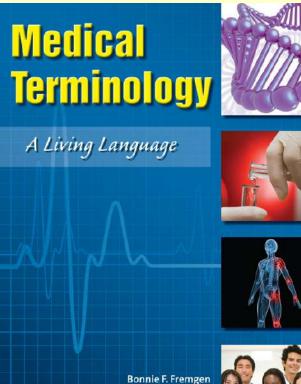
Medical Terminology **A Living Language**



Chapter 8

Digestive System



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Suzanne S. Frucht

Multimedia Directory

Slide 16Digestive System Animation Slide 58Digestive System Exercise Slide 79Orthodontics Video Slide 84GERD Video Slide 109Sigmoidoscopy Video Slide 113Nasogastric Intubation Animation Slide 114Dieticians Video

Digestive System at a Glance

- Function of the Digestive System
 - Mechanical and chemical digestion of food
 - Absorption of nutrient molecules
 - Elimination of solid wastes

Digestive System at a Glance

Organs of the Gastrointestinal tract

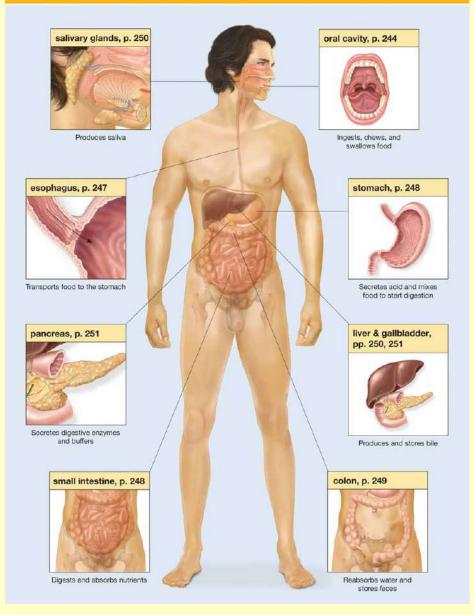
- Oral cavity
- Pharynx
- Esophagus
- Stomach
- Small intestine
- Colon

Digestive System at a Glance

- Accessory Organs
 - Pancreas
 - Liver
 - Gallbladder
 - Salivary glands

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Digestive System Illustrated



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an/oanus

- append/oappendix
- appendic/oappendix
- bar/oweight
- bucc/ocheek
- cec/ocecum
- chol/ebile, gall

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- cholangi/obile duct
- cholecyst/ogallbladder
- choledoch/ocommon bile duct
- col/ocolon
- colon/ocolon
- dent/otooth
- duoden/oduodenum

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- enter/osmall intestine
- esophag/oesophagus
- gastr/ostomach
- gingiv/ogums
- gloss/otongue
- hepat/oliver
- ile/oileum

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- jejun/ojejunum
- Iabi/olip
- Iapar/oabdomen
- lingu/otongue
- Iith/ostone
- odont/otooth
- or/omouth

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- palat/opalate
- pancreat/opancreas
- pharyng/othroat, pharynx
- proct/oanus and rectum
- pylor/opylorus
- rect/orectum
- sialaden/osalivary gland
- sigmoid/osigmoid colon

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Digestive System Suffixes

- emesisvomit
- –lithiasisstone
- orexiaappetite
- –pepsiadigestion
- –phagiaeat, swallow
- –prandialpertaining to a meal
- –tripsysurgical crushing

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Also called:

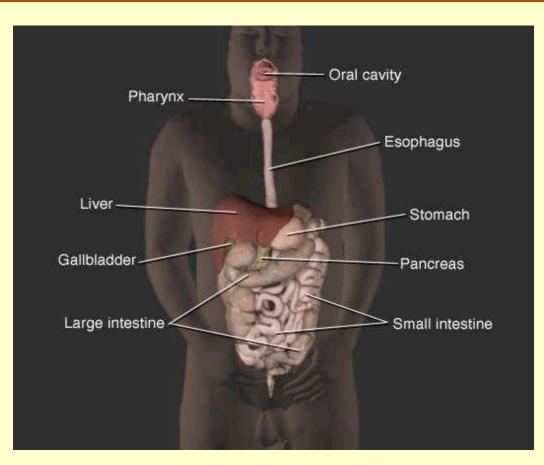
- Gastrointestinal system (GI)
- Gut
- Alimentary canal
- Approximately 30 feet of continuous muscular tube between mouth and anus

Organs of the continuous gut tube in order:

- Oral cavity
- Pharynx
- Esophagus
- Stomach
- Small intestine
- Colon (including rectum and anus)

- Accessory organs are connected to gut tube by ducts
- Include:
 - Salivary glands
 - Pancreas
 - Liver
 - Gallbladder

Digestive System Animation



Click here to view an animation of the digestive system.

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- Three main functions of Digestive system
 - Digesting food
 - Absorbing nutrients
 - Eliminating waste

Digesting Food

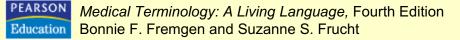
- Physical and chemical breakdown of large food particles
- Produces simple nutrient molecules
 - Glucose
 - Triglycerides
 - Amino acids

Absorbing Nutrients

- Simple molecules are absorbed from intestine
- Circulated through body by cardiovascular system
- Used for growth and repair of cells, tissues, and organs

Eliminating Waste

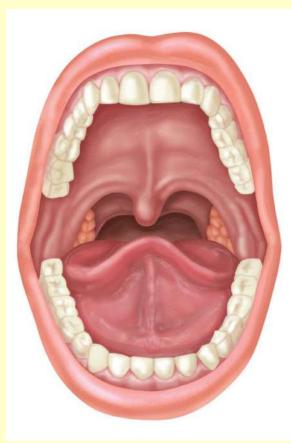
- Some ingested food cannot be digested or absorbed
- Expelled from body as solid waste
 - Feces



Oral Cavity

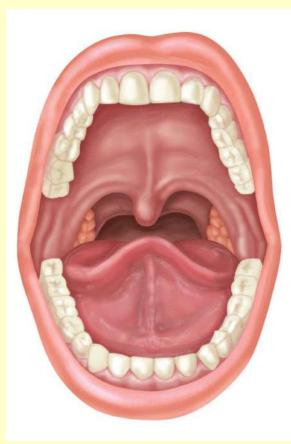
Roof is palate

- Hard bony anterior
- Soft flexible posterior
- Hanging down from soft palate is uvula
 - Speech production
 - Location of gag reflex



Oral Cavity

- Cheeks are lateral walls
- Lips are anterior opening
- Entire cavity lined with mucous membrane



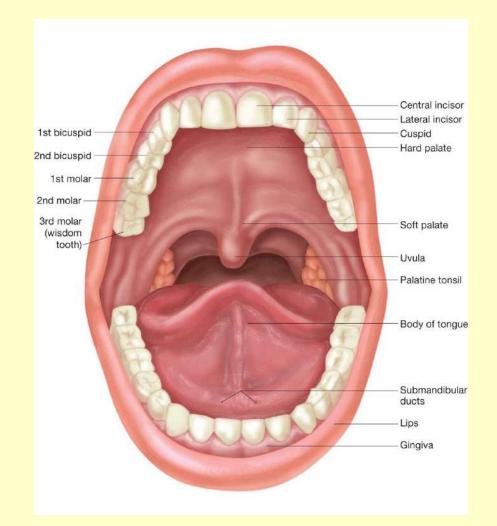


Figure 8.1 – Anatomy of the oral cavity.

