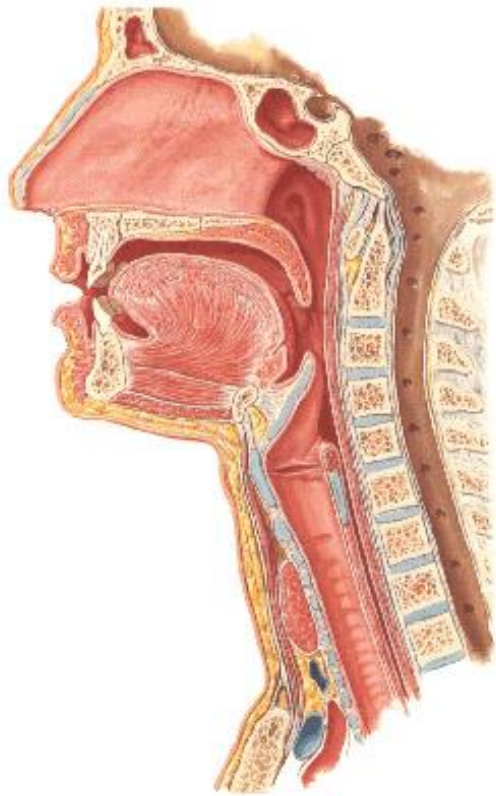


# Biomedical Terminology

## Digestive System Anatomy

# Digestive Tract (aka Alimentary Canal or GI Tract)

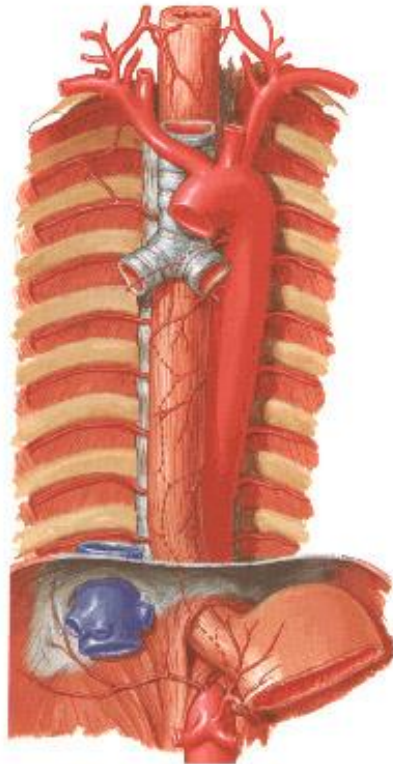
**Pharynx**  
Sagittal Section



- Pharynx
  - Consists of
    - Nasopharynx
    - Oropharynx
    - Laryngopharynx

# Digestive Tract (aka Alimentary Canal or GI Tract)

## Arteries of Esophagus

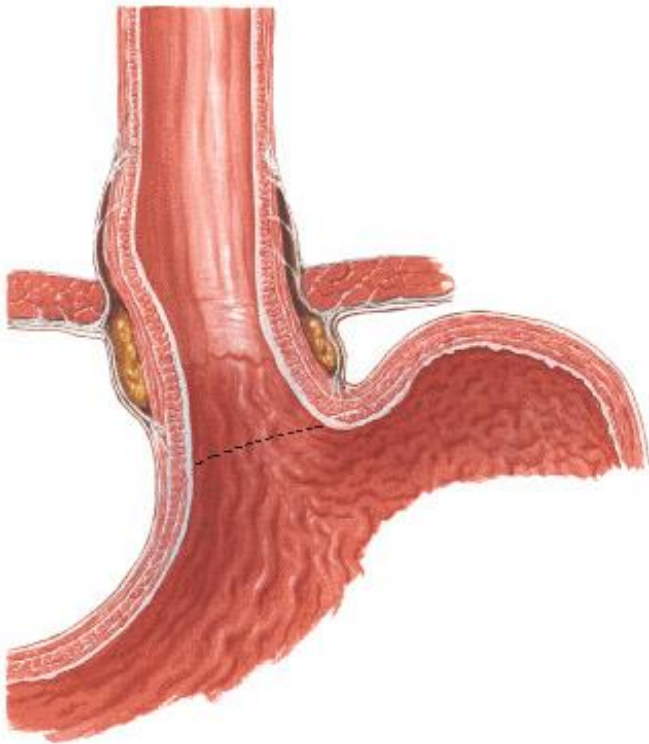


- Esophagus (esophag/o)
  - Extends from pharynx to stomach (gastr/o)
  - Passes through esophageal hiatus of diaphragm
    - Hiatus serves as a valve to prevent reflux serves
    - In a hiatal hernia, the upper portion of the stomach protrudes above the diaphragm
    - Patients experience GERD (gastroesophageal reflux disease), pain, belching, difficulty swallowing and other ‘rebellious stomach qi’ symptoms
    - Chronic reflux can lead to a condition called Barrett’s esophagus

