

CHAPTER 8

DIGESTIVE SYSTEM

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MEDIA LIBRARY

Student DVD-ROM

- Twelve different interactive learning games
- Flash card generator
- Audio Glossary
- Professional Profile video—Dental Care
- Body Rhythms
- Terminology Translator

Companion Website

- Multiple Choice, True/False, and Fill-in-the-Blank practice questions
- Labeling exercises
- Case study
- Additional Professional Profile information

- *New York Times* link for research into specific pathologies
- Web Destination activities
- Audio Glossary
- Link to VangoNotes
- Link to drug updates

IRDVD

- Animations
 - 3D interactive animation of digestive system anatomy
 - Nasogastric intubation
- Drag-and-drop labeling activity for Digestive system anatomy

- Videos
 - Orthodontics
 - Gastroesophageal reflux disease
 - Sigmoidoscopy
 - Registered dietician
- Digital library of all figures from text chapter, labeled and unlabeled
- Test bank with 200 objective questions per chapter plus two short answer questions
- 20 classroom response questions
- PowerPoint presentation for classroom or online utilization

OBJECTIVE 1

Identify and define the combining forms and suffixes introduced in this chapter.

Text page: 242; PowerPoint slides: 7–12

LECTURE NOTES

Combining Forms

an/o	anus
append/o	appendix
appendic/o	appendix
bar/o	weight
bucc/o	cheek
cec/o	cecum
chol/e	bile, gall
cholangi/o	bile duct
cholecyst/o	gallbladder
choledoch/o	common bile duct
col/o	colon
colon/o	colon
dent/o	tooth
duoden/o	duodenum
enter/o	small intestine
esophag/o	esophagus
gastr/o	stomach
gingiv/o	gums
gloss/o	tongue
hepat/o	liver
ile/o	ileum
jejun/o	jejunum
labi/o	lip
lapar/o	abdomen
lingu/o	tongue
lith/o	stone
odont/o	tooth
or/o	mouth
palat/o	palate
pancreat/o	pancreas
pharyng/o	throat, pharynx

TEACHING STRATEGIES

- Encourage/remind students to add new word parts to their flash cards.

Medical Terminology Bee

- Create PowerPoint flash cards of new combining forms and suffixes presented in this chapter; have all students stand and then define word part; if student is correct, he or she remains standing; if student is wrong, he or she sits down; continue until only one student is standing.

LEARNING ACTIVITIES

Worksheet 8A

- New Combining Form and Suffix Handout

Worksheet 8B

- Medical Term Analysis

Quiz 8A

- May be used as a worksheet

Text

- Practice Exercises

Student DVD-ROM

- Learning games
- Make flash cards

CW

- Practice questions

ASSESSMENTS

Quiz 8A—New Word Parts Quiz

Test Bank—Fill-in-the-Blank questions

proct/o	anus and rectum
pylor/o	pylorus
rect/o	rectum
sialaden/o	salivary gland
sigmoid/o	sigmoid colon
Suffixes	
-emesis	vomit
-lithiasis	condition of stones
-orexia	appetite
-pepsia	digestion
-phagia	eat, swallow
-prandial	pertaining to a meal
-tripsy	surgical crushing

OBJECTIVE 2

Correctly spell and pronounce medical terms and major anatomical structures relating to the digestive system.

LECTURE NOTES

Pronunciation for medical terms in this chapter can be found:

- In parentheses following key terms
- In the Audio Glossary on Student DVD-ROM
- In the Audio Glossary at Companion Website

TEACHING STRATEGIES

Emphasize to students:

- Importance of correctly spelling terms.
- How sounding out terms can assist in learning how to spell the terms.

Say each new term in class and have students repeat it.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension of spelling strategies.

LEARNING ACTIVITIES

Worksheet 8B

- Medical Term Analysis

Terminology Checklist

- Can be used to practice pronunciation using the Audio Glossary as a reference

Text

- Practice Exercises

Flash cards

- Look at the definition and write out/pronounce terms

Student DVD-ROM

- Audio Glossary
- Spelling Challenge game
- Crossword and Word Search puzzles

ASSESSMENTS

Quiz 8B—Spelling Quiz

Suggested terms:

1. gastrointestinal
2. periodontal
3. oropharynx
4. peristalsis
5. sphincters
6. sialadenitis
7. anorexia
8. cachexia
9. hematochezia
10. diverticulosis
11. dysentery
12. intussusception
13. volvulus
14. polyposis
15. cholelithiasis
16. cholangiography
17. paracentesis
18. hemorrhoidectomy
19. choledocholithotripsy
20. fistulectomy

Test Bank—questions

OBJECTIVE 3

Locate and describe the major organs of the digestive system and their functions.

Text pages: 244–250; PowerPoint slides: 13–24; 34–47

LECTURE NOTES

- Also known as **gastrointestinal (GI) system**; includes approximately 30 feet of continuous muscular tube, called **gut, alimentary canal, or gastrointestinal tract**; stretches between mouth and anus; organs in system are different sections of tube
- Beginning at mouth and continuing to anus, organs are **oral cavity, pharynx, esophagus, stomach, small intestines, and colon**
- **Accessory organs** of digestion—organs that participate in digestion process, but not part of continuous alimentary canal; connected to gut by duct; **liver, pancreas, gallbladder, and salivary glands**
- Three main functions: digesting food, absorbing nutrients, and eliminating waste
- Digestion—physical and chemical breakdown of large food particles into simple nutrient molecules like glucose, triglycerides, and amino acids
- Absorption—simple nutrient molecules are absorbed from intestines and circulated throughout body by cardiovascular system; used for growth and repair of organs and tissues
- Elimination—food that cannot be digested or absorbed by body is eliminated from gastrointestinal system as solid waste

TEACHING STRATEGIES

Visual Aids

- Use full-size anatomical charts and models to illustrate digestive system organs

IRDVD

- See PowerPoint presentation on the Instructor's Resource DVD for a 3D animation of digestive system organs.
- See PowerPoint presentation on the Instructor's Resource DVD for a drag-and-drop digestive system anatomy activity; display on screen and have students discuss and place labels during class.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 8C

- Chapter Review

Oral Cavity

- Digestion begins when food enters mouth and is mechanically broken up by chewing movements of **teeth**
- Muscular **tongue** moves food within mouth and mixes it with **saliva**; see ■ Figure 8.1
- Saliva contains digestive enzymes to break down carbohydrates and slippery lubricants to make food easier to swallow
- **Taste buds**, on surface of tongue, can distinguish bitter, sweet, sour, and salty flavors in food
- Roof of oral cavity is known as **palate** and is subdivided into hard palate, bony anterior portion, and soft palate, flexible posterior portion
- Hanging down from posterior edge of soft palate is **uvula**; serves two important functions; first, it has role in speech production; second, it is location of gag reflex; this reflex is stimulated when food enters throat without swallowing (for example, laughing with food in your mouth); important because swallowing also results in epiglottis covering larynx to prevent food from entering lungs (see ■ Figure 8.2)
- **Cheeks** form lateral walls, and **lips** are anterior opening
- Entire oral cavity is lined with mucous membrane; portion of this mucous membrane forms **gums**, or **gingiva**, which combine with connective tissue to cover jaw bone and seal off teeth in their bony sockets