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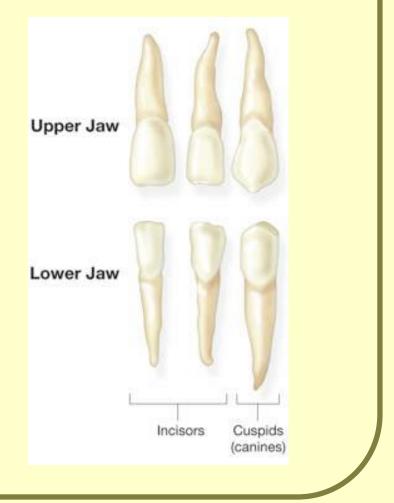
Oral Cavity

Digestion begins when food enters mouth Mechanically broken up by chewing Tongue moves food within mouth Mixes with saliva **Digestive enzymes** Lubricates Taste buds on tongue surface Detect bitter, sweet, salty, sour flavors

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Teeth

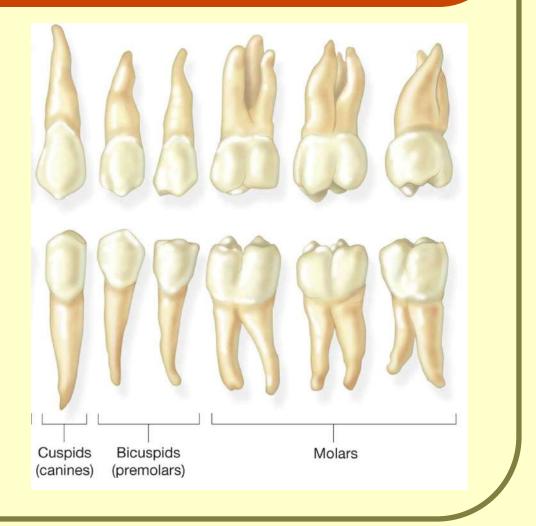
Cutting teeth Bite Tear Out Incisors Cuspids (canines)



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Teeth

 Grinding teeth
 Bicuspids (premolars)
 Molars
 Third molar is wisdom tooth



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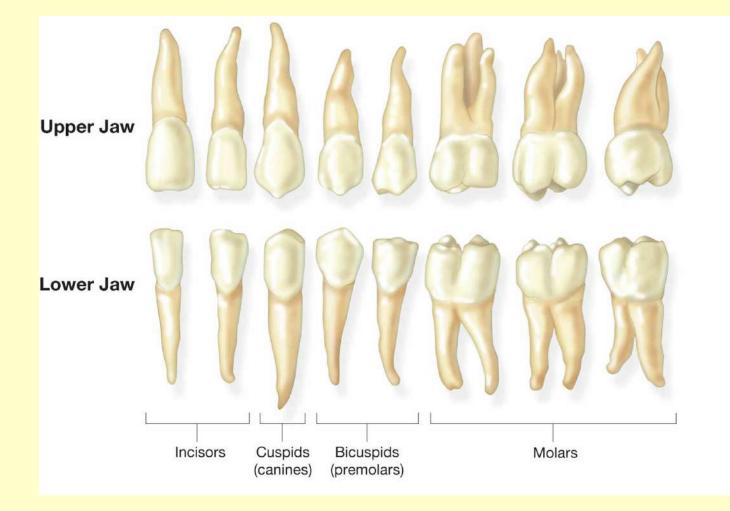
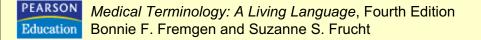


Figure 8.3A – The name and shape of the adult teeth.



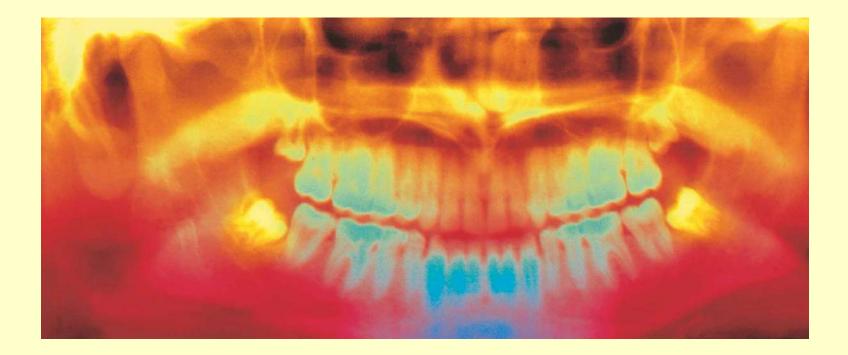


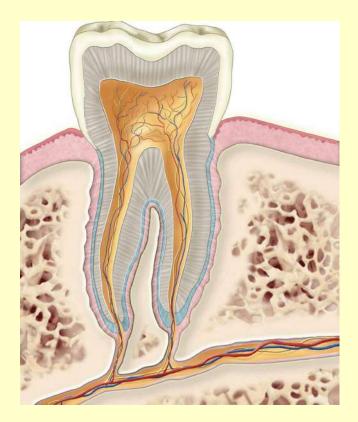
Figure 8.3B – Color enhanced X-ray of teeth showing four wisdom teeth that have not erupted. (Science Photo Library/Photo Researchers, Inc.)

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Tooth Structure

Gums

- Mucous membrane
 + connective tissue
- Seals off teeth in socket
- Tooth is divided into:
 - Crown above gum
 - Root below gum



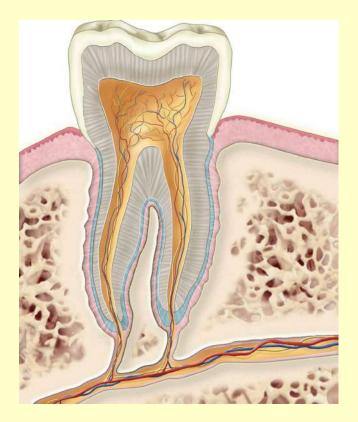
Tooth Structure

Enamel

Outer covering
In crown only
Hardest substance

Dentin

Under enamel
In crown and root
Bulk of tooth

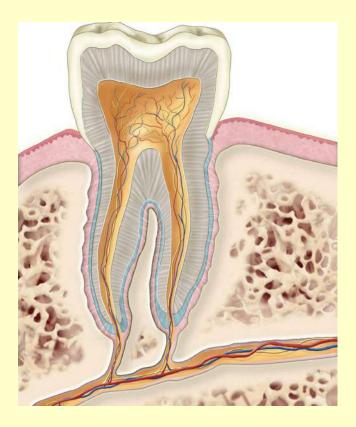


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Tooth Structure

Pulp cavity

- In crown and root canal
- Blood vessels, nerves
- Cementum and periodontal ligaments
 - Anchors root in jawbone



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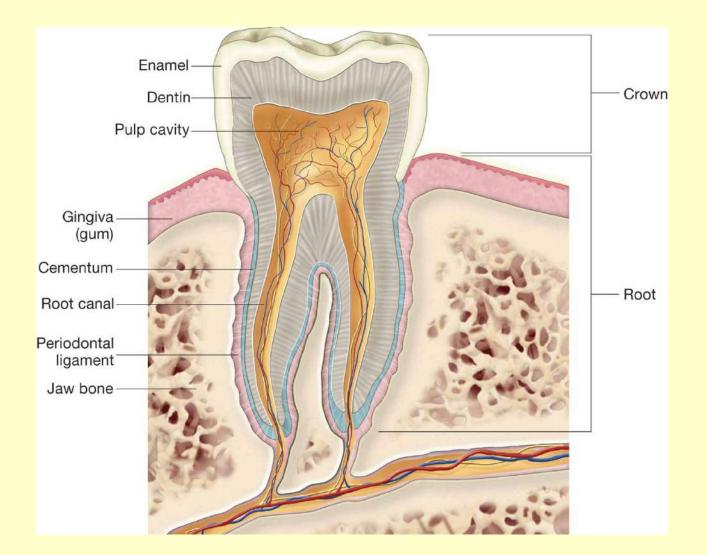
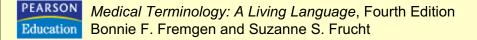


Figure 8.4 – Internal structures of the crown and root.