# Digestive Tract (aka Alimentary Canal or GI Tract)

## Esophagogastric Junction

Coronal Section

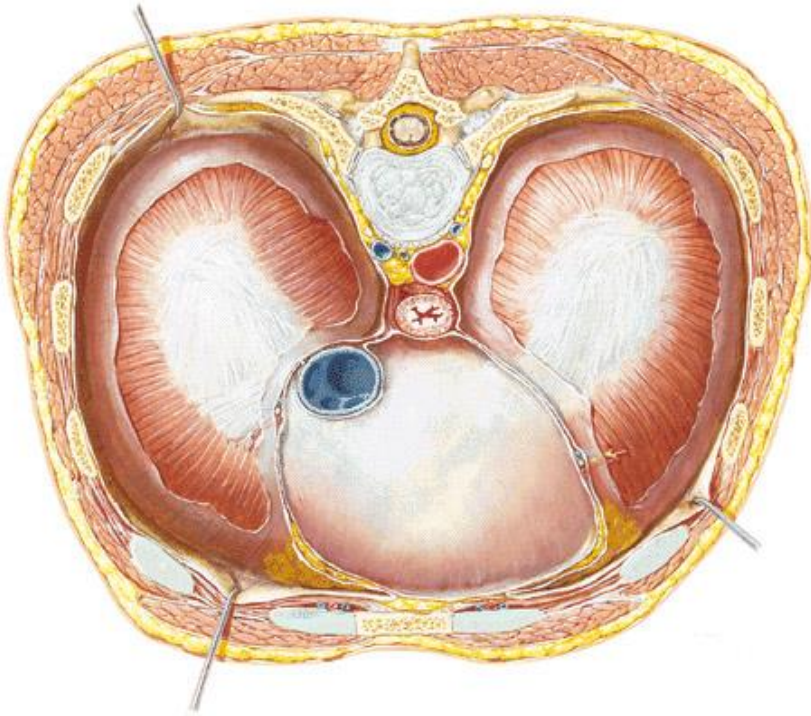


## Barett's Esophagus

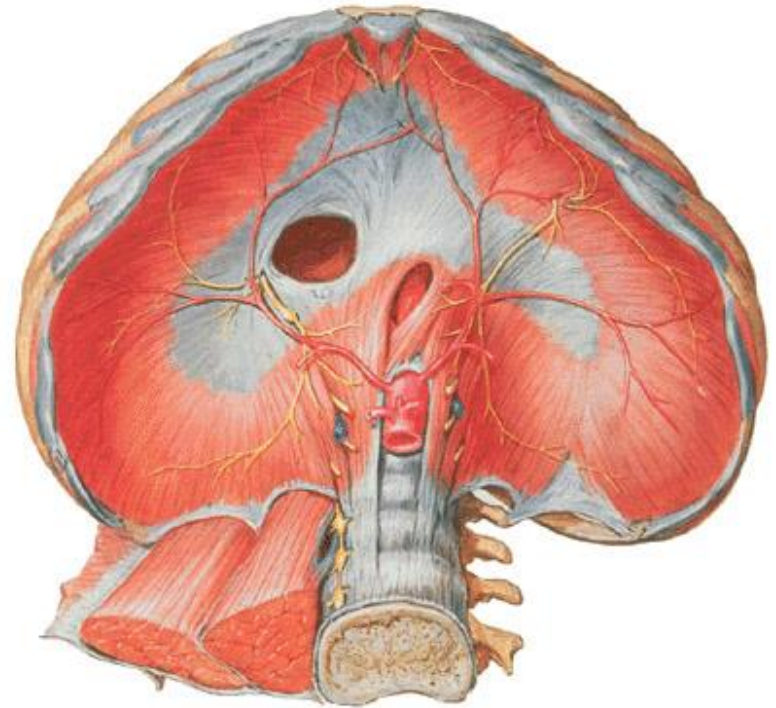
- Lining of the esophagus is damaged by stomach acid and changed to a lining similar to that of the stomach
- Increases the risk for esophageal cancer
- An endoscopic tests such as an esophagoscopy might be performed. A common endoscopic test that looks further into the digestive tract is a EGD (Esophagogastroduodenoscopy)