Pharynx

- When food swallowed, it enters **oropharynx** and then **laryngopharynx**
- See ■ Figure 8.2)
- Air is also traveling through these portions of pharynx
- **Epiglottis** is cartilaginous flap that folds down to cover larynx and trachea so that food is prevented from entering respiratory tract and instead continues into esophagus

Esophagus

- Muscular tube about 10 inches long in adults
- Food entering esophagus is carried through thoracic cavity and diaphragm and into abdominal cavity where it enters stomach
- See ■ Figure 8.5
- Food is propelled along esophagus by wave-like muscular contractions called **peristalsis**; peristalsis works to push food through entire gastrointestinal tract

Stomach

- J-shaped muscular organ that acts as bag or sac to collect and churn food with digestive juices
- Composed of three parts: **fundus** or upper region, **body** or main portion, and **antrum** or lower region
- See ■ Figure 8.5
- Folds in lining of stomach are called **rugae**; when stomach fills with food, rugae stretch out and disappear
- **Hydrochloric acid** (HCl) is secreted by glands in mucous membrane lining of stomach; food mixes with hydrochloric acid and other gastric juices to form liquid mixture called **chyme**, which then passes through remaining portion of digestive system

Text

- Labeling exercises 8.A & 8.B1
- Practice Exercises

Student DVD-ROM

- Labeling exercise
- Learning games

CW

- Labeling exercise
- Practice questions

Quiz 8C

- May be used as a worksheet

ASSESSMENTS

Quiz 8C—Labeling Diagram

Test Bank—questions

- Entry into and exit from stomach is controlled by muscular valves called **sphincters**; these valves open and close to ensure food can only move forward down gut tube; **cardiac sphincter**, named for its proximity to heart, is located between esophagus and fundus; also called **lower esophageal sphincter** (LES), it keeps food from flowing backward into esophagus; antrum tapers off into **pyloric sphincter**, which regulates passage of food into small intestine; small amount of chyme is allowed to enter small intestine with each opening of sphincter for two important reasons; first, small intestine is much narrower than stomach and cannot hold as much as stomach can; second, chyme is highly acidic and must be thoroughly neutralized as it leaves stomach

Small Intestine

- Also called small bowel
- Major site of digestion and absorption of nutrients from food
- Located between pyloric sphincter and colon; see ■ Figure 8.6
- Has three sections: **duodenum**, **jejunum**, and **ileum**
 1. Duodenum—extends from pyloric sphincter to jejunum; is about 10 to 12 inches long; digestion is completed in duodenum after liquid chyme from stomach is mixed with digestive juices from pancreas and gallbladder
 2. Jejunum—middle portion; extends from duodenum to ileum and is about 8 feet long
 3. Ileum—last portion of small intestine and extends from jejunum to colon; 12 feet in length; connects to colon with a sphincter called **ileocecal valve**

Colon

- Fluid that remains after complete digestion and absorption of nutrients in small intestine enters colon or large intestine; see ■ Figure 8.7; most of this fluid is water, which is reabsorbed into body; material that remains after absorption is solid waste called **feces** (or stool); evacuated in bowel movements (BM)
- Approximately 5 feet long and extends from ileocecal valve of small intestine to **anus**
- **Cecum**—pouch or sac-like area in first two to three inches at beginning of colon
- **Vermiform appendix**—small worm-shaped outgrowth at end of cecum
- Remaining colon consists of **ascending colon**, **transverse colon**, **descending colon**, and **sigmoid colon**; ascending colon on right side extends from cecum to lower border of liver; transverse colon begins where ascending colon leaves off and moves horizontally across upper abdomen toward spleen; descending colon then travels down left side of body to where sigmoid colon begins; sigmoid colon curves in S-shape back to midline of body and ends at **rectum**
- Rectum—where feces is stored; leads into anus, which contains **anal sphincter**; sphincter consists of rings of voluntary and involuntary muscles to control evacuation of feces or **defecation**

OBJECTIVE 4

Describe the function of the accessory organs of the digestive system.

Text pages: 250–251; PowerPoint slides: 48–58

LECTURE NOTES

- Accessory organs of digestive system are salivary glands, liver, pancreas, and gallbladder
- Function by producing digestive fluids and enzymes necessary for chemical breakdown of food
- Each is attached to gut tube by duct

Salivary Glands

- In oral cavity
- Produce saliva; watery and slick fluid allows food to be swallowed with less danger of choking; mixed with food in mouth forms **bolus** (chewed food that is ready to swallow); also contains digestive enzyme **amylase** that begins digestion of carbohydrates
- Three pairs of salivary glands:
 1. **Parotid glands** in front of ears
 2. **Submandibular glands** in floor of mouth
 3. **Sublingual glands** in floor of mouth
- See ■ Figure 8.8

Liver

- Large organ located in right upper quadrant of abdomen
- Has several functions, including processing nutrients absorbed by intestines, detoxifying harmful substances in body, and producing **bile**; bile is important for digestion of fats and lipids because it breaks up large fat globules into much smaller droplets, making them easier to digest in watery environment inside intestines; process is called **emulsification**
- See ■ Figure 8.9

Gallbladder

- Bile produced by liver stored in gallbladder (GB)
- As liver produces bile, it travels down **hepatic duct** and up **cystic duct** into gallbladder (see ■ Figure 8.9)
- In response to fat in chyme, muscular wall of gallbladder contracts and sends bile back down cystic duct and into **common bile duct** (CBD), which carries bile to duodenum where it is able to emulsify fat in chyme

Pancreas

- Connected to duodenum by **pancreatic duct**, see ■ Figure 8.9
- Produces two important secretions for digestion—**buffers** and **pancreatic enzymes**
- Buffers neutralize acidic chyme that has just left stomach
- Pancreatic enzymes chemically digest carbohydrates, fats, and proteins
- Also endocrine gland that produces hormones insulin and glucagon; plays role in regulating level of glucose in blood and is discussed in further detail in Chapter 11

TEACHING STRATEGIES

Visual Aids

- Use full-size anatomical charts and models to illustrate accessory organs of the digestive system.

IRDVD

- See PowerPoint presentation on the Instructor's Resource DVD for a drag-and-drop digestive system anatomy activity; display on screen and have students discuss and place labels during class.
- See PowerPoint presentation on the Instructor's Resource DVD for a 3D animation of digestive system organs.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 8C

- Chapter Review

Text

- Labeling Exercise 8.B2
- Practice Exercises

Student DVD-ROM

- Labeling exercise
- Learning games

CW

- Labeling exercise
- Practice questions

Quiz 8D

- May be used as a worksheet

ASSESSMENTS

Quiz 8D—Labeling Diagram

Test Bank—questions

OBJECTIVE 5

Identify the shape and function of each type of tooth.