Humans Have 2 Sets of Teeth

Deciduous teeth

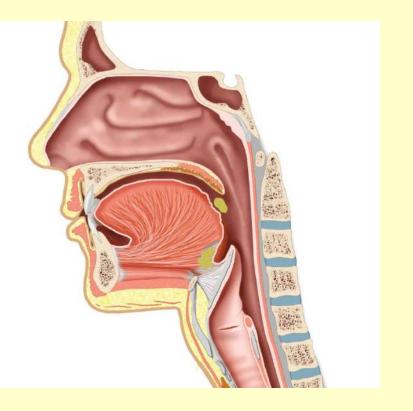
- First set, baby teeth
- 20 teeth erupt between ages 6 and 28 months

Permanent teeth

- Second set, adult teeth
- About 6 years of age, baby teeth fall out
- Replaced by 32 permanent teeth
- Process continues until 18-20 years of age

Pharynx

- Swallowed food enters oropharynx
- Proceeds down pharynx into laryngopharynx
- Epiglottis
 - Covers larynx and trachea
 - Shunts food away from lungs & into esophagus



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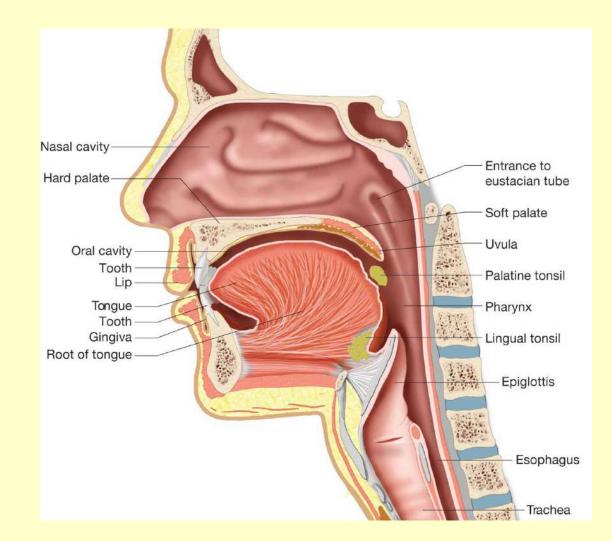


Figure 8.2 – Structures of the oral cavity, pharynx, and esophagus.

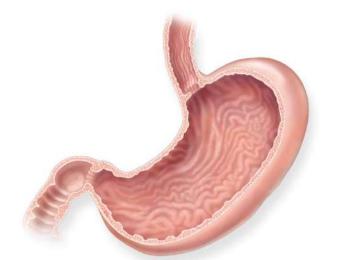
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Esophagus

- 10-inch long muscular tube
- Food enters from pharynx
- Delivered to stomach
- Propelled along by wavelike muscular movements
 - Called peristalsis
 - Pushes food through entire gut tube

The Stomach

- J-shaped muscular organ
- Collects & churns food
 - Mixes it with
 hydrochloric acid
 (HCI)
- Forms chyme
 - Watery mix of food and digestive juices



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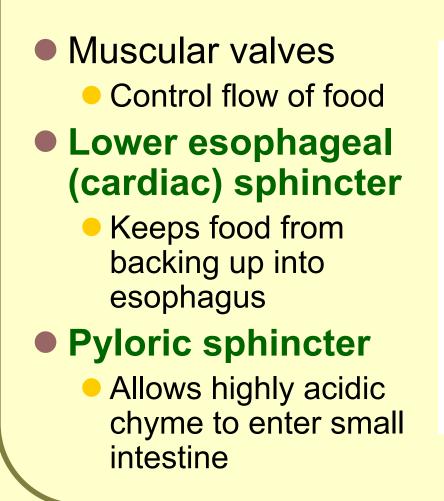
The Stomach

Three regions Fundus – upper Body – main Antrum – lower Rugae are folds in stomach lining Stretch out to allow stomach to expand with food



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Sphincters



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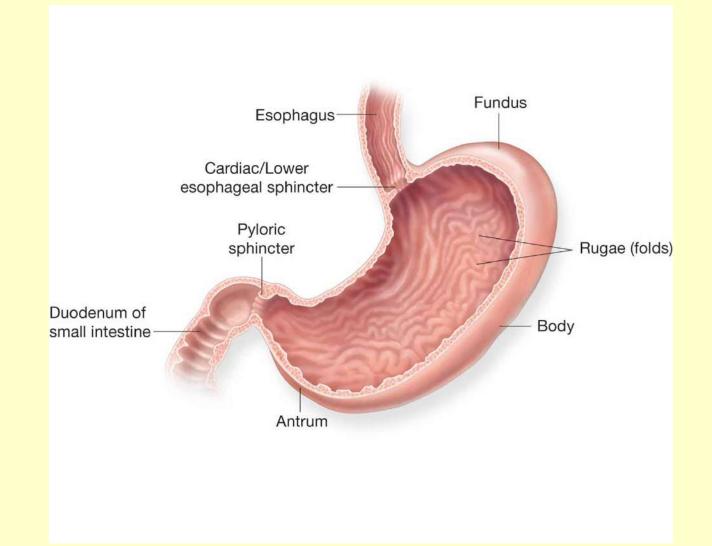
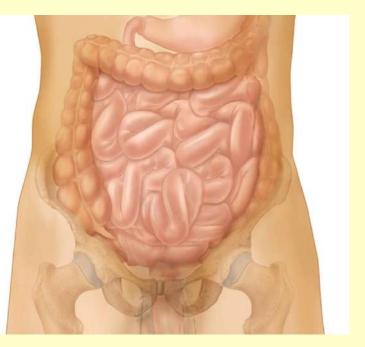


Figure 8.5 – The regions and internal structures of the stomach.

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Small Intestine

Longest portion of alimentary canal Averages 20 feet **Between pyloric** sphincter and colon Site of: Completion of digestion Majority of absorption



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Three Sections of Small Intestine

Duodenum

- First section about 10-12 inches long
- Starts at pyloric sphincter
- Jejunum
 - Second section about 8 feet long
- Ileum
 - Third section about 12 feet long
 - Connects to colon at ileocecal valve

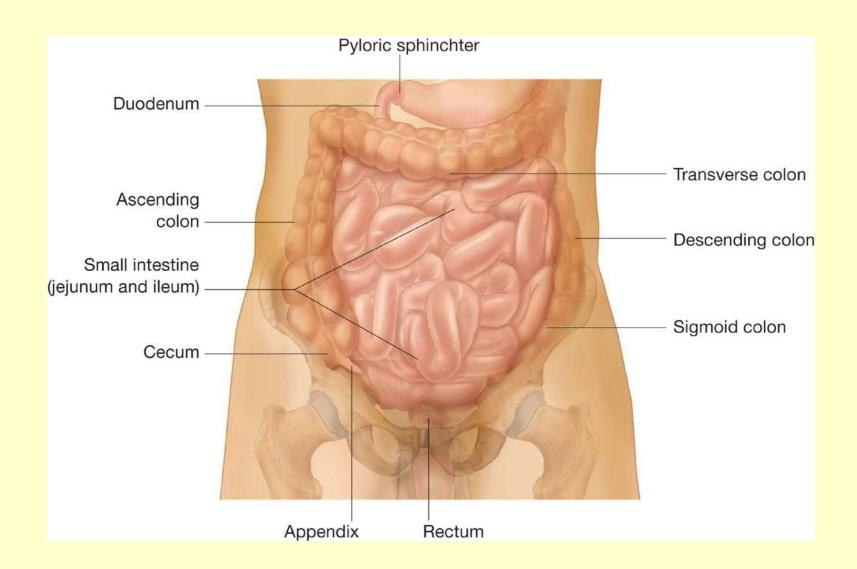


Figure 8.6 – The small intestine – duodenum, jejunum, ileum – begins at the pyloric sphincter and ends at the colon.

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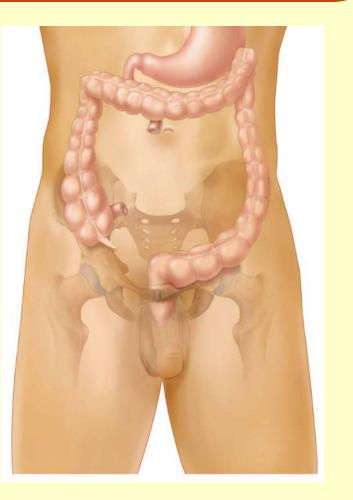
Colon

5 feet long

- Extends from ileocecal valve to anus
- Fluid that remains after digestion and absorption enters colon
- Most is water and is reabsorbed into body
- Solid waste left over is feces
- Evacuated in bowel movements

Regions of the Colon

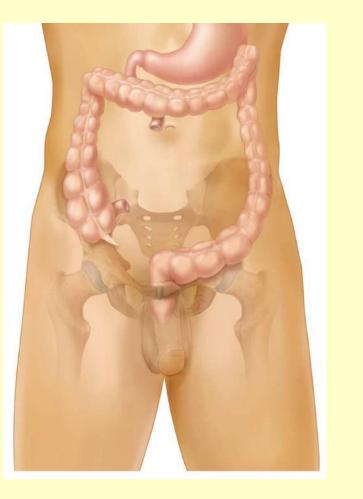
Cecum
Appendix
Ascending colon
Transverse colon
Descending colon
Sigmoid colon