# Digestive Tract (aka Alimentary Canal or GI Tract)

**Diaphragm**  
Thoracic Surface



**Diaphragm**  
Abdominal Surface



# Digestive Tract (aka Alimentary Canal or GI Tract)

Musculature of Esophagus 1



Musculature of Esophagus 2

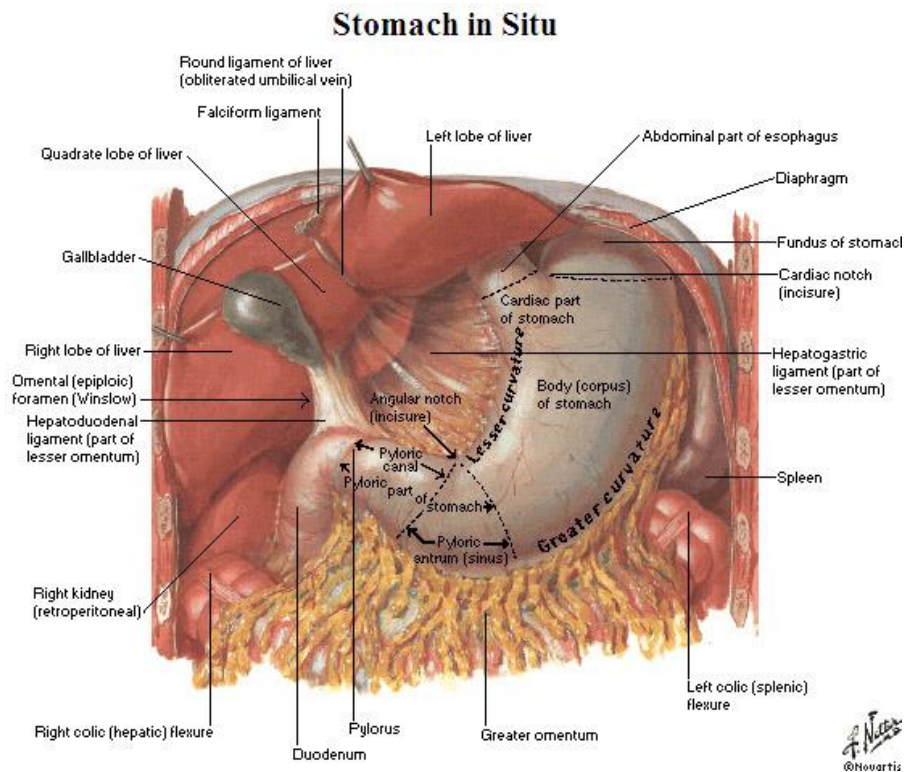




# Digestive Tract

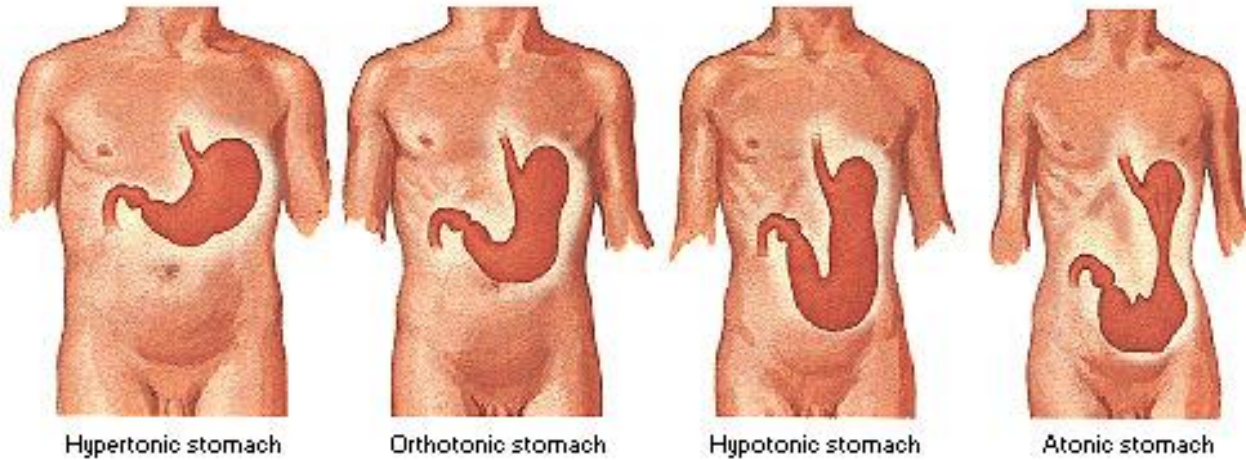
## (aka Alimentary Canal or GI Tract)

- Stomach (gastr/o)
  - Mixes and stores food. It secretes chemicals for digestion and hormones for local communication control
  - Consists of four regions
    - Cardia
    - Fundus
    - Body
    - Pylorus
      - Consists of
        - » Atrum – portion of pylorus which connects to body of stomach
        - » Pyloric valve (sphincter)



