Spastic colon (IBS): Impaired mobility
- Crohn's disease

Chronic autoimmune disorder resulting in scarring and thickening of intestinal walls



Intestinal Obstructions

- Ileus: Peristalsis stops temporarily
- Strangulating obstruction: Blood flow cut off
- Volvulus: twisting of the sm.
Intestines causing an obs
- Intussusception
- Inguinal hernia:
Bowel in groin area



Infectious diseases of the Intestine

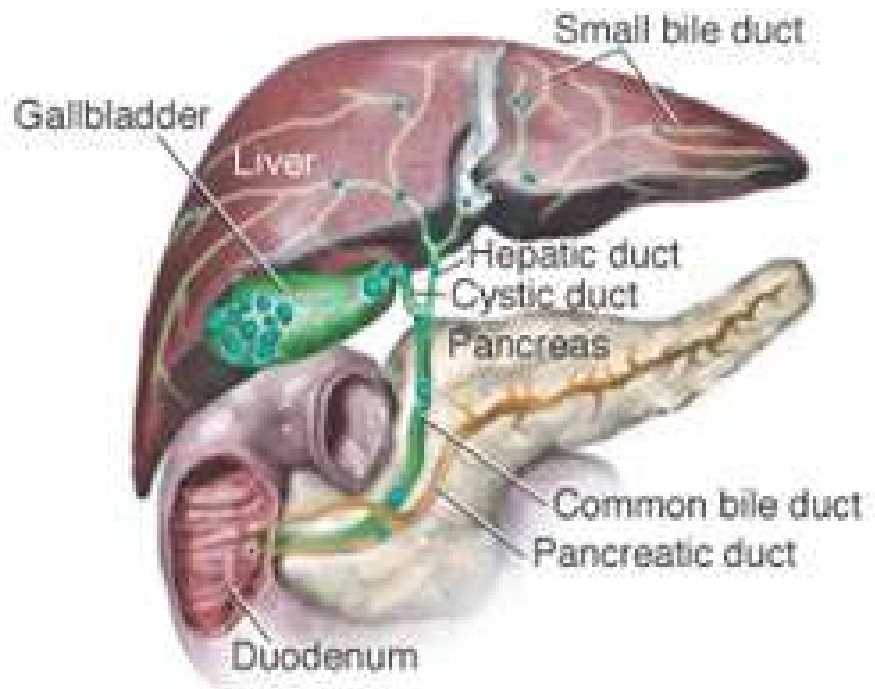
- Amebic dysentery: Amoeba – bloody, watery stools with pain, fever, dehydration
- Botulism: Bacteria - food poisoning characterized by paralysis; often fatal
- Cholera: Bacteria - severe diarrhea, vomiting and dehydration; can be fatal
- E. coli: Bacteria - watery diarrhea that becomes bloody; usually no fever
- Salmonella: Bacteria – severe diarrhea, nausea, vomiting with high fever
- Typhoid fever: Bacteria – headache, delirium, cough, watery diarrhea, rash, high fever

Liver Disorders

- Cirrhosis: Destruction of the structure & function of the liver
- Hepatomegaly: Enlarged liver
- Hepatorrhesis: Rupture of the liver
- Jaundice: Yellow skin
- Hepatitis
 - Hep A: Contaminated food – vaccine available
 - Hep B: Spread through blood/body fluids - vaccine
 - Hep C: Spread through blood/body fluids – no vaccine

Gallbladder Disorders

- Biliary calculus: Gall stone
- Cholecystitis: Inflammation of the gallbladder
- Cholelithiasis:
Presence of gallstones
in the gallbladder or bile
ducts



Diagnostic Procedures

- Hemoccult: Test for blood in stool
- Abdominal CT / CT Scan: Computed tomography – cross section of tissues
- Anoscopy: View anal canal and lower rectum
- Barium swallow: Upper GI series – barium used to make structures visible
- Barium enema: Lower GI series

