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
### OBJECTIVE 1

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

Text page: 242; PowerPoint slides: 7–12

### LECTURE NOTES

<table>
<thead>
<tr>
<th>Combining Forms</th>
<th>Anus</th>
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<tbody>
<tr>
<td>append/o</td>
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<td>Cecum</td>
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<td>chol/e</td>
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<td>cholangi/o</td>
<td>Bile duct</td>
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<td>Common bile duct</td>
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<td>Small intestine</td>
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<td>Lip</td>
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<td>pancreat/o</td>
<td>Pancreas</td>
</tr>
<tr>
<td>pharyng/o</td>
<td>Throat, pharynx</td>
</tr>
</tbody>
</table>

### 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
### 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

<table>
<thead>
<tr>
<th>Suffixes</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>-emesis</td>
<td>vomit</td>
</tr>
<tr>
<td>-lithiasis</td>
<td>condition of stones</td>
</tr>
<tr>
<td>-orexia</td>
<td>appetite</td>
</tr>
<tr>
<td>-pepsia</td>
<td>digestion</td>
</tr>
<tr>
<td>-phagia</td>
<td>eat, swallow</td>
</tr>
<tr>
<td>-prandial</td>
<td>pertaining to a meal</td>
</tr>
<tr>
<td>-tripsy</td>
<td>surgical crushing</td>
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</table>

<table>
<thead>
<tr>
<th>Suffixes</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
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<td>proct/o</td>
<td>anus and rectum</td>
</tr>
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<td>pylor/o</td>
<td>pylorus</td>
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<tr>
<td>rect/o</td>
<td>rectum</td>
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<tr>
<td>sialaden/o</td>
<td>salivary gland</td>
</tr>
<tr>
<td>sigmoid/o</td>
<td>sigmoid colon</td>
</tr>
</tbody>
</table>

### 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
OBJECTIVE 3
Locate and describe the major organs of the digestive system and their functions.

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

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
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
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 **cuspids** or **canines**; see Figure 8.3
- Posterior teeth grind and crush food into even finer pieces; include **bicuspids**, 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

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**OBJECTIVE 6**
Build and define digestive system medical terms from word parts.
Text pages: 252–254; PowerPoint slides: 59–74

**Lecture Notes**

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<tr>
<th>Combining</th>
<th>Medical Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>an/o</td>
<td>anal</td>
<td>pertaining to anus</td>
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<td>appendectomy</td>
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<td>appendic/o</td>
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<td>inflammation of appendix</td>
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<td>pertaining to cheeks and lips</td>
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<tr>
<td>cholecyst/o</td>
<td>cholecystectomy</td>
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**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.
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<thead>
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<th>Combining Forms</th>
<th>Medical Terms</th>
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<td>laparotomy incision into abdomen</td>
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<td><strong>palat/o</strong></td>
<td>palatoplasty surgical repair of palate</td>
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<td><strong>pancreat/o</strong></td>
<td>pancreatitis inflammation of pancreas</td>
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<td>proctologist specialist in rectum and anus</td>
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</tbody>
</table>

- Write sentences on the board using common words; have students substitute correct medical terms.
- 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
OBJECTIVE 7

Identify and define digestive system vocabulary terms.


**LECTURE NOTES**

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

**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 dentist or oral surgeon

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 gastroenterologist

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 internist

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 morbid obesity

orthodontics  branch of dentistry concerned with correction of problems with tooth alignment; specialist is orthodontist

periodontics  branch of dentistry concerned with treating conditions involving gums and tissues surrounding teeth; specialist is periodontist

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 proctologist

pyrosis  pain and burning sensation usually caused by stomach acid splashing up into esophagus; commonly called heartburn

regurgitation  return of fluids and solids from stomach into mouth
OBJECTIVE 8
Identify and define selected digestive system pathology terms.