Text pages: 246–247; PowerPoint slides: 25–33

LECTURE NOTES

- Teeth are important part of first stage of digestion
- Teeth in front of mouth bite, tear, or cut food into small pieces; include **incisors** and **cuspid**s or **canines**; see ■ Figure 8.3
- Posterior teeth grind and crush food into even finer pieces; include **bicuspid**s, or **pre-molars**, and **molars**
- Tooth subdivided into **crown** and **root**; crown is part of tooth visible above gum line; root is below gum line; root anchored in bony socket of jaw by **cementum** and tiny **periodontal ligaments**
- Crown of tooth is covered by layer of **enamel**, hardest substance in body; under enamel layer is **dentin**, substance that makes up main bulk of tooth; hollow interior of tooth is called **pulp cavity** in crown and **root canal** in root; these cavities contain soft tissue made up of blood vessels, nerves, and lymph vessels; see ■ Figure 8.4
- Humans have two sets of teeth; first set, often referred to as baby teeth, are **deciduous teeth**; 20 teeth in this set; erupt through gums between ages of 6 and 28 months; at approximately 6 years of age, these teeth begin to fall out and are replaced by 32 **permanent teeth**; replacement process continues until about 18 to 20 years of age

TEACHING STRATEGIES

Visual Aids

- Use full-size anatomical charts and models to illustrate accessory organs of the digestive system.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

Guest Speaker

- Invite a dentist or dental hygienist to speak to the class about tooth structure and dental procedures; professionals may be able to bring dental X-rays to share with the class

LEARNING ACTIVITIES

Worksheet 8C

- Chapter Review

Text

- Practice Exercises

Student DVD-ROM

- Learning games

CW

- Practice questions

ASSESSMENTS

Quiz 8G—Chapter Review

Test Bank—questions

OBJECTIVE 6

Build and define digestive system medical terms from word parts.

Text pages: 252–254; PowerPoint slides: 59–74

LECTURE NOTES

Combining

Form	Medical Term	Definition
an/o	anal	pertaining to anus
append/o	appendectomy	removal of appendix
appendic/o	appendicitis	inflammation of appendix
bucc/o	buccal	pertaining to cheeks
	buccolabial	pertaining to cheeks and lips
cholecyst/o	cholecystectomy	removal of gallbladder

TEACHING STRATEGIES

- Reinforce how many digestive system terms can be constructed from word parts.
- Read aloud chapter terms that are made up of word parts; have students identify parts and define terms, either aloud or individually on paper.

	cholecystogram	record of gallbladder
	cholecystic	pertaining to gallbladder
	cholecystalgia	gallbladder pain
col/o	colectomy	removal of colon
	colostomy	create an opening in colon
	colorectal	pertaining to colon and rectum
colon/o	colonoscope	instrument to view colon
	colonic	pertaining to colon
dent/o	dental	pertaining to teeth
	dentalgia	tooth pain
duoden/o	duodenal	pertaining to duodenum
enter/o	enteric	pertaining to small intestine
	enteritis	small intestine inflammation
esophag/o	esophageal	pertaining to esophagus
	esophagectasis	dilated esophagus
gastr/o	gastralgia	stomach pain
	gastric	pertaining to stomach
	gastroenteritis	inflammation of stomach and small intestine
	gastroenterologist	specialist in stomach and small intestine
	gastromalacia	softening of stomach
	nasogastric	pertaining to nose and stomach
	gastrostomy	create an opening in stomach
	gastroscope	instrument to view inside stomach
	gastritis	stomach inflammation
	gastreectomy	removal of stomach
gingiv/o	gingival	pertaining to gums
	gingivitis	inflammation of gums
gloss/o	glossal	pertaining to tongue
	hypoglossal	pertaining to under tongue
hepat/o	hepatitis	inflammation of liver
	hepatoma	liver tumor
	hepatic	pertaining to liver
ile/o	ileal	pertaining to ileum
	ileostomy	create an opening in ileum
jejun/o	jejunal	pertaining to jejunum
lapar/o	laparotomy	incision into abdomen
	laparoscope	instrument to view inside the abdomen
lingu/o	sublingual	pertaining to under tongue
odont/o	orthodontic	pertaining to straight teeth
	periodontic	pertaining to around teeth
or/o	oral	pertaining to mouth
palat/o	palatoplasty	surgical repair of palate
pancreat/o	pancreatitis	inflammation of pancreas
	pancreatic	pertaining to pancreas
pharyng/o	pharyngeal	pertaining to throat
	pharyngoplegia	paralysis of throat
	pharyngoplasty	surgical repair of throat
proct/o	proctoptosis	drooping rectum and anus
	proctologist	specialist in rectum and anus

- Write sentences on the board using common words; have students substitute correct medical terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 8A

- New Combining Forms and Suffixes Handout

Worksheet 8B

- Medical Term Analysis

Worksheet 8C

- Chapter Review

Quiz 8E

- May be used as a worksheet

Text

- Practice Exercises
- Terminology Checklist

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions

ASSESSMENTS

Quiz 8E—Word Building Quiz

Quiz 8G—Chapter Review

Test Bank—questions

	proctopexy	surgical fixation of rectum and anus
pylor/o	pyloric	pertaining to pylorus
rect/o	rectal	pertaining to rectum
sialaden/o	sialadenitis	inflammation of salivary gland
sigmoid/o	sigmoidoscope	instrument to view inside sigmoid colon
	sigmoidal	pertaining to sigmoid colon
Suffix	Medical Term	Definition
-emesis	hematemesis	vomiting blood
	hyperemesis	excessive vomiting
-orexia	anorexia	absence of appetite
	dysorexia	abnormal appetite
-pepsia	bradypepsia	slow digestion
	dyspepsia	difficult digestion
-phagia	aphagia	unable to swallow/eat
	dysphagia	difficulty swallowing/eating
	polyphagia	many (excessive) eating
-prandial	postprandial	after a meal

OBJECTIVE 7

Identify and define digestive system vocabulary terms.

Text pages: 254–255; PowerPoint slides: 75–80

LECTURE NOTES

Term	Definition
anorexia	general term meaning loss of appetite that may accompany other conditions; sometimes used to refer to <i>anorexia nervosa</i> , which is personality disorder involving refusal to eat
ascites	collection or accumulation of fluid in peritoneal cavity
bowel incontinence	inability to control defecation
bridge	dental appliance attached to adjacent teeth for support to replace missing teeth
cachexia	loss of weight and generalized wasting that occurs during chronic disease
constipation	experiencing difficulty in defecation or infrequent defecation
crown	artificial covering for tooth created to replace original crown
dental caries	gradual decay and disintegration of teeth caused by bacteria; may lead to abscessed teeth; commonly called a <i>tooth cavity</i>

TEACHING STRATEGIES

- Write sentences on the board using common words; have students substitute correct medical terms.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Pathology, Diagnostic, and Therapeutic terms.