# Stomach

## Variations in Position and Contour

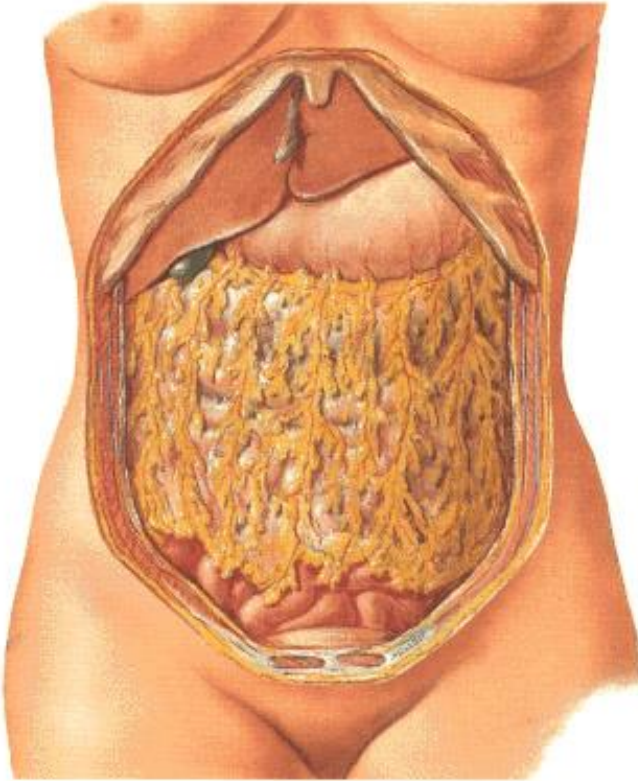


Variations of stomach in relation to body habitus



# Digestive Tract Accessory Structure

## Greater Omentum and Abdominal Viscera

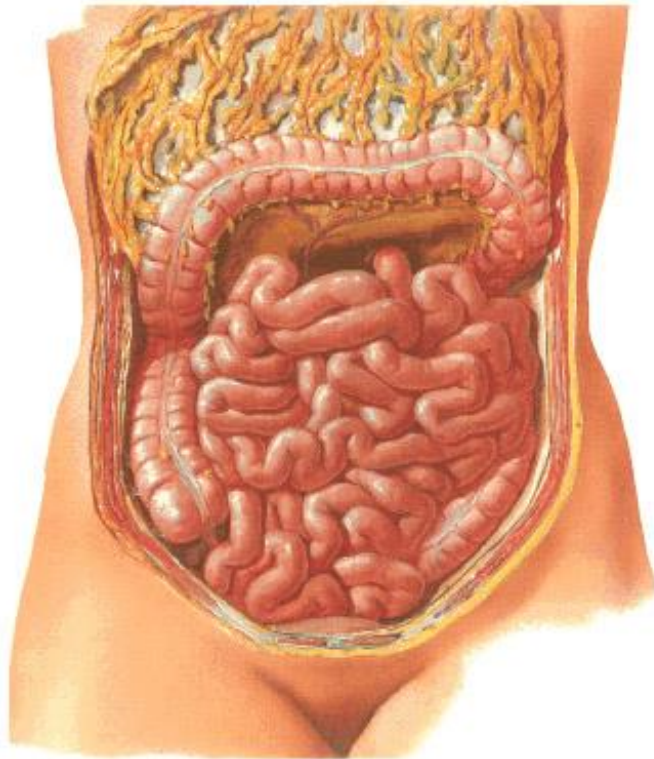


- Greater Omentum
  - Fold of the peritoneum that drapes over the abdominal organs
  - It extends from the greater curvature of the stomach, passing in front of the small intestines and reflects on itself to ascend to the transverse colon before reaching to the posterior abdominal wall

# Digestive Tract (aka Alimentary Canal or GI Tract)

## Greater Omentum and Abdominal Viscera

Omentum Raised



- Small Intestines (enter/o)
  - 20 foot canal extending from the pyloric valve to the large intestine
  - Consists of three parts
    - Duodenum (duoden/o)
    - Jejunum (jejun/o)
    - Ileum (ile/o)
      - Connects with the first part of the large intestine (cecum) at the ileocecal valve

# Duodenum

## Mesenteric Relations of Intestines

### Suspensory Muscle of Duodenum



Exposure of suspensory muscle of duodenum (ligament of Treitz)