LECTURE NOTES

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Cavity</td>
<td></td>
</tr>
<tr>
<td>aphthous ulcers</td>
<td>painful ulcers in mouth of unknown cause; commonly called canker sores</td>
</tr>
<tr>
<td>cleft lip</td>
<td>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</td>
</tr>
<tr>
<td>cleft palate</td>
<td>congenital anomaly in which roof of mouth has split or fissure; corrected with surgery</td>
</tr>
<tr>
<td>herpes labialis</td>
<td>infection of lip by herpes simplex virus type 1 (HSV-1); also called fever blisters or cold sores</td>
</tr>
<tr>
<td>periodontal disease</td>
<td>disease of supporting structures of teeth, including gums and bones; the most common cause of tooth loss</td>
</tr>
<tr>
<td>Esophagus</td>
<td></td>
</tr>
<tr>
<td>esophageal varices</td>
<td>enlarged and swollen varicose veins in lower end of esophagus; if rupture, serious hemorrhage results; often related to liver disease</td>
</tr>
<tr>
<td>gastroesophageal reflux disease (GERD)</td>
<td>acid from stomach flows backward up into esophagus causing inflammation and pain</td>
</tr>
<tr>
<td>Stomach</td>
<td></td>
</tr>
<tr>
<td>gastric carcinoma</td>
<td>cancerous tumor in stomach</td>
</tr>
<tr>
<td>hiatal hernia</td>
<td>protrusion of stomach through diaphragm and extending into thoracic cavity; gastroesophageal reflux disease is a common symptom; also called a diaphragmatocoele</td>
</tr>
<tr>
<td>peptic ulcer disease (PUD)</td>
<td>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</td>
</tr>
<tr>
<td>Small Intestine and Colon</td>
<td></td>
</tr>
<tr>
<td>anal fistula</td>
<td>abnormal tube-like passage from surface around anal opening directly into rectum</td>
</tr>
<tr>
<td>colorectal carcinoma</td>
<td>cancerous tumor along length of colon and rectum</td>
</tr>
<tr>
<td>Crohn’s disease</td>
<td>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</td>
</tr>
</tbody>
</table>

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
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>diverticulitis</td>
<td>inflammation of <em>diverticulum</em> (an outpouching off the gut), especially in the colon; inflammation often results when food becomes trapped within pouch</td>
</tr>
<tr>
<td>diverticulosis</td>
<td>condition of having diverticula (outpouches off the gut); may lead to <em>diverticulitis</em> if one becomes inflamed</td>
</tr>
<tr>
<td>dysentery</td>
<td>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</td>
</tr>
<tr>
<td>diverticulosis</td>
<td>condition of having diverticula (outpouches off the gut); may lead to <em>diverticulitis</em> if one becomes inflamed</td>
</tr>
<tr>
<td>hemorrhoids</td>
<td>varicose veins in rectum</td>
</tr>
<tr>
<td>ileus</td>
<td>severe abdominal pain, inability to pass stools, vomiting, and abdominal distension as a result of intestinal blockage; may require surgery to reverse blockage</td>
</tr>
<tr>
<td>inguinal hernia</td>
<td>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 incarcerated or strangulated if muscle tightens down around loop of intestines and cuts off blood flow</td>
</tr>
<tr>
<td>intussusception</td>
<td>result of intestine slipping or telescoping into another section of intestine just below it; more common in children</td>
</tr>
<tr>
<td>irritable bowel syndrome (IBS)</td>
<td>disturbance in functions of intestine from unknown causes; symptoms include abdominal discomfort and alteration in bowel activity; also called spastic colon or functional bowel syndrome</td>
</tr>
<tr>
<td>polyposis</td>
<td>small tumors that contain pedicle or stem-like attachment in mucous membranes of colon; may be pre-cancerous</td>
</tr>
<tr>
<td>ulcerative colitis</td>
<td>chronic inflammatory condition that produces numerous ulcers that form on mucous membrane lining of colon; cause is unknown; also known as inflammatory bowel disease (IBD)</td>
</tr>
<tr>
<td>volvulus</td>
<td>condition in which bowel twists upon itself and causes an obstruction; painful and requires immediate surgery</td>
</tr>
<tr>
<td>Accessory Organs</td>
<td></td>
</tr>
<tr>
<td>cholecystitis</td>
<td>inflammation of gallbladder; most commonly caused by gallstones in gallbladder or common bile duct that block flow of bile</td>
</tr>
<tr>
<td>cholelithiasis</td>
<td>presence of gallstones; may or may not cause symptoms such as cholecystalgia</td>
</tr>
<tr>
<td>cirrhosis</td>
<td>chronic disease of liver associated with failure of liver to function properly</td>
</tr>
<tr>
<td>hepatitis</td>
<td>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</td>
</tr>
</tbody>
</table>
OBJECTIVE 9
Identify and define selected digestive system diagnostic procedures.
Text pages: 260–262; PowerPoint slides: 102–110