IRDVD

- See PowerPoint presentation on the Instructor's Resource DVD for a video on the topic of orthodontics.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 8C

- Chapter Review

dentistry	branch of healthcare involved with prevention, diagnosis, and treatment of conditions involving teeth, jaw, and mouth; dentistry is practiced by <i>dentist</i> or <i>oral surgeon</i>
denture	partial or complete set of artificial teeth that are set in plastic materials; acts as substitute for natural teeth and related structures
diarrhea	passing of frequent, watery bowel movements; usually accompanies gastrointestinal (GI) disorders
emesis	vomiting
gastroenterology	branch of medicine involved in diagnosis and treatment of diseases and disorders of digestive system; physician is <i>gastroenterologist</i>
hematochezia	passing bright red blood in stools
implant	prosthetic device placed in jaw to which tooth or denture may be anchored
internal medicine	branch of medicine involving diagnosis and treatment of diseases and conditions of internal organs such as digestive system; physician is an <i>internist</i>
jaundice	yellow cast to skin, mucous membranes, and whites of eyes caused by deposit of bile pigment from too much bilirubin in blood; bilirubin is waste product produced when worn-out red blood cells are broken down; may be symptom of disorder such as gallstones blocking common bile duct or carcinoma of the liver
melena	passage of dark tarry stools; color is result of digestive enzymes working on blood in gastrointestinal tract
nausea	urge to vomit
obesity	body weight above healthy level; person 100 pounds overweight has <i>morbid obesity</i>
orthodontics	branch of dentistry concerned with correction of problems with tooth alignment; specialist is <i>orthodontist</i>
periodontics	branch of dentistry concerned with treating conditions involving gums and tissues surrounding teeth; specialist is <i>periodontist</i>
polyp	small tumor with pedicle or stem attachment; commonly found on mucous membranes such as lining of colon or nasal cavity; colon polyps may be pre-cancerous
proctology	branch of medicine involved in diagnosis and treatment of diseases and disorders of anus and rectum; physician is <i>proctologist</i>
pyrosis	pain and burning sensation usually caused by stomach acid splashing up into esophagus; commonly called <i>heartburn</i>
regurgitation	return of fluids and solids from stomach into mouth

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study

ASSESSMENTS

Quiz 8G—Chapter Review

Test Bank—questions

OBJECTIVE 8

Identify and define selected digestive system pathology terms.

Text pages: 256–260; PowerPoint slides: 81–101

LECTURE NOTES

Term

Oral Cavity

aphthous ulcers

cleft lip

cleft palate

herpes labialis

periodontal disease

Esophagus

esophageal varices

gastroesophageal reflux disease (GERD)

Stomach

gastric carcinoma

hiatal hernia

peptic ulcer disease (PUD)

Small Intestine and Colon

anal fistula

colorectal carcinoma

Crohn's disease

Definition

painful ulcers in mouth of unknown cause; commonly called *canker sores*

congenital anomaly in which upper lip and jaw bone fail to fuse in midline leaving open gap; often seen along with cleft palate; corrected with surgery

congenital anomaly in which roof of mouth has split or fissure; corrected with surgery

infection of lip by herpes simplex virus type 1 (HSV-1); also called *fever blisters* or *cold sores*

disease of supporting structures of teeth, including gums and bones; the most common cause of tooth loss

enlarged and swollen varicose veins in lower end of esophagus; if rupture, serious hemorrhage results; often related to liver disease

acid from stomach flows backward up into esophagus causing inflammation and pain

cancerous tumor in stomach

protrusion of stomach through diaphragm and extending into thoracic cavity; gastroesophageal reflux disease is a common symptom; also called a *diaphragmatocele*

ulcer occurring in lower portion of esophagus, stomach, and/or duodenum; caused by acid of gastric juices; initial damage to protective lining of stomach may be caused by *Helicobacter pylori* (*H. pylori*) bacterial infection; if ulcer extends all way through wall of stomach, it is called *perforated ulcer*, which requires immediate surgery to repair

abnormal tube-like passage from surface around anal opening directly into rectum

cancerous tumor along length of colon and rectum

form of chronic inflammatory bowel disease affecting primarily ileum and/or colon; also called *regional ileitis*; autoimmune condition affects all layers of bowel wall and results in scarring and thickening of gut wall

TEACHING STRATEGIES

- Select two students to do 5-minute presentations of their Internet research in class.
- Write sentences on the board using common words; have students substitute correct medical terms.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Vocabulary, Diagnostic, and Therapeutic terms.

IRDVD

- See PowerPoint presentation on the Instructor's Resource DVD for a video on the topic of gastrointestinal reflux disease.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Internet Research

- Have students select a specific pathology and use Internet resources to research its symptoms, diagnosis, and treatments.

Worksheet 8C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study
- Web Destination activities on peptic ulcer and gallstones
- *New York Times* link for research into specific pathologies

ASSESSMENTS

Quiz 8G—Chapter Review

Test Bank—questions

diverticulitis	inflammation of <i>diverticulum</i> (an out-pouching off the gut), especially in the colon; inflammation often results when food becomes trapped within pouch
diverticulosis	condition of having diverticula (outpouches off the gut); may lead to <i>diverticulitis</i> if one becomes inflamed
dysentery	disease characterized by diarrhea, often with mucus and blood, severe abdominal pain, fever, and dehydration; caused by ingesting food or water contaminated by chemicals, bacteria, protozoans, or parasites
hemorrhoids	varicose veins in rectum
ileus	severe abdominal pain, inability to pass stools, vomiting, and abdominal distension as a result of intestinal blockage; may require surgery to reverse blockage
inguinal hernia	hernia or protrusion of loop of small intestine into inguinal (groin) region through weak spot in abdominal muscle wall that develops into hole; may become <i>incarcerated</i> or <i>strangulated</i> if muscle tightens down around loop of intestines and cuts off blood flow
intussusception	result of intestine slipping or telescoping into another section of intestine just below it; more common in children
irritable bowel syndrome (IBS)	disturbance in functions of intestine from unknown causes; symptoms include abdominal discomfort and alteration in bowel activity; also called <i>spastic colon</i> or <i>functional bowel syndrome</i>
polyposis	small tumors that contain pedicle or stem-like attachment in mucous membranes of colon; may be pre-cancerous
ulcerative colitis	chronic inflammatory condition that produces numerous ulcers that form on mucous membrane lining of colon; cause is unknown; also known as <i>inflammatory bowel disease</i> (IBD)
volvulus	condition in which bowel twists upon itself and causes an obstruction; painful and requires immediate surgery
Accessory Organs	
cholecystitis	inflammation of gallbladder; most commonly caused by gallstones in gallbladder or common bile duct that block flow of bile
cholelithiasis	presence of gallstones; may or may not cause symptoms such as <i>cholecystalgia</i>
cirrhosis	chronic disease of liver associated with failure of liver to function properly
hepatitis	inflammation of liver, usually due to viral infection; different viruses are transmitted by different routes, such as sexual contact or from exposure to blood or fecal-contaminated water or food

OBJECTIVE 9

Identify and define selected digestive system diagnostic procedures.