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Rectum and Anus

- Rectum is area for storage of feces
- Leads to anus
 - External opening of alimentary canal
- Feces are evacuated
 Called defecation



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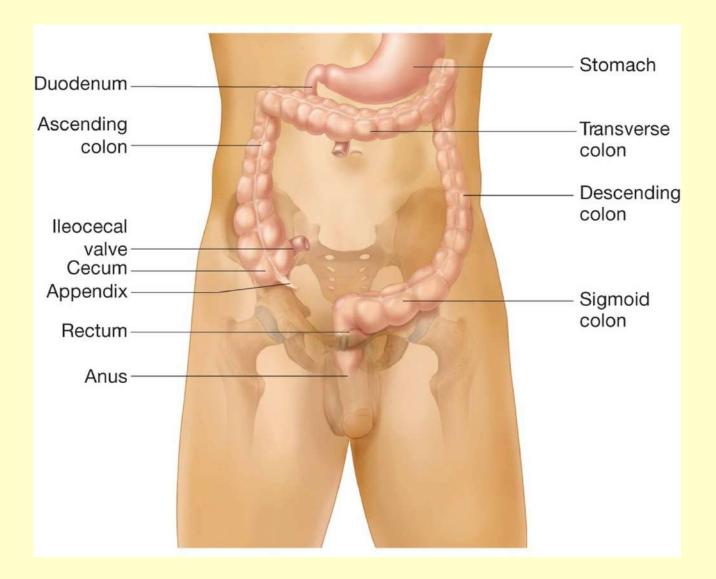
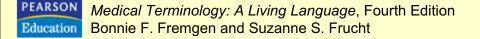


Figure 8.7 – The regions of the colon.



Accessory Organs

- Generally function by producing substances necessary for chemical breakdown of food
- Salivary glands
- Liver
- Gallbladder
- Pancreas

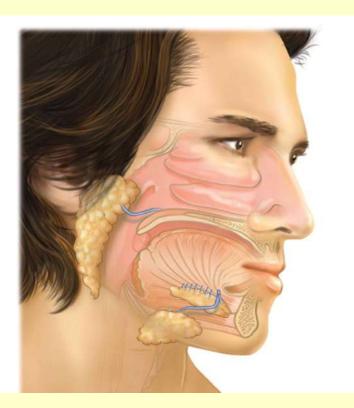
Salivary Glands

- Produce saliva
- Allows food to be swallowed without choking
- Saliva + food = bolus
- Contains amylase
 - Begins digestion of carbohydrates



Salivary Glands

Three pairs Parotid glands Sublingual glands Submandibular glands



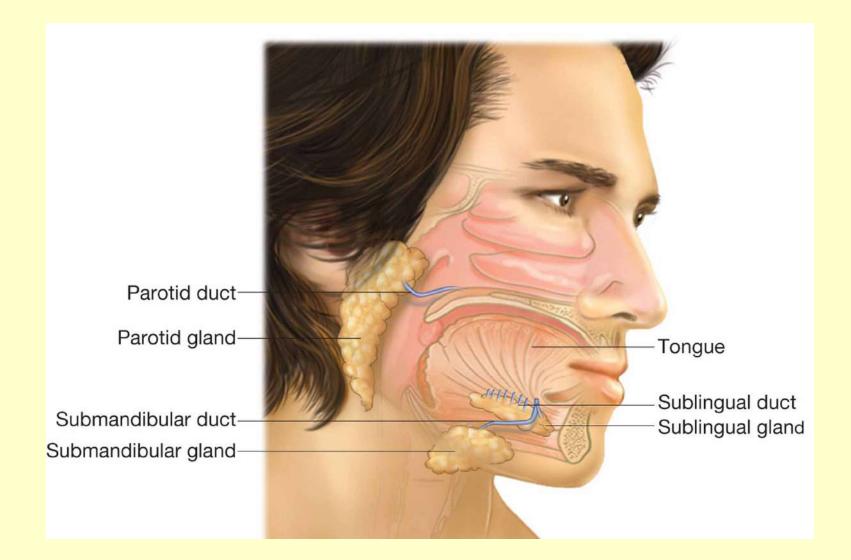
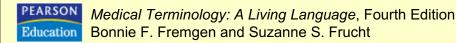


Figure 8.8 – The salivary glands, parotid, sublingual, and submandibular.





Located in right upper quadrant of abdomen

- Processes nutrients
- Detoxifies harmful substances
- Produces bile
 - Emulsification
 - Breaks up large fat globules into smaller droplets

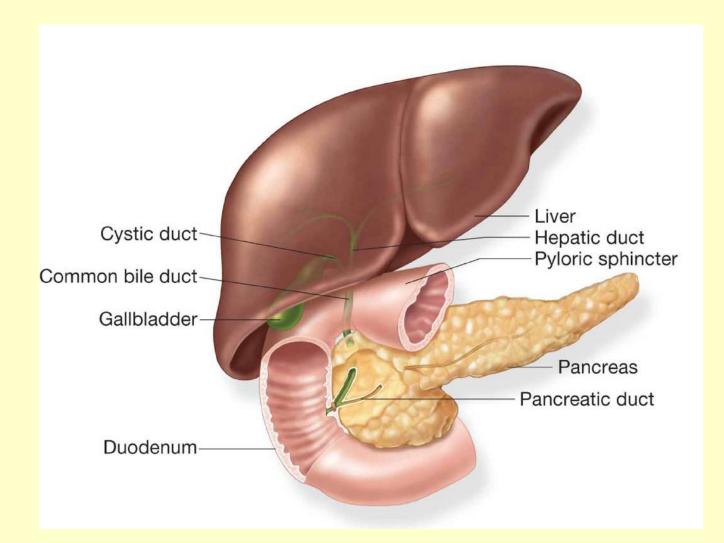
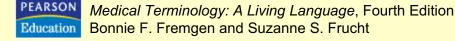
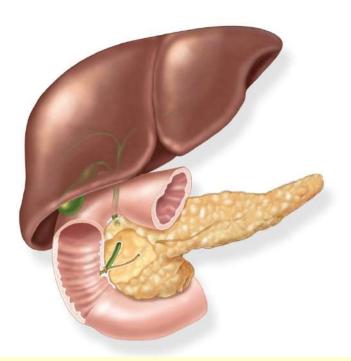


Figure 8.9 – The accessory organs of the digestive system: the liver, gallbladder, and pancreas.



Gallbladder

- Lies under liver
- Stores bile produced by liver
 - Hepatic duct
 - Cystic duct
- Common bile duct carries bile to duodenum



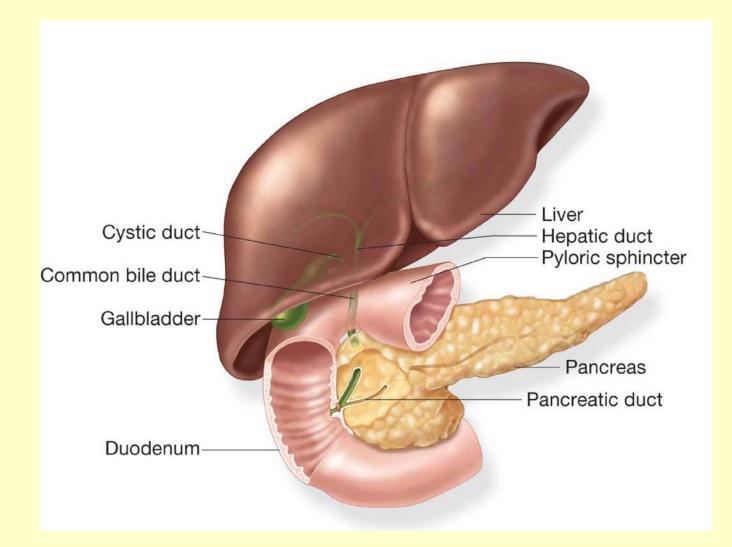
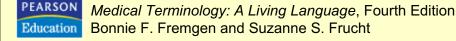
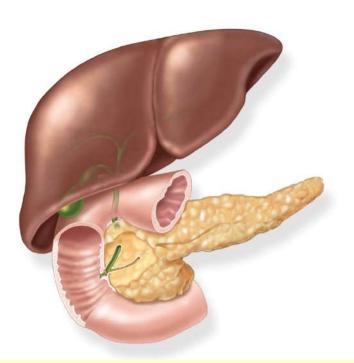


Figure 8.9 – The accessory organs of the digestive system: the liver, gallbladder, and pancreas.