# Digestive Tract (aka Alimentary Canal or GI Tract)

## Mesenteric Relations of Intestines

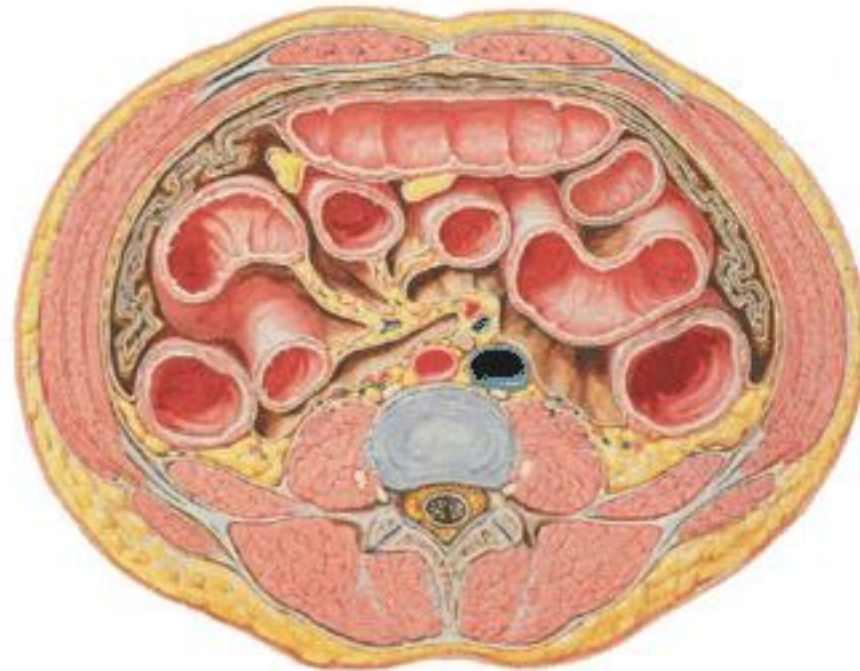
Small Intestine Removed



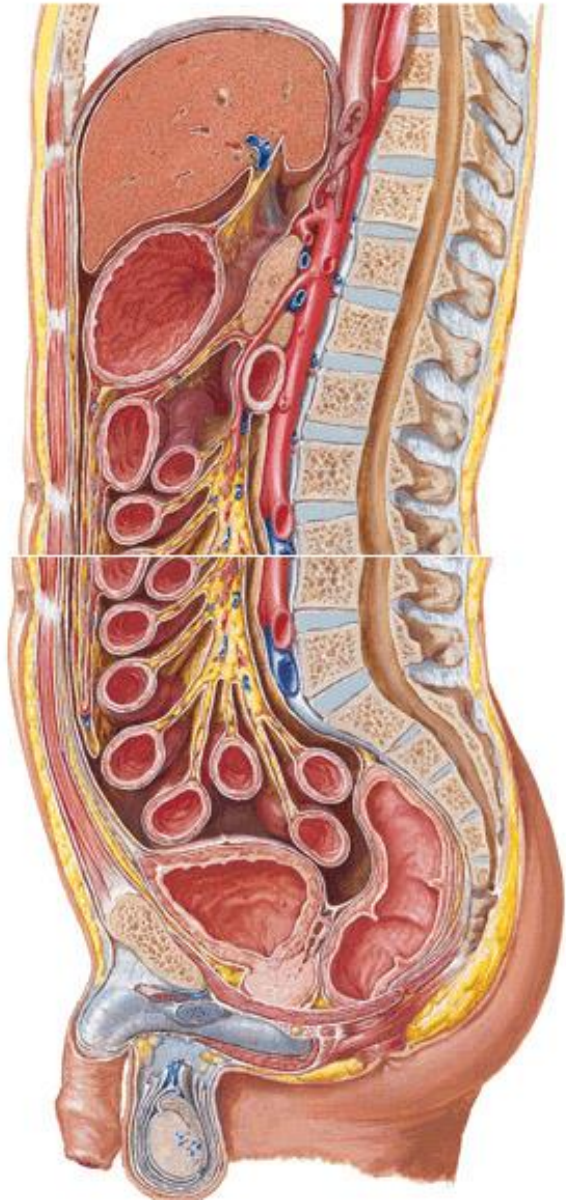
- The small intestines (especially the jejunum and ileum) are suspended from the posterior peritoneum from the mesentery