Text pages: 260–262; PowerPoint slides: 102–110

LECTURE NOTES

Term

Clinical Laboratory Tests

alanine transaminase (ALT)

Definition

enzyme normally present in blood; blood levels are increased in persons with liver disease

aspartate transaminase (AST)

enzyme normally present in blood; blood levels are increased in persons with liver disease

fecal occult blood test (FOBT)

laboratory test on feces to determine if microscopic amounts of blood are present; also called *hemoccult* or *stool guaiac*

ova and parasites (O&P)

laboratory examination of feces with microscope for presence of parasites or their eggs

serum bilirubin

blood test to determine amount of waste product bilirubin in bloodstream; elevated levels indicate liver disease

stool culture

laboratory test of feces to determine if any pathogenic bacteria are present

Diagnostic Imaging

bite-wing X-ray

X-ray taken with part of film holder held between teeth and parallel to teeth

intravenous cholecystography

dye administered intravenously to patient that allows for X-ray visualization of gallbladder and bile ducts

lower gastrointestinal series (lower GI series)

X-ray image of colon and rectum is taken after administration of barium (a radiopaque dye) by enema; also called *barium enema (BE)*

percutaneous transhepatic cholangiography (PTC)

procedure in which contrast medium is injected directly into liver to visualize bile ducts; used to detect obstructions

upper gastrointestinal (UGI) series

administering of barium contrast material orally and then taking X-ray to visualize esophagus, stomach, and duodenum; also called *barium swallow*

Endoscopic Procedures

colonoscopy

flexible fiberscope called *colonoscope* is passed through anus, rectum, and colon; used to examine upper portion of colon; polyps and small growths can be removed during this procedure

TEACHING STRATEGIES

- Write sentences on the board using common words; have students substitute correct medical terms.
- Obtain copies of actual upper and lower GI series or photos taken during a colonoscopy.

IRDVD

- See PowerPoint presentation on the Instructor's Resource DVD for a video on the topic of sigmoidoscopy.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Vocabulary, Pathology, and Therapeutic terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 8C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study
- *New York Times* link for research into specific diagnostic procedures

ASSESSMENTS

Quiz 8G—Chapter Review

Test Bank—questions

endoscopic retrograde cholangiopancreatography (ERCP)	procedure using endoscope to visually examine hepatic duct, common bile duct, and pancreatic duct; retrograde means to go in backwards direction; endoscope is inserted through anus and worked backwards to area where pancreatic and common bile ducts empty into duodenum
esophagogastroduodenoscopy (EGD)	use of flexible fiber-optic endoscope to visually examine esophagus, stomach, and beginning of duodenum
gastroscopy	procedure in which flexible <i>gastroscope</i> is passed through mouth and down esophagus; used to visualize inside stomach; to diagnose peptic ulcers and gastric carcinoma
laparoscopy	<i>laparoscope</i> is passed into abdominal wall through small incision; abdominal cavity is visually examined for tumors and other conditions; also called <i>peritoneoscopy</i>
sigmoidoscopy	procedure using flexible <i>sigmoidoscope</i> to visually examine sigmoid colon; used to diagnose cancer and polyps
Additional Diagnostic Procedures	
paracentesis	insertion of needle into abdominal cavity to withdraw fluid; tests to diagnose diseases may be conducted on fluid

OBJECTIVE 10

Identify and define selected digestive system therapeutic procedures.

Text pages: 262–263; PowerPoint slides: 111–120

LECTURE NOTES

Term

Dental Procedures

extraction
root canal

Definition

removing or “pulling” teeth
dental treatment involving pulp cavity of root of tooth; procedure used to save tooth that is badly infected or abscessed

Medical Procedures

gavage
lavage

using nasogastric (NG) tube to place liquid nourishment directly into stomach
using nasogastric (NG) tube to wash out stomach; for example, after ingestion of dangerous substances

TEACHING STRATEGIES

- Write sentences on the board using common words; have students substitute correct medical terms.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Vocabulary, Pathology, and Diagnostic terms.

IRDVD

- See PowerPoint presentation on the Instructor’s Resource DVD for an animation on the topic of nasogastric intubation.

nasogastric intubation (NG tube)	flexible catheter is inserted into nose and down esophagus to stomach; may be used for feeding or to suction out stomach fluids
total parenteral nutrition (TPN)	providing 100 percent of patient's nutrition intravenously; used when patient is unable to eat
Surgical Procedures	
anastomosis	to surgically create connection between two organs or vessels; for example, joining together two cut ends of intestines after section is removed
bariatric surgery	group of surgical procedures such as stomach stapling and restrictive banding to reduce size of stomach; treatment for morbid (extreme) obesity
choledocholithotripsy colostomy	crushing of gallstone in common bile duct surgical creation of opening of some portion of colon through abdominal wall to outside surface; fecal material (stool) drains into bag worn on abdomen
diverticulectomy	surgical removal of diverticulum
exploratory laparotomy	abdominal operation for purpose of examining abdominal organs and tissues for signs of disease or other abnormalities
fistulectomy	removal of fistula
gastric stapling	procedure that closes off large section of stomach with rows of staples; results in smaller stomach to assist very obese patients to lose weight
hemorrhoidectomy	surgical removal of hemorrhoids from anorectal area
hernioplasty	surgical repair of hernia; also called <i>herniorrhaphy</i>
laparoscopic cholecystectomy	surgical removal of gallbladder through very small abdominal incision with assistance of laparoscope
liver transplant	transplant of liver from donor

- See PowerPoint presentation on the Instructor's Resource DVD for video on the topic of registered dietitians.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

Guest Speaker

- Invite a registered dietitian to speak to class about total parenteral nutrition.

LEARNING ACTIVITIES

Worksheet 8C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study
- *New York Times* link for research into specific treatment procedures

ASSESSMENTS

Quiz 8G—Chapter Review

Test Bank—questions

OBJECTIVE 11

Identify and define selected medications relating to the digestive system.

Text page: 264; PowerPoint slides: 121–122

LECTURE NOTES

Classification	Action	Generic and Brand Names
anorexiant	treats obesity by suppressing appetite	phendimetrazine, Adipost, Obezine; phentermine, Zantryl, Adipex
antacid	neutralizes stomach acids	calcium carbonate, Tums; aluminum hydroxide and magnesium hydroxide, Maalox, Mylanta

TEACHING STRATEGIES

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

antidiarrheal	controls diarrhea	loperamide, Imodium; diphenoxylate, Lomotil; kaolin/pectin, Kaopectate
antiemetic	treats nausea, vomiting, and motion sickness	prochlorperazine, Compazine; promethazine, Phenergan
emetic	induces vomiting	ipecac syrup
H ₂ -receptor antagonists	treats peptic ulcers and gastroesophageal reflux disease; when stimulated, H ₂ -receptors increase production of stomach acid; using antagonist to block these receptors results in low acid level in stomach	ranitidine, Zantac; cimetidine, Tagamet; famotidine, Pepcid
laxative	treats constipation by stimulating bowel movement	senosides, Senokot; psyllium, Metamucil
proton pump inhibitors	used to treat peptic ulcers and gastroesophageal reflux disease; blocks stomach's ability to secrete acid	esomeprazole, Nexium; omeprazole, Prilosec

LEARNING ACTIVITIES

- Have students use a PDR and/or the Internet to look up additional information regarding these medications, such as dosage, side effects, and contraindications.