Pancreas

- Digestive juices include:
 - Buffers neutralize acidic chyme
 - Enzymes digest carbohydrates, lipids, and proteins



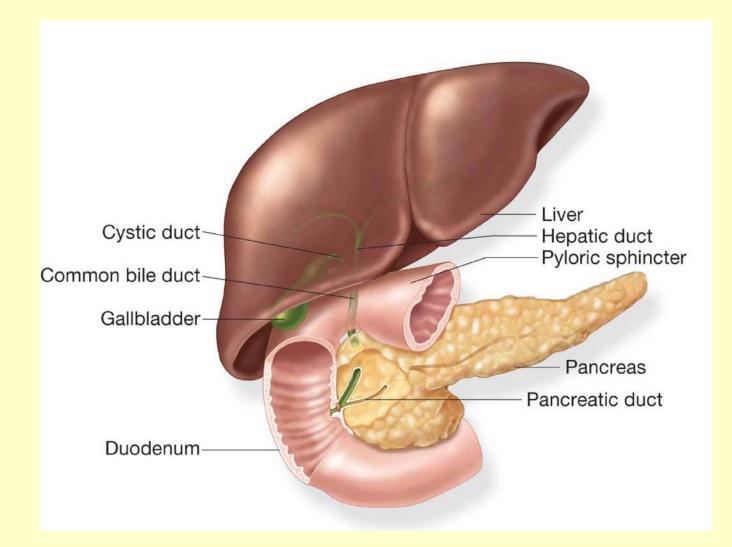
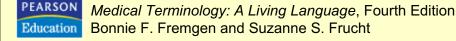
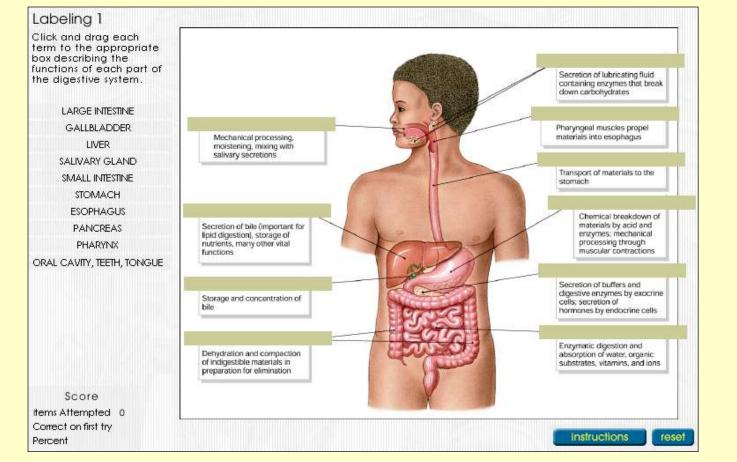


Figure 8.9 – The accessory organs of the digestive system: the liver, gallbladder, and pancreas.



Digestive System Exercise



Click here to review digestive system anatomy in a labeling activity.

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Word Building with an/o & bucc/o

–al	anal	pertaining to anus
–al	buccal	pertaining to cheek
labi/o –al	labiobuccal	pertaining to lips and cheeks

Word Building with append/o & appendic/o

-ectomy	appendectomy	surgical removal of appendix
–itis	appendicitis	inflammation of appendix
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Word Building with cholecyst/o & dent/o

-ectomy	cholecystectomy	removal of gallbladder
–gram	cholecystogram	X-ray record of gallbladder
–ic	cholecystic	pertaining to gallbladder
–algia	cholecystalgia	gallbladder pain
	dental	pertaining to teeth

–al	dental	pertaining to teeth
–algia	dentalgia	tooth pain

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Word Building with col/o & colon/o

-ectomy	colectomy	removal of colon
-ostomy	colostomy	new opening into colon
rect/o –al	colorectal	pertaining to colon & rectum

-scope	colonoscope	instrument to view colon
–ic	colonic	pertaining to colon

Word Building with duoden/o, enter/o, & esophag/o

–al	duodenal	pertaining to duodenum
• .		
–ic	enteric	pertaining to intestine
–itis	enteritis	inflammation of intestine
–eal	esophageal	pertaining to esophagus
-ectasis	esophagectasis	dilation of esophagus

Word Building with gastr/o

–algia	gastralgia	stomach pain
—ic	gastric	pertaining to stomach
enter/o –itis	gastroenteritis	inflammation of stomach
enter/o –ologist	gastroenterologist	stomach specialist
-malacia	gastromalacia	stomach softening

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Word Building with gastr/o

nas/o –ic	nasogastric	pertaining to nose & stomach
-ostomy	gastrostomy	new opening into stomach
-scope	gastroscope	instrument to view stomach
–itis	gastritis	inflammation of stomach
-ectomy	gastrectomy	surgical removal of stomach

Word Building with gingiv/o & gloss/o

–al	gingival	pertaining to gums
-itis	gingivitis	gum inflammation

–al	glossal	pertaining to tongue
hypo– –al	hypoglossal	pertaining to under tongue

Word Building with hepat/o & ile/o

–itis	hepatitis	inflammation of liver
–oma	hepatoma	liver tumor
—ic	hepatic	pertaining to liver

–al	ileal	pertaining to ileum
-ostomy	ileostomy	new opening into ileum

Word Building with jejun/o, lapar/o, & lingu/o

–al	jejunal	pertaining to jejunum
-otomy	laparotomy	incision into abdomen
-scope	laparoscope	instrument to view inside colon
subal	sublingual	pertaining to under the tongue
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Word Building with odont/o, or/o, & palat/o

orth/o –ic	orthodontic	pertaining to straight teeth
–al	oral	pertaining to mouth
-plasty	palatoplasty	surgical repair of palate
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Word Building with pancreat/o & pharyng/o

–itis	pancreatitis	inflammation of pancreas
–ic	pancreatic	pertaining to pancreas

–eal	pharyngeal	pertaining to pharynx
–plegia	pharyngoplegia	pharynx paralysis
–plasty	pharyngoplasty	surgical repair of pharynx

Word Building with proct/o & pylor/o

–ptosis	proctoptosis	drooping rectum & anus
-logist	proctologist	rectum & anus specialist
–pexy	proctopexy	surgical fixation of rectum & anus

—ic	pyloric	pertaining to pylorus

Word Building with rect/o, sialaden/o, & sigmoid/o

–al	rectal	pertaining to rectum		
—itis	sialadenitis	inflammation of salivary glands		
-scope	sigmoidoscope	instrument to view inside sigmoid colon		
–al	sigmoidal	pertaining to sigmoid colon		

Word Building with –emesis, –orexia, & -prandial

hemat/o	hematemesis	vomit blood
hyper-	hyperemesis	excessive vomiting
		· · · · · · · · · · · · · · · · · · ·
an–	anorexia	lack of appetite
dys–	dysorexia	abnormal appetite

post–	postprandial	pertaining to after a meal
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Word Building with –pepsia & –phagia

brady-	bradypepsia	slow digestion
dys–	dyspepsia	painful digestion

а—	aphagia	lack of eating
dys–	dysphagia	abnormal eating
poly–	polyphagia	too much eating

loss of appetite with other conditions; different from anorexia nervosa
collection of fluid in peritoneal cavity
inability to control defecation
dental appliance attached to adjacent teeth to replace missing teeth
loss of weight and wasting occurring during chronic disease



constipation	difficult or infrequent defecation
crown	artificial tooth to replace original crown
dental caries	decay of tooth due to bacterial infection; tooth cavity
dentistry	prevention, diagnosis, and treatment of conditions involving teeth, jaw, and mouth
denture	partial or complete set of artificial teeth
diarrhea	frequent, watery bowel movements

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emesis	vomiting
gastroenterology	diagnosis and treatment of diseases of the digestive system
hematochezia	passing bright red blood in stools
implant	prosthetic device in jaw to anchor a tooth
internal medicine	diagnosis and treatment of diseases of internal organs

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jaundice	yellow cast to skin; caused by deposit of bile pigment; often caused by liver disease
melena	passage of dark tarry stool, due to digested blood
nausea	urge to vomit
obesity	weight above healthy levels
orthodontics	correction of problems of tooth alignment

Orthodontics Video



Click here to view a video on orthodontics.