## **Abdominal Wall and Viscera**

Schematic Cross Section Between L2 and L3

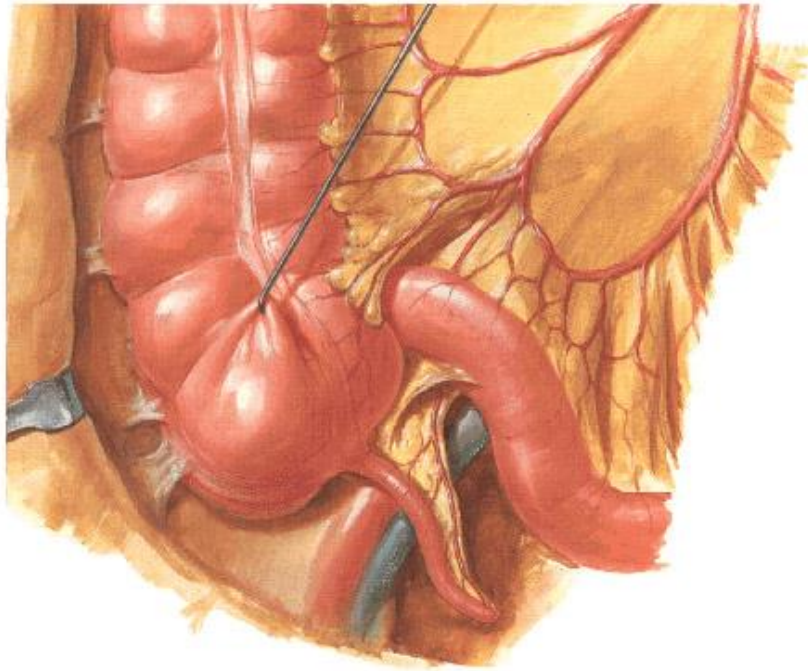






# Digestive Tract (aka Alimentary Canal or GI Tract)

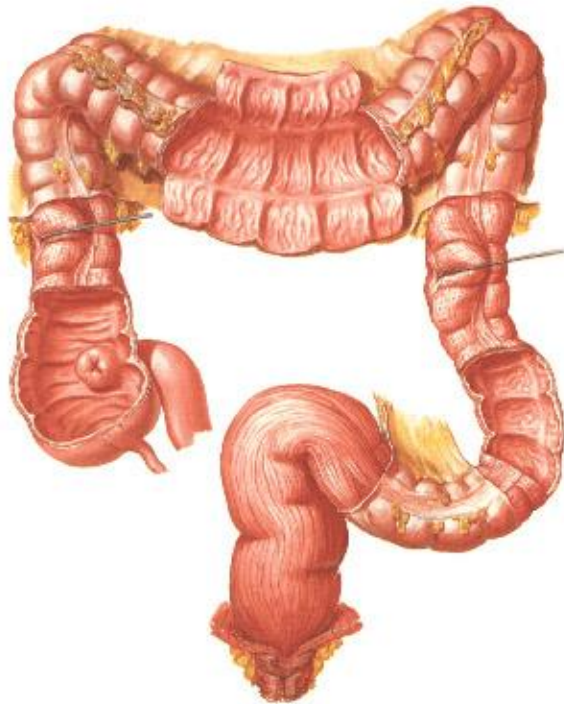
Ileocecal Region



- The ileum (ile/o) meets with the cecum (cec/o) which is the first part of the large intestine (col/o) at the ileocecal valve

# Digestive Tract (aka Alimentary Canal or GI Tract)

## Mucosa and Musculature of Large Intestine

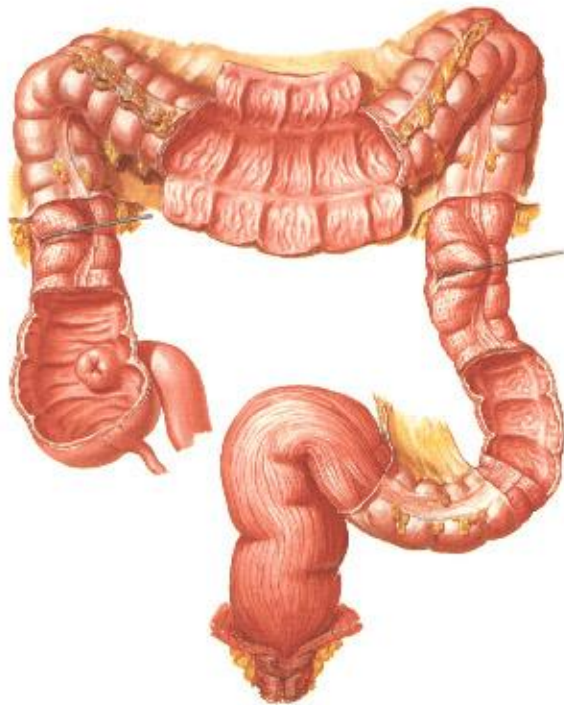


- The large intestine (often referred to as the colon – col/o) consists of the
  - Cecum (cec/o)
  - Ascending colon
  - Transverse colon
  - Descending colon
  - Sigmoid colon (sigmoid/o)
  - Rectum (proct/o, rect/o)

# Digestive Tract

## (aka Alimentary Canal or GI Tract)

### Mucosa and Musculature of Large Intestine

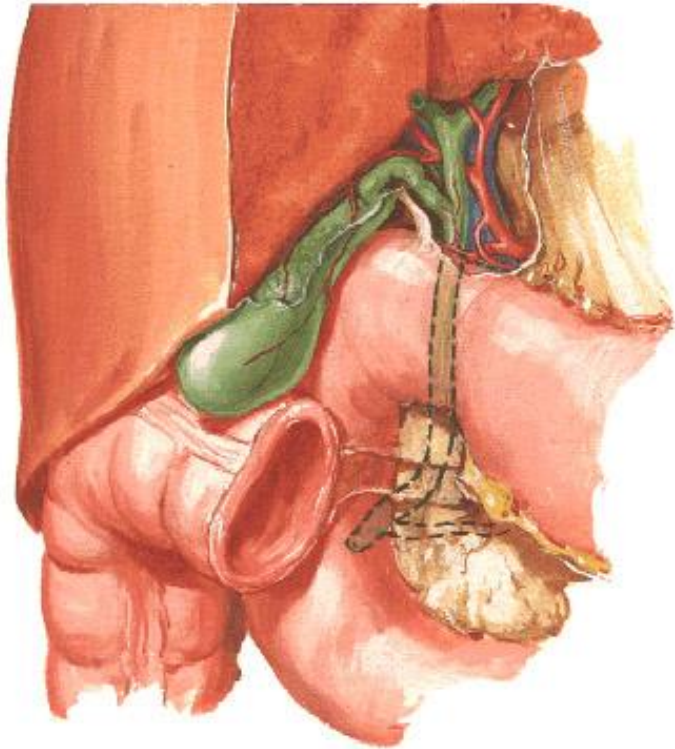


- Diverticulosis and diverticulitis are both common conditions which affect the colon, especially the sigmoid colon
- Diverticulitis is small, bulging sacs or pouches of the inner lining of the intestine (diverticulosis) that become inflamed or infected
  - Diverticul/o – diverticulum, or blind pouch, extending from a hollow organ