Worksheet 8C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions

ASSESSMENTS

Quiz 8G—Chapter Review

Test Bank—questions

OBJECTIVE 12

Define selected abbreviations associated with the digestive system.

Text page: 264; PowerPoint slides: 123–127

LECTURE NOTES

ac	before meals
ALT	alanine transaminase
AST	aspartate transaminase
Ba	barium
BE	barium enema
BM	bowel movement
BS	bowel sounds
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
HCl	hydrochloric acid
HCV	hepatitis C virus

TEACHING STRATEGIES

- Emphasize importance of learning abbreviations and their full meanings; point out how some abbreviations, such as GERD, FOBT, NG, and NPO are typically used rather than full terms.
- Encourage students to add abbreviations to their flash cards.
- Write sentences on the board using common words; have students substitute correct abbreviations.

Memory Game

- Have students assist in creating a memory game to be played in class.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

HDV	hepatitis D virus
HEV	hepatitis E virus
HSV-1	herpes simplex virus type 1
IBD	inflammatory bowel disease
IBS	irritable bowel syndrome
IVC	intravenous cholangiography
NG	nasogastric (tube)
NPO	nothing by mouth
n&v	nausea and vomiting
O&P	ova and parasites
pc	after meals
PO	by mouth
pp	postprandial
PTC	percutaneous transhepatic cholangiography
PUD	peptic ulcer disease
TPN	total parenteral nutrition
UGI	upper gastrointestinal series

LEARNING ACTIVITIES

Worksheet 8C

- Chapter Review

Quiz 8F

- May be used as a worksheet

Text

- Practice Exercises

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions

ASSESSMENTS

Quiz 8F—Abbreviations Quiz

Quiz 8G—Chapter Review

Test Bank—questions

Worksheet 8A

New Combining Form and Suffix Handout

Directions: For each combining form below, write out its meaning and then locate a new term from the chapter that uses the combining form or suffix.

Combining Forms	Meaning	Chapter Term	Meaning
1. an/o	_____	_____	_____
2. append/o	_____	_____	_____
3. appendic/o	_____	_____	_____
4. bar/o	_____	_____	_____
5. bucc/o	_____	_____	_____
6. cec/o	_____	_____	_____
7. chol/e	_____	_____	_____
8. cholangi/o	_____	_____	_____
9. cholecyst/o	_____	_____	_____
10. choledoch/o	_____	_____	_____
11. col/o	_____	_____	_____
12. colon/o	_____	_____	_____
13. dent/o	_____	_____	_____
14. duoden/o	_____	_____	_____
15. enter/o	_____	_____	_____
16. esophag/o	_____	_____	_____
17. gastr/o	_____	_____	_____
18. gingiv/o	_____	_____	_____
19. gloss/o	_____	_____	_____
20. hepat/o	_____	_____	_____
21. ile/o	_____	_____	_____
22. jejun/o	_____	_____	_____
23. labi/o	_____	_____	_____

(Continued)

Combining Forms	Meaning	Chapter Term	Meaning
24. lapar/o	_____	_____	_____
25. lingu/o	_____	_____	_____
26. lith/o	_____	_____	_____
27. odont/o	_____	_____	_____
28. or/o	_____	_____	_____
29. palat/o	_____	_____	_____
30. pancreat/o	_____	_____	_____
31. pharyng/o	_____	_____	_____
32. proct/o	_____	_____	_____
33. pylor/o	_____	_____	_____
34. rect/o	_____	_____	_____
35. sialaden/o	_____	_____	_____
36. sigmoid/o	_____	_____	_____
Suffixes			
37. -emesis	_____	_____	_____
38. -lithiasis	_____	_____	_____
39. -orexia	_____	_____	_____
40. -pepsia	_____	_____	_____
41. -phagia	_____	_____	_____
42. -prandial	_____	_____	_____
43. -tripsy	_____	_____	_____

Worksheet 8B

Medical Term Analysis

Directions: Below are terms built from word parts used in this chapter that are not analyzed in the Word Building Table. Many are built from word parts you have learned in previous chapters. Analyze each term presented below and list and define the word parts used to build each term.

Medical Term	Word Part Analysis
1. proctology	_____ _____
2. gastroesophageal	_____ _____
3. carcinoma	_____ _____
4. colitis	_____ _____
5. cholecystitis	_____ _____
6. cholelithiasis	_____ _____
7. cholecystography	_____ _____
8. intravenous	_____ _____
9. transhepatic	_____ _____
10. cholangiography	_____ _____
11. colonoscopy	_____ _____

(Continued)

- 12. cholangiopancreatography _____

- 13. esophagogastroduodenoscopy _____

- 14. gastroscopy _____

- 15. laparoscopy _____

- 16. sigmoidoscopy _____

- 17. choledocholithotripsy _____

Worksheet 8C

Chapter Review

Anatomy and Physiology

1. The accessory organs of the digestive system are the _____, _____, _____, _____.
2. _____ is the watery, slippery secretion in the oral cavity that contains the digestive enzyme, _____.
3. The _____ of a tooth is above the gum line and the _____ of the tooth is below the gum line.
4. The hardest substance in the body is _____.
5. The _____ prevents food from entering the trachea.
6. The stomach secretes _____.
7. _____ are rings of muscles that control entry into or exit from an organ.
8. The three sections of the small intestine are the _____, _____, and _____.
9. The appendix is attached to the _____ of the colon.
10. The liver secretes _____ to emulsify fats.

Word Building

Directions: Build a term that means:

1. inflammation of appendix _____
2. removal of gallbladder _____
3. create opening in colon _____
4. specialist in stomach and small intestine _____
5. instrument to view inside sigmoid colon _____
6. incision into abdomen _____
7. pertaining to straight teeth _____

(Continued)

8. surgical repair of palate _____

9. vomiting blood _____

10. slow digestion _____

Matching

- | | |
|-----------------------------|---|
| _____ 1. ascites | a. tooth cavity |
| _____ 2. cachexia | b. gallstones |
| _____ 3. crown | c. yellow tint to the skin |
| _____ 4. caries | d. varicose veins in rectum |
| _____ 5. emesis | e. test for microscopic blood in stools |
| _____ 6. hematochezia | f. heartburn |
| _____ 7. jaundice | g. withdrawing fluid from abdominal cavity |
| _____ 8. melena | h. accumulation of fluid in peritoneal cavity |
| _____ 9. polyp | i. washing out the stomach |
| _____ 10. pyrosis | j. intestine twisted on itself |
| _____ 11. aphthous ulcer | k. dark, tarry stools |
| _____ 12. herpes labialis | l. diaphragmatocele |
| _____ 13. hemorrhoids | m. X-ray to visualize bile ducts |
| _____ 14. fistula | n. bright red blood in the stools |
| _____ 15. hiatal hernia | o. treatment for morbid obesity |
| _____ 16. intussusception | p. a diagnostic blood test |
| _____ 17. volvulus | q. loss of weight and generalized wasting |
| _____ 18. cholelithiasis | r. abnormal tube-like passageway |
| _____ 19. ALT | s. canker sore |
| _____ 20. lavage | t. small tumor on a stem or pedicle |
| _____ 21. bariatric surgery | u. artificial covering for tooth |
| _____ 22. antiemetic | v. treats nausea |
| _____ 23. FOBT | w. telescoping stretch of intestine |
| _____ 24. paracentesis | x. fever blister |
| _____ 25. PTC | y. vomiting |

Quiz 8A

New Word Parts Quiz

Directions: Define the combining form or suffix in the spaces provided.