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periodontics	treating conditions of the gums and area around teeth
polyp	tumor with a pedicle (stem) attachment; found on mucous membranes
proctology	diagnosis and treatment of diseases of anus and rectum
pyrosis	stomach acid splashing into esophagus; heartburn
regurgitation	backflow of stomach contents into mouth



Oral Cavity Pathology

aphthous ulcers	ulcers in the mouth; commonly called canker sores
cleft lip	congenital anomaly where upper lip and jaw fail to fuse in the midline, leaving a gap
cleft palate	congenital anomaly where hard palate fails to fuse in the midline, leaving an opening into nasal cavity

Oral Cavity Pathology

herpes labialis	herpes simplex virus type 1 (HSV-1) infection; fever blisters or cold sores
periodontal disease	disease of supporting structures around the teeth; especially the gums; most common cause of tooth loss

Esophageal Pathology

esophageal	varicose veins in the esophagus;
varices	hemorrhaging occurs if rupture
gastroesophageal	acid from stomach flows backward
reflux disease	up into esophagus causing
(GERD)	inflammation and pain

GERD Video



Click here to view a video on gastroesophageal reflux disease.

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Stomach Pathology

gastric carcinoma	malignant tumor in stomach
hiatal hernia	protrusion of stomach through diaphragm into thoracic cavity; also called diaphragmatocele
peptic ulcer disease (PUD)	ulcer in the lower portion of esophagus, stomach, and/or duodenum; caused by high acid of stomach juices; may be a result of <i>Helicobacter pylori</i> infection

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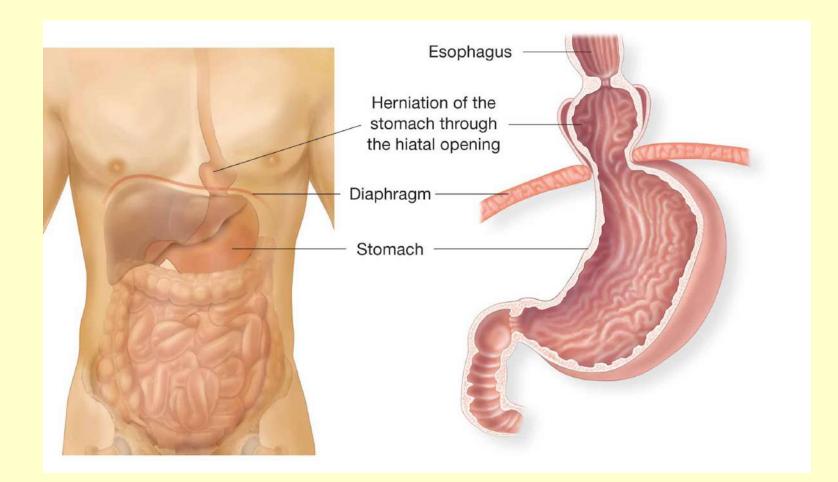
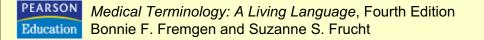


Figure 8.10 – A hiatal hernia or diaphragmatocele.



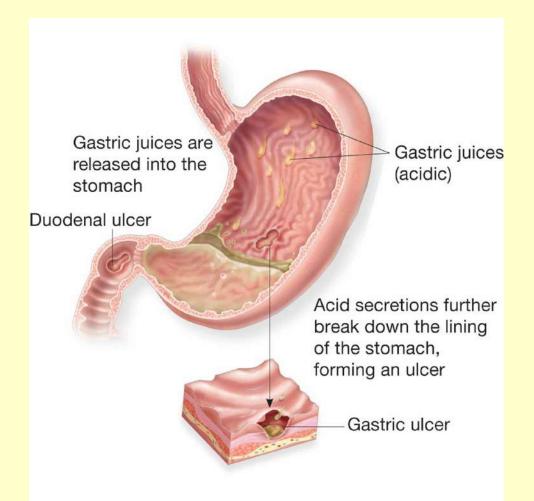


Figure 8.11A – The location and appearance of a peptic ulcer in both the stomach and the duodenum.

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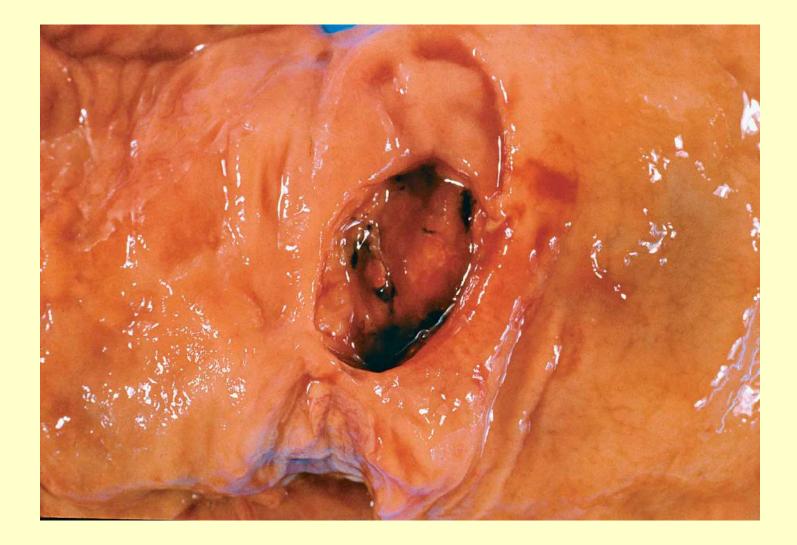


Figure 8.11B – Photomicrograph of a gastric ulcer. (Dr. E. Walker/Science Photo Library/Photo Researchers, Inc.)

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Small Intestine & Colon Pathology

anal fistula	abnormal passageway from surface directly into rectum; around anal opening
colorectal carcinoma	malignant tumor in the colon or rectum
Crohn's disease	chronic inflammatory bowel disease, primarily in ileum and/or colon; results in scarring; also called regional ileitis

Small Intestine & Colon Pathology

diverticulitis	inflammation of a diverticulum, an outpouching off the colon; results from food being trapped inside
diverticulosis	condition of having diverticula, may lead to diverticulitis
dysentery	diarrhea with mucus and blood, severe abdominal pain, and fever; caused by contaminated food or water

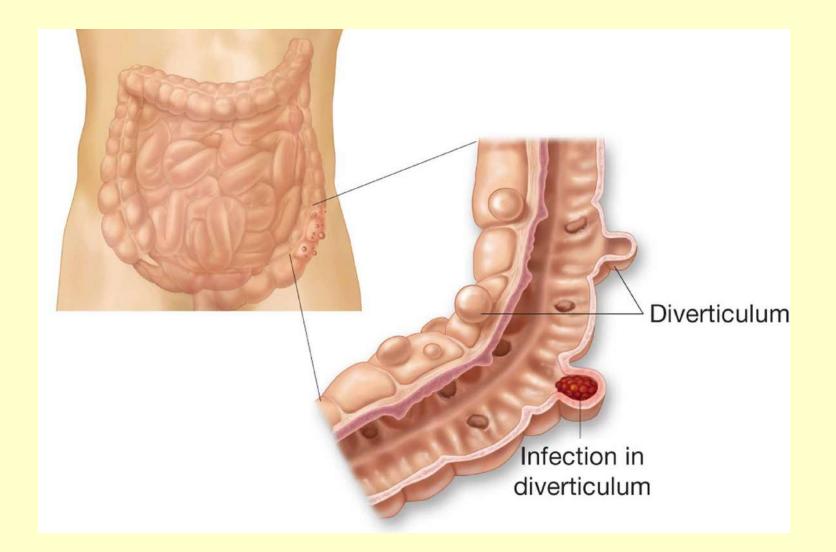


Figure 8.12 – Diverticulosis.