# Accessory Organs

## Gallbladder and Extrahepatic Bile Ducts

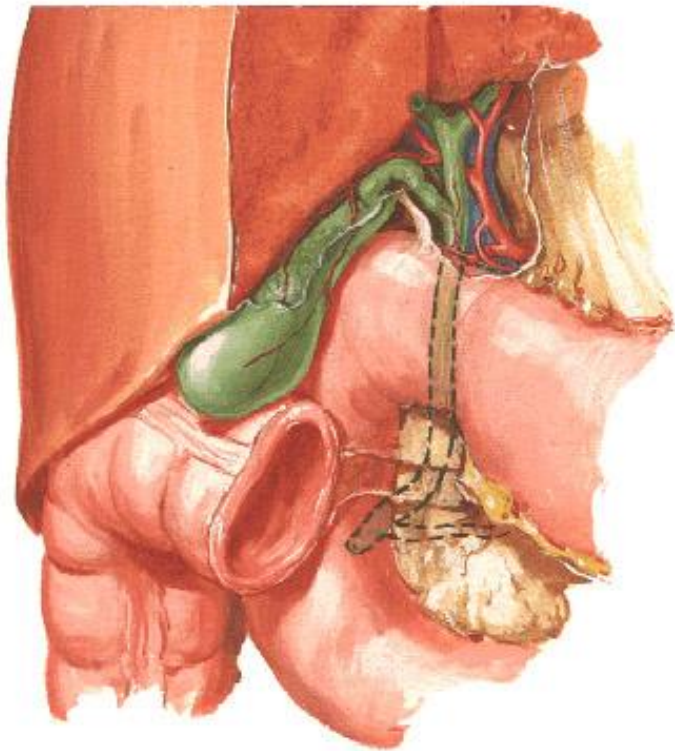


- The Liver (hepat/o), Gallbladder (chol/e – can also indicate bile), and pancreas (pancreat/o) are all accessory organs of the digestive system
- Bile is secreted from the gallbladder, through the bile duct (cholangi/o), joining with the common bile duct (choledoch/o) into the duodenum
- Pancreatic digestive enzymes are secreted into the duodenum



# Accessory Organs

## Gallbladder and Extrahepatic Bile Ducts



- Gallstones can form in the gallbladder (cholelithiasis), this can lead to cholecystitis
  - If they get ejected from the gallbladder and lodge in the common bile duct the condition would be called choledocholithiasis
  - If they prevent pancreatic enzymes from entering the duodenum, these can backflow and start digesting the pancreas, causing pancreatitis

# Digestive System

Information Relevant to the Test

# Combining Forms for the Digestive Tract

- An/o
  - Anus
    - Ex) anal
      - Definition of the suffix –al
        - » Pertaining to
      - Definition of anal
        - » Pertaining to the anus
- Antr/o
  - Antrum
    - Ex) antrectomy
      - Definition of suffix –ectomy
        - » Excision
      - Definition of antrectomy
        - » Excision of the antrum
      - This procedure is done to the gastric antrum when there are ulcers that are unmanageable by other treatment, there exists perforation, bleeding, or obstruction

# Combining Forms for the Digestive Tract

- Cec/o
  - Cecum
- Col/o, colon/o
  - Colon (usually denotes large intestine)
    - Ex) colonoscopy
      - Definition of suffix –scopy
        - » Visual examination
      - Definition of colonoscopy
        - » Visual examination of the colon
        - » Often performed to see and remove polyps, also used to diagnose diverticulosis, cancer, and can visualize perforation

# Combining Forms for the Digestive Tract

- Duoden/o
  - Duodenum
    - Ex) esophagogastroduodenoscopy (EGD)
      - Definition of combining forms esophag/o, gastr/o
        - » Esophag/o – esophagus, gastr/o- stomach
      - Definition of suffix –scopy
        - » Visual examination
      - Definition of esophagogastroduodenoscopy
        - » Visual examination of the esophagus, stomach and duodenum
- Enter/o
  - Intestine (usually denotes small intestine)
    - Ex) gastroenteritis
      - Inflammation of the stomach and (small) intestines



# Combining Forms for the Digestive Tract

- Esophag/o
  - Esophagus
    - Ex) esophagogastroplasty
      - Definition of suffix –plasty
        - » Surgical repair
      - Definition of esophagogastroplasty
        - » Surgical repair of the esophagus and the stomach
- Gastr/o
  - Stomach
    - Ex) gastrostomy
      - Definition of the suffix – stomy
        - » Creation of an artificial opening
      - Definition of gastrostomy
        - » Creation of an artificial opening into the stomach (used to administer food when swallowing is impossible)