1. bar/o _____
2. append/o _____
3. cholecyst/o _____
4. cec/o _____
5. dent/o _____
6. chol/e _____
7. hepat/o _____
8. lingu/o _____
9. gastr/o _____
10. proct/o _____
11. pharyng/o _____
12. cholangi/o _____
13. sialaden/o _____
14. or/o _____
15. odont/o _____
16. choledoch/o _____
17. gingiv/o _____
18. gloss/o _____
19. colon/o _____
20. enter/o _____
21. labi/o _____
22. -tripsy _____
23. -pepsia _____
24. -prandial _____
25. -phagia _____

Quiz 8B

Spelling Quiz

Directions: Write each term as your instructor pronounces it.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Quiz 8C

Labeling Diagram

Directions: Label the organs of the digestive system.

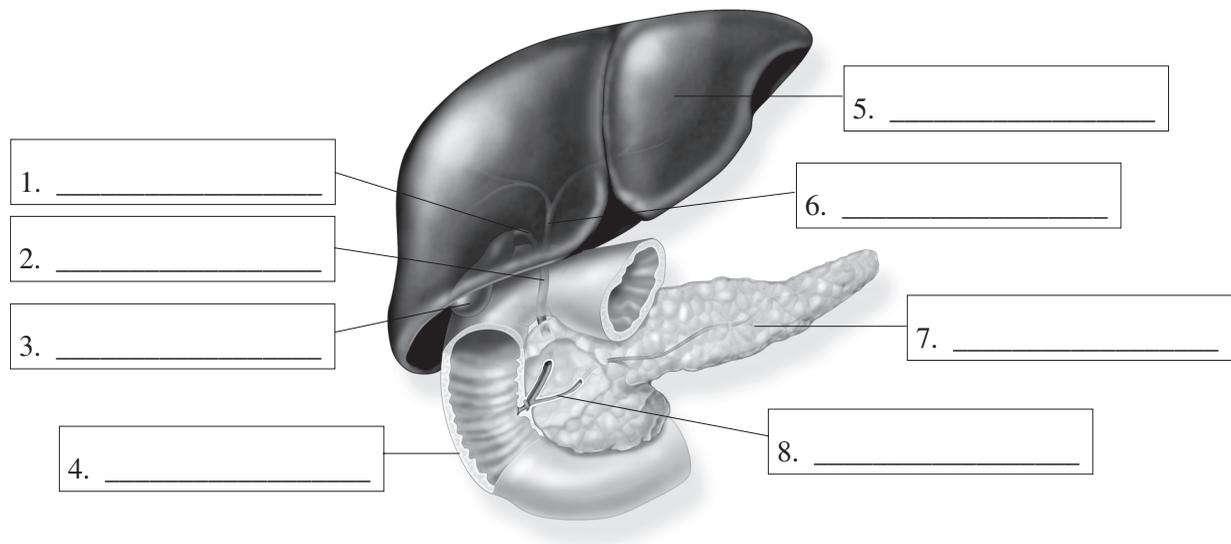
The diagram shows a human figure with the digestive system highlighted. Eight numbered callouts point to specific organs:

- 1. Salivary gland (submandibular gland)
- 2. Esophagus
- 3. Gallbladder
- 4. Large intestine
- 5. Mouth
- 6. Stomach
- 7. Liver
- 8. Small intestine

Quiz 8D

Labeling Diagram

Directions: Label the organs of the digestive system.



Quiz 8E

Word Building Quiz

Directions: Build a single medical term for each phrase below.

1. pertaining to the anus _____
2. pertaining to the cheeks _____
3. pertaining to the gallbladder _____
4. pertaining to the colon _____
5. pertaining to teeth _____
6. pertaining to the duodenum _____
7. pertaining to the small intestine _____
8. pertaining to the esophagus _____
9. pertaining to the stomach _____
10. pertaining to the gums _____
11. pertaining to the liver _____
12. pertaining to the ileum _____
13. pertaining to the jejunum _____
14. pertaining to under the tongue _____
15. pertaining to the mouth _____
16. pertaining to the pancreas _____
17. pertaining to the throat _____
18. pertaining to the pylorus _____
19. pertaining to the rectum _____
20. abnormal appetite _____
21. excessive vomiting _____
22. slow digestion _____
23. unable to eat/swallow _____
24. after a meal _____
25. removal of the appendix _____

Quiz 8F

Abbreviation Quiz

Directions: Write the medical term for which each abbreviation stands.

1. ac _____
2. Ba _____
3. BS _____
4. CBD _____
5. ERCP _____
6. FOBT _____
7. GB _____
8. GERD _____
9. GI _____
10. HCl _____
11. IBD _____
12. IVC _____
13. NG _____
14. NPO _____
15. n&v _____
16. O&P _____
17. pc _____
18. pp _____
19. TPN _____
20. PUD _____
21. UGI _____
22. PO _____
23. AST _____
24. BE _____
25. HAV _____

Quiz 8G

Chapter Review

PART I: Multiple Choice

Directions: Circle the correct answer.

1. What is the medical term for the return of fluids and solids from the stomach into the mouth?
 - a. dyspepsia
 - b. regurgitation
 - c. dysphagia
 - d. aphagia
2. A protrusion of the stomach through the diaphragm and into the thoracic cavity is a(n)
 - a. inguinal hernia.
 - b. hiatal hernia.
 - c. abdominal hernia.
 - d. disk hernia.
3. The organ that produces bile is the
 - a. gallbladder.
 - b. pancreas.
 - c. liver.
 - d. small intestine.
4. The pathological condition characterized by twisting of the intestine on itself is called
 - a. polyp.
 - b. intussusception.
 - c. volvulus.
 - d. Crohn's disease.
5. The term for chronic disease of the liver with gradual destruction of its cells is
 - a. adhesion.
 - b. cirrhosis.
 - c. peptic ulcer.
 - d. volvulus.
6. The term for a series of X-rays taken of the stomach and duodenum after barium has been swallowed is
 - a. lower GI.
 - b. upper GI.
 - c. anastomosis.
 - d. retrograde cholangiography.
7. What is the medical term for tooth decay?
 - a. ascites
 - b. fistula
 - c. gingivitis
 - d. caries
8. Which surgical term listed below means to create a passageway between two organs?
 - a. gastrectomy
 - b. anastomosis
 - c. lithotripsy
 - d. laparotomy
9. Which treatment listed below involves using a nasogastric tube to place a nutritional liquid into the stomach?
 - a. lavage
 - b. anastomosis
 - c. gavage
 - d. fistulectomy
10. Which of the following conditions is the presence of outpouches off the gut?
 - a. diverticulosis
 - b. polyposis
 - c. diaphragmatocele
 - d. ileus

(Continued)

PART II: Matching

Directions: Match the term with its definition.