Barium Enema

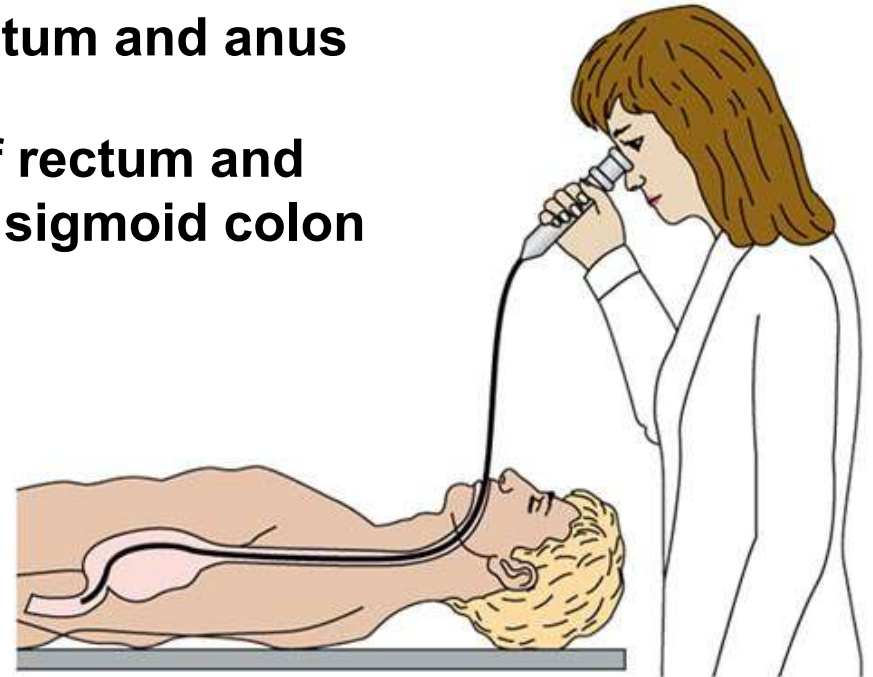
Radiographic study to examine the digestive system. Barium is used as a contrast medium to make these structures visible



Barium Enema

Endoscopy

- **Colonoscopy:** Visual examination of colon
- **Gastrointestinal endoscopy:** Examination of esophagus, stomach and duodenum
- **Proctoscopy:** Examination of rectum and anus
- **Sigmoidoscopy:** Examination of rectum and sigmoid colon



Ostomies

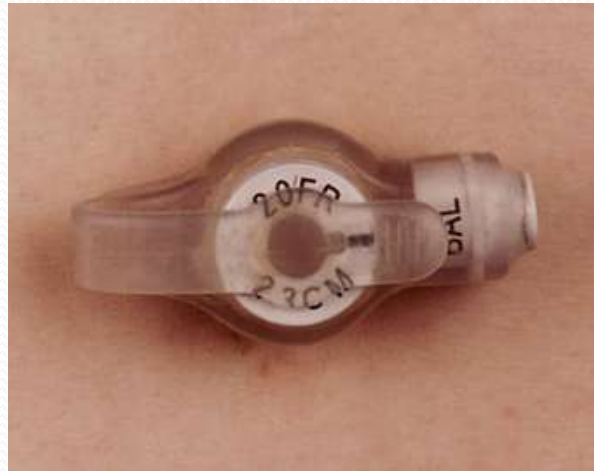
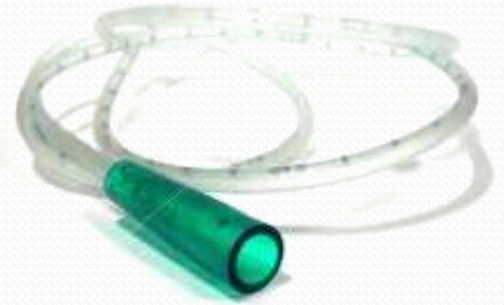
- An artificial opening between an organ and the outside of the body.
 - Allows for waste removal

- Colonostomy
- Gastrostomy
- Ileostomy



Enteral Feeding

- Gastrotomy
- Nasogastric tube (NGt)



Treatments

Be able to attach the following suffixes to know roots of the digestive system to define the different treatment options

- -plasty
- -ectomy
- -otomy

- -ostomy
- -pexy
- -rrhapy

Resources

Understanding the Risks of Diet Drugs

**Pamela Walker
The Rosen Publishing Group
2000**