# Combining Forms for the Digestive Tract

- Ile/o
  - Ileum
    - Ex) ileocecal
      - Definition of the suffix –al
        - » Pertaining to
      - Definition of ileocecal
        - » Pertaining to the ileum and cecum
- Or/o, stomat/o
  - Mouth
    - Ex) stomatogastric
      - Definition of suffix –ic
        - » Pertaining to
      - Definition of stomatogastric
        - » Pertaining to the mouth and stomach
- Jejun/o
  - Jejunum

# Combining Forms for the Digestive Tract

- Proct/o, rect/o
  - Rectum
    - Ex) proctoptosis
      - Definition of the suffix –ptosis
        - » Drooping, sagging, prolapse
      - Definition of proctoptosis
        - » Prolapse of the rectum
- Sigmoid/o
  - Sigmoid colon
    - Ex) sigmoidoscopy
      - Definition of suffix –scopy
        - » Visual examination
      - Definition of sigmoidoscopy
        - » Visual examination of the sigmoid colon

# Combining Forms commonly used with Digestive System (Related to Gallbladder)

- **Cholangi/o**

- Bile duct

- Ex) Cholangioma

- Definition of suffix –  
oma

- » Tumor, swelling

- Definition of  
cholangioma

- » Tumor of the  
bile duct

- **Chol/e**

- Gall, bile

- Cholelithiasis

- Definition of  
combining form  
lith/o

- » Stone, calculus

- Definition of suffix –  
iasis

- » Condition

- Definition of  
cholelithiasis

- » Condition of  
gallstones

# Combining Forms commonly used with Digestive System (Related to Gallbladder)

- Choledoch/o
  - Common bile duct
    - Ex) Choledocholithiasis
      - Recall definition of combining form lith/o and suffix –iasis
      - Definition of choledocholithiasis
        - » Condition of stones in the common bile duct
      - A patient with choledocholithiasis might undergo a surgical procedure which uses an incision to remove this stone, what would this incision be called?
        - » Choledocholithotomy



# Combining Forms commonly used with Digestive System (Related to Gallbladder)

- We saw cyst/o – bladder in the urinary system
  - Cholecyst/o – bile bladder (gallbladder)
    - Ex) cholecystitis
      - Inflammation of the gallbladder
      - Someone with inflammation of the gallbladder might get their gallbladder removed, what would this procedure be called?
        - » Cholecystectomy

# Combining Forms commonly used with Digestive System (Other Accessory Organs)

- Hepat/o

- Liver

- Ex) hepatic

- Definition of suffix –  
ic

- » Pertaining to

- Definition of hepatic

- » Pertaining to  
the liver

- Pancreat/o

- Pancreas

- Ex) pancreatitis

- Inflammation of the  
pancreas

# Combining Forms commonly used with Digestive System Terms

- Abdomin/o, celi/o, lapar/o
  - Abdomen (abdominal cavity)
    - Abdominocentesis
      - Definition of suffix – centesis
        - » Surgical puncture to aspirate fluid
      - Definition of abdominocentesis
        - » Surgical puncture to aspirate fluid from the abdominal cavity (also called paracentesis)
- Appendic/o
  - Appendix
    - Ex) appendicitis
      - Definition of suffix –itis
        - » Inflammation
      - Definition of appendicitis
        - » Inflammation of the appendix
- Cheil/o
  - Lip

# Combining Forms commonly used with Digestive System Terms

- **Diverticul/o**
  - Diverticulum
    - Ex) diverticulosis and diverticulitis
      - Definition of suffixes –osis and –itis
        - » -osis – abnormal condition, -itis – inflammation
      - Definition of diverticulosis and diverticulitis
        - » Diverticulosis – abnormal condition of having diverticula
        - » Diverticulitis – inflammation of diverticulum
- **Gingiv/o**
  - Gum

# Combining Forms commonly used with Digestive System Terms

- Gloss/o, lingu/o
  - Tongue
    - Ex) glossopharyngeal (such as CN IX)
      - Definition of suffix –eal
        - » Pertaining to
      - Definition of glossopharyngeal
        - » Pertaining to the tongue and pharynx

# Combining Forms commonly used with Digestive System Terms

- Herni/o
  - Hernia
- Palat/o
  - Palate
- Peritone/o
  - Peritoneum
    - Ex) peritonitis (*Note: e is dropped*)
      - Inflammation of the peritoneum
- Polyp/o
  - Polyp, small growth
- Pylor/o
  - Pylorus
    - Ex) pyloric
      - Definition of suffix –ic
        - » Pertaining to
      - Definition of pyloric
        - » Pertaining to the pylorus
- Sial/o
  - Saliva, salivary gland
    - Ex) sialolith
      - Stone in the salivary gland
- Uvul/o
  - uvula

# Prefixes and Suffixes commonly used with Digestive System Terms

- Prefixes

- Hemi-

- half

- Suffixes

- -pepsia

- Digestion