- | | |
|---------------------------------|---------------------------------------|
| _____ 1. chyme | a. difficulty with defecation |
| _____ 2. cuspid | b. treats gum conditions |
| _____ 3. constipation | c. an autoimmune condition |
| _____ 4. jaundice | d. an X-ray of the teeth |
| _____ 5. periodontics | e. liquefied food leaving the stomach |
| _____ 6. cleft palate | f. to surgically pull teeth |
| _____ 7. Crohn's disease | g. a symptom of liver disease |
| _____ 8. bite-wing | h. treats peptic ulcers |
| _____ 9. extraction | i. a biting tooth |
| _____ 10. proton pump inhibitor | j. a congenital condition |

PART III: Abbreviations

Directions: Write the full meaning of the following abbreviations.

1. PUD _____
2. IBS _____
3. NPO _____
4. n&v _____
5. EGD _____

Chapter 8 Answer Keys

Worksheet 8A Answer Key

1. anus
2. appendix
3. appendix
4. weight
5. cheek
6. cecum
7. gall, bile
8. bile duct
9. gallbladder
10. common bile duct
11. colon
12. colon
13. tooth
14. duodenum
15. small intestine
16. esophagus
17. stomach
18. gums
19. tongue
20. liver
21. ileum
22. jejunum
23. lip
24. abdomen
25. tongue
26. stone
27. tooth
28. mouth
29. palate
30. pancreas
31. throat, pharynx
32. anus and rectum
33. pylorus
34. rectum
35. salivary gland
36. sigmoid colon

Suffixes

37. vomit
38. condition of stones
39. appetite
40. digestion
41. eat, swallow
42. pertaining to a meal
43. surgical crushing

Worksheet 8B Answer Key

1. proct/o = anus and rectum; -ology = study of
2. gastr/o = stomach; esophag/o = esophagus; -eal = pertaining to
3. carcin/o = cancer; -oma = tumor
4. col/o = colon; -itis = inflammation
5. cholecyst/o = gallbladder; -itis = inflammation
6. chol/e = gall, bile; -lithiasis = condition of stones
7. cholecyst/o = gallbladder; -graphy = process of recording
8. intra- = within; ven/o = vein; -ous = pertaining to
9. trans- = across; hepat/o = liver; -ic = pertaining to
10. cholangi/o = bile duct; -graphy = process of recording
11. colon/o = colon; -scopy = process of viewing
12. cholangi/o = bile duct; pancreat/o = pancreas; -graphy = process of recording
13. esophag/o = esophagus; gastr/o = stomach; duoden/o = duodenum; -scopy = process of viewing
14. gastr/o = stomach; -scopy = process of viewing
15. lapar/o = abdomen; -scopy = process of viewing
16. sigmoid/o = sigmoid colon; -scopy = process of viewing
17. choledoch/o = common bile duct; lith/o = stone; -tripsy = surgical crushing

Worksheet 8C Answer Key

Anatomy and Physiology

1. salivary glands, pancreas, liver, gallbladder
2. saliva, amylase
3. crown, root
4. enamel
5. epiglottis
6. hydrochloric acid
7. sphincters
8. duodenum, ileum, jejunum
9. cecum
10. bile

Word Building

1. appendicitis
2. cholecystectomy
3. colostomy
4. gastroenterologist
5. sigmoidoscope
6. laparotomy
7. orthodontic
8. palatoplasty
9. hematemesia
10. bradypepsia

Matching

1. h
2. q
3. u
4. a
5. y
6. n
7. c
8. k
9. t
10. f
11. s
12. x
13. d
14. r
15. l
16. w
17. j
18. b
19. p
20. i
21. o
22. v
23. e
24. g
25. m

Quiz 8A Answer Key

1. weight
2. appendix
3. gallbladder
4. cecum
5. tooth
6. bile, gall
7. liver
8. tongue
9. stomach
10. anus and rectum
11. throat, pharynx
12. bile duct
13. salivary gland
14. mouth
15. tooth
16. common bile duct
17. gums
18. tongue
19. colon
20. small intestine
21. lip
22. surgical crushing
23. digestion
24. pertaining to a meal
25. eat, swallow

Quiz 8B Answer Key

1. gastrointestinal
2. periodontal
3. oropharynx
4. peristalsis
5. sphincters
6. sialadenitis
7. anorexia
8. cachexia
9. hematochezia
10. diverticulosis
11. dysentery
12. intussusception
13. volvulus
14. polyposis
15. cholelithiasis
16. cholangiography
17. paracentesis
18. hemorrhoidectomy
19. choledocholithotripsy
20. fistulectomy

Quiz 8C Answer Key

1. salivary glands
2. esophagus
3. pancreas
4. small intestine
5. oral cavity
6. stomach
7. liver and gallbladder
8. colon

Quiz 8D Answer Key

1. cystic duct
2. common bile duct
3. gallbladder
4. duodenum
5. liver
6. hepatic duct
7. pancreas
8. pancreatic duct

Quiz 8E Answer Key

1. anal
2. buccal
3. cholecystic
4. colonic
5. dental
6. duodenal
7. enteric
8. esophageal
9. gastric
10. gingival
11. hepatic
12. ileal
13. jejunal
14. sublingual
15. oral
16. pancreatic
17. pharyngeal
18. pyloric
19. rectal
20. dysorexia
21. hyperemesis
22. bradypepsia
23. aphagia
24. postprandial
25. appendectomy

Quiz 8F Answer Key

1. before meals
2. barium
3. bowel sounds
4. common bile duct
5. endoscopic retrograde cholangiopancreatography
6. fecal occult blood test
7. gallbladder
8. gastroesophageal reflux disease
9. gastrointestinal
10. hydrochloric acid
11. inflammatory bowel disease
12. intravenous cholangiography
13. nasogastric
14. nothing by mouth
15. nausea and vomiting
16. ova and parasites
17. after meals
18. postprandial
19. total parenteral nutrition
20. peptic ulcer disease
21. upper gastrointestinal
22. by mouth
23. aspartate transaminase
24. barium enema
25. hepatitis A virus

Quiz 8G Answer Key

Multiple Choice

1. B
2. B
3. C
4. C
5. B
6. B
7. D
8. B
9. C
10. A

Matching

1. e
2. i
3. a
4. g
5. b
6. j
7. c
8. d
9. f
10. h

Abbreviations

1. peptic ulcer disease
2. irritable bowel syndrome
3. nothing by mouth
4. nausea and vomiting
5. esophagogastroduodenoscopy