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Small Intestine & Colon Pathology

hemorrhoids	varicose veins in the anal region
ileus	severe abdominal pain, inability to defecate, abdominal distension; caused by intestinal blockage
inguinal hernia	protrusion of a loop of bowel through abdominal muscle and into groin region; may become incarcerated or strangulated if muscle pinches the loop of bowel

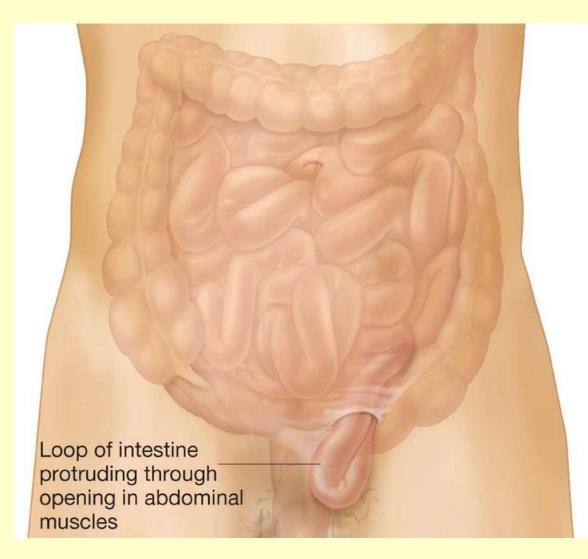


Figure 8.13 – An inguinal hernia.

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Small Intestine & Colon Pathology

intussusception	one part of intestine slips or telescopes into another section
irritable bowel syndrome (IBS)	disturbance in function of intestine for unknown reason; causes abdominal cramping and alternating diarrhea and constipation; also called functional bowel syndrome

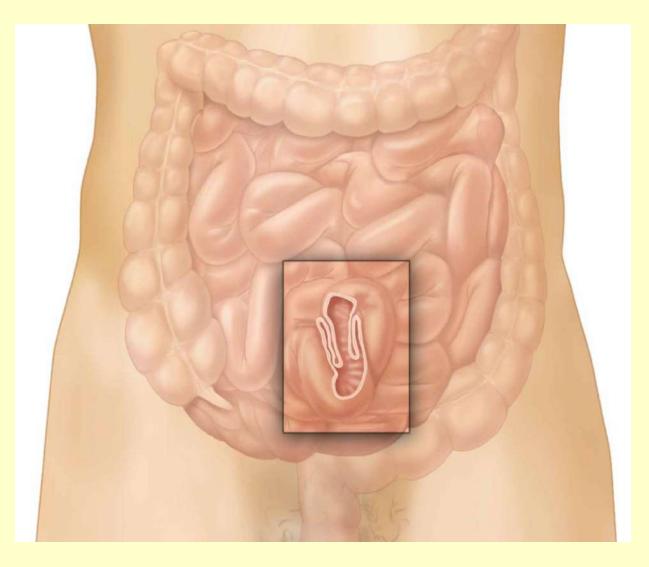


Figure 8.14 – Intussusception.

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Small Intestine & Colon Pathology

polyposis	having polyps growing on the mucous membrane of the colon; may become cancerous
ulcerative colitis	chronic inflammatory condition with numerous small ulcers on the lining of the colon; also called inflammatory bowel disease (IBD)
volvulus	bowel twists upon itself causing an obstruction

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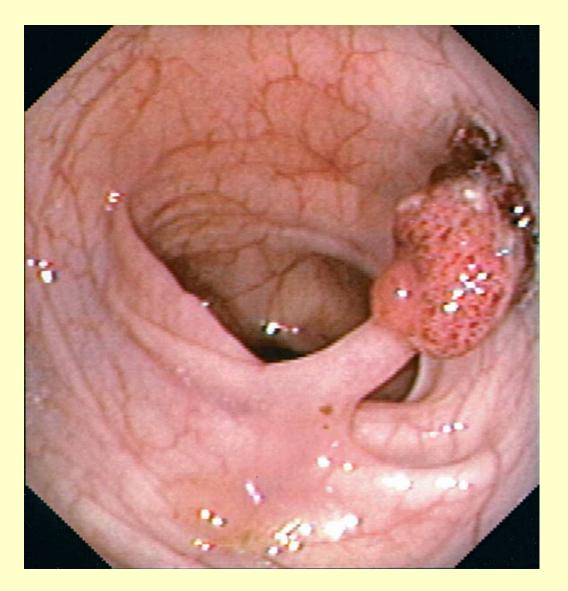


Figure 8.15 – Photograph showing a polyp in the colon. (ISM/Phototake NYC)

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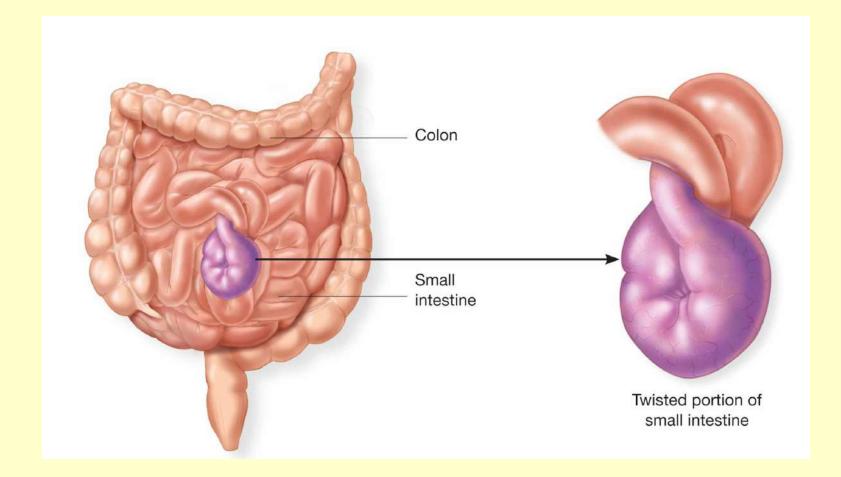


Figure 8.16 – Volvulus.

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Accessory Organ Pathology

cholecystitis	inflammation of gallbladder; commonly caused by gallstones
cholelithiasis	presence of gallstones; may or may not cause symptoms
cirrhosis	chronic liver disease due to liver failure
hepatitis	inflammation of liver; usually due to a viral infection

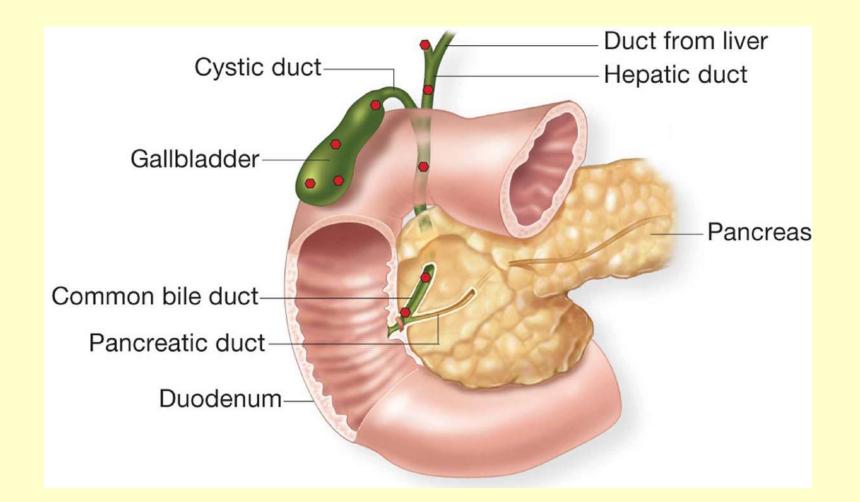


Figure 8.17A – Common sites for cholelithiasis.

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Figure 8.17B – A gallbladder specimen with multiple gallstones. (Martin Rotker/Phototake NYC)

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Clinical Laboratory Tests

alanine transaminase (ALT)	normal enzyme in the bloodstream; increased levels indicate liver disease
aspartate transaminase (AST)	normal enzyme in the bloodstream; increased levels indicate liver disease
fecal occult blood (FOBT)	examines feces for microscopic amounts of blood; also called hemoccult



Clinical Laboratory Tests

ova and parasites (O&P)	examination of feces for presence of parasites or their eggs
serum bilirubin	determines amount of bilirubin in bloodstream; indicates liver disease
stool culture	culture of feces to look for presence of pathogenic bacteria



Diagnostic Imaging

bite-wing X-ray	X-ray of teeth with film holder held in the teeth
intravenous cholecystography	X-ray of gallbladder and bile ducts after intravenous injection of dye
lower gastrointestinal series (lower GI)	X-ray of colon and rectum after barium dye injected via an enema; also called a barium enema (BE)



Figure 8.18 – Color enhanced X-ray of the colon taken during a barium enema.

(CNRI/Science Photo Library/Photo Researchers, Inc.)

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Diagnostic Imaging

percutaneous transhepatic cholangiography (PTC)	X-ray of liver and bile duct after dye is injected directly into liver
upper gastrointestinal series (upper GI)	X-ray of esophagus, stomach, and duodenum after swallowing barium; also called barium swallow

Endoscopic Procedures

esophagogastro- duodenoscopy (EGD)	using a scope to view inside the esophagus, stomach, and duodenum
endoscopic retrograde cholangiopan- creatography (ERCP)	visual examine inside hepatic duct, common bile duct, and pancreatic duct; scope is inserted through anus and worked backwards through gut

Endoscopic Procedures

colonoscopy	visual examination inside of colon and rectum using a colonoscope
gastroscopy	visual examination inside of stomach using a gastroscope
laparoscopy	visual examination inside of abdominal cavity using a laparoscope
sigmoidoscopy	visual examination inside of sigmoid colon using a sigmoidoscope

Sigmoidoscopy Video



Click here to view a video on sigmoidoscopy.

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Additional Diagnostic Procedures

paracentesis	insertion of needle into abdominal cavity to withdraw fluid



Dental Procedures

extraction	removing teeth
root canal	drilling out of pulp cavity of a tooth; used to save a tooth that is badly infected

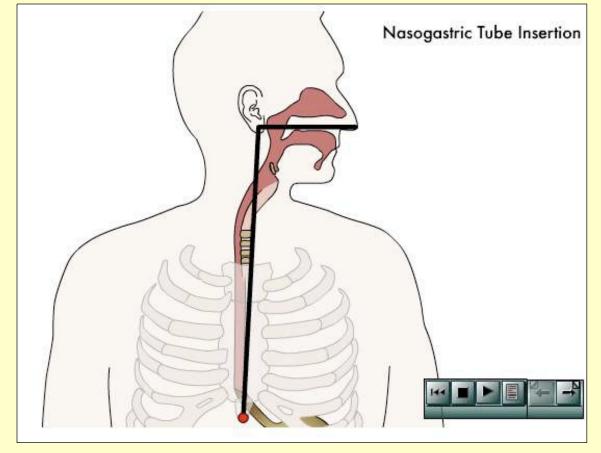
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Medical Procedures

gavage	placing liquid nourishment directly into stomach via a nasogastric tube
lavage	washing out stomach using a nasogastric tube
nasogastric intubation (NG tube)	flexible catheter inserted into nose and down esophagus into the stomach
total parenteral nutrition (TPN)	providing 100% of patient nutrition; used when patient is unable to eat



Nasogastric Intubation Animation



Click here to view an animation on nasogastric intubation.

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Dieticians Video

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Cabbage	0. 0	1.	Granberry	0+ 🔘	3+
Cartol	01 0	1.	Besps	0+ 🕥	1+
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Gelery	0+ ()	31 22 30	Lamon	p. ()	9+ (1)
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Garlio	0+ (C)	24	Orange	0. 📿	0+ 🔘
Green pepper	0+	4.0	Ререуа	0. (1)	1.
Lettuce	0. 3	19	Peach	04 C	34
Mushroom	9+ 💮	24	Pear	0+ 🕥	24
Olive	0. ()	**	Pinasppie	0- 🔘	1-1
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Spinach	0+ 0	1.	17 Nederlandsharme	A REAL PROPERTY.	

Click here to view a video on registered dieticians.

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between two organs; like joining together two sections of colon
surgical procedures to treat morbid obesity; like stomach stapling
surgical crushing of a gallstone in the common bile duct

colostomy	surgical creation of opening into some portion of colon through abdominal wall
diverticulectomy	surgical removal of diverticula
exploratory laparotomy	surgical procedure to examine the abdominal organs

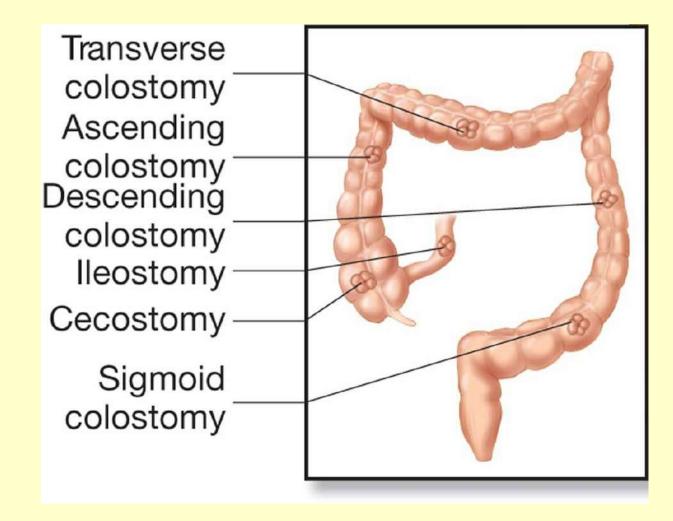


Figure 8.19A – The colon illustrating various –ostomy sites.

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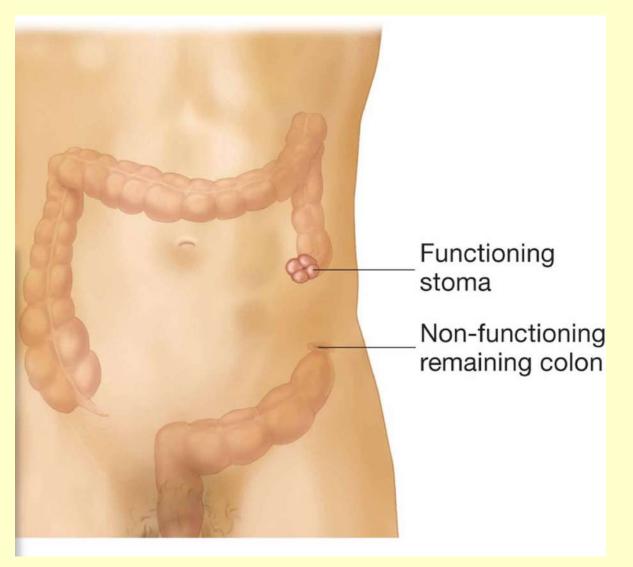
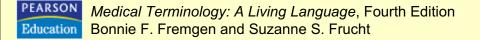


Figure 8.19B – Colostomy in the descending colon.



fistulectomy		removal of a fistula
g	astric stapling	procedure to close off large section of stomach with rows of staples; results in much smaller stomach
hemorrhoidectomy		surgical removal of hemorrhoids

hernioplasty	surgical repair of a hernia
laparoscopic cholecystectomy	surgical removal of gallbladder through a laparoscopic incision
liver transplant	implantation of a donor liver

Digestive System Pharmacology

anorexiant	suppresses appetite to treat obesity	Adipost, Obezine
antacid	neutralizes stomach acid	Tums, Maalox, Mylanta
antidiarrheal	used to control diarrhea	Imodium, Lomotil
antiemetic	treats nausea and vomiting	Compazine, Phenergan



Digestive System Pharmacology

emetic	induces vomiting	Ipecac syrup
H ₂ -receptor antagonist	blocks the production of stomach acid	Zantac, Pepcid, Tagament
laxative	stimulates a bowel movement	Senokot, Metamucil
proton pump inhibitor	blocks stomach's ability to secrete acid	Nexium, Prilosec

ас	before meals
ALT	alanine transaminase
AST	aspartate transaminase
Ва	barium
BE	barium enema
BM	bowel movement
BS	bowel sounds

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	CBD	common bile duct	
	EGD	esophagogastroduodenoscopy	
	ERCP	endoscopic retrograde cholangiopancreatography	
	FOBT	fecal occult blood test	
	GB	gallbladder	
	GERD	gastroesophageal reflux disease	
	GI	gastrointestinal	



HAV	hepatitis A virus
HBV	hepatitis B virus
HCI	hydrochloric acid
HCV	hepatitis C virus
HDV	hepatitis D virus
HEV	hepatitis E virus
HSV-1	herpes simplex virus type 1

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IBD	inflammatory bowel disease
IBS	irritable bowel syndrome
IVC	intravenous cholangiography
NG	nasogastric
NPO	nothing by mouth
n&v	nausea and vomiting
O&P	ova and parasites

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рс	after meals
PO	by mouth
рр	postprandial
PTC	percutaneous transhepatic cholangiography
PUD	peptic ulcer disease
TPN	total parenteral nutrition
UGI	upper gastrointestinal series