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

LECTURE NOTES

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Laboratory Tests</td>
<td></td>
</tr>
<tr>
<td>alanine transaminase (ALT)</td>
<td>enzyme normally present in blood; blood levels are increased in persons with liver disease</td>
</tr>
<tr>
<td>aspartate transaminase (AST)</td>
<td>enzyme normally present in blood; blood levels are increased in persons with liver disease</td>
</tr>
<tr>
<td>fecal occult blood test (FOBT)</td>
<td>laboratory test on feces to determine if microscopic amounts of blood are present; also called hemoccult or stool guaiac</td>
</tr>
<tr>
<td>ova and parasites (O&amp;P)</td>
<td>laboratory examination of feces with microscope for presence of parasites or their eggs</td>
</tr>
<tr>
<td>serum bilirubin</td>
<td>blood test to determine amount of waste product bilirubin in bloodstream; elevated levels indicate liver disease</td>
</tr>
<tr>
<td>stool culture</td>
<td>laboratory test of feces to determine if any pathogenic bacteria are present</td>
</tr>
<tr>
<td>Diagnostic Imaging</td>
<td></td>
</tr>
<tr>
<td>bite-wing X-ray</td>
<td>X-ray taken with part of film holder held between teeth and parallel to teeth</td>
</tr>
<tr>
<td>intravenous cholecystography</td>
<td>dye administered intravenously to patient that allows for X-ray visualization of gallbladder and bile ducts</td>
</tr>
<tr>
<td>lower gastrointestinal series (lower GI series)</td>
<td>X-ray image of colon and rectum is taken after administration of barium (a radiopaque dye) by enema; also called barium enema (BE)</td>
</tr>
<tr>
<td>percutaneous transhepatic cholangiography (PTC)</td>
<td>procedure in which contrast medium is injected directly into liver to visualize bile ducts; used to detect obstructions</td>
</tr>
<tr>
<td>upper gastrointestinal (UGI) series</td>
<td>administering of barium contrast material orally and then taking X-ray to visualize esophagus, stomach, and duodenum; also called barium swallow</td>
</tr>
<tr>
<td>Endoscopic Procedures</td>
<td></td>
</tr>
<tr>
<td>colonoscopy</td>
<td>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</td>
</tr>
</tbody>
</table>

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.
OBJECTIVE 10
Identify and define selected digestive system therapeutic procedures.

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

LECTURE NOTES

Term Dental Procedures

Definition

extraction removing or “pulling” teeth

root canal dental treatment involving pulp cavity of root of tooth; procedure used to save tooth that is badly infected or abscessed

Medical Procedures

gavage using nasogastric (NG) tube to place liquid nourishment directly into stomach

lavage 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.

© 2009 Pearson Education, Inc.
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 crushing of gallstone in common bile duct

colostomy 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 herniorrhaphy

laparoscopic cholecystectomy surgical removal of gallbladder through very small abdominal incision with assistance of laparoscope

liver transplant transplant of liver from donor

OBJECTIVE 11
Identify and define selected medications relating to the digestive system.

Text page: 264; PowerPoint slides: 121–122

LECTURE NOTES

Classification Action
anorexiant treats obesity by suppressing appetite

antacid neutralizes stomach acids

Generic and Brand Names
phenmetrazine, Adipost, Obetzone; phentermine, Zantyrl, Adipex 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.

Guest Speaker
• Invite a registered dietician to speak to class about total parenteral nutrition.

ASSESSMENTS
Quiz 8G—Chapter Review
Text Bank—questions
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

antidiarrheal controls diarrhea loperamide, Imodium; diphenoxylate, Lomotil; kaolin/pectin, Kaopectate

antiemetic treats nausea, vomiting, and motion sickness prochlorperazine, Com- pazine; promethazine, Phenergan

emetic induces vomiting ipecac syrup

H₂-receptor antagonists treats peptic ulcers and gastroesophageal reflux disease; when stimulated, H₂-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

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.
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

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
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.

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

(Continued)
<table>
<thead>
<tr>
<th>Combining Forms</th>
<th>Meaning</th>
<th>Chapter Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>24. lapar/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>25. lingu/o</td>
<td>________</td>
<td>_________</td>
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</tr>
<tr>
<td>26. lith/o</td>
<td>________</td>
<td>_________</td>
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<tr>
<td>27. odont/o</td>
<td>________</td>
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<tr>
<td>28. or/o</td>
<td>________</td>
<td>_________</td>
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<tr>
<td>29. palat/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>30. pancreat/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>31. pharyng/o</td>
<td>________</td>
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<tr>
<td>32. proct/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
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<tr>
<td>33. pylor/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>34. rect/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>35. sialaden/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>36. sigmoid/o</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suffixes</th>
<th>Meaning</th>
<th>Chapter Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>37. –emesis</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>38. –lithiasis</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>39. –orexia</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>40. –pepsia</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>41. –phagia</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>42. –prandial</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
<tr>
<td>43. –tripsy</td>
<td>________</td>
<td>_________</td>
<td>________</td>
</tr>
</tbody>
</table>
# 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.

<table>
<thead>
<tr>
<th>Medical Term</th>
<th>Word Part Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. proctology</td>
<td></td>
</tr>
<tr>
<td>2. gastroesophageal</td>
<td></td>
</tr>
<tr>
<td>3. carcinoma</td>
<td></td>
</tr>
<tr>
<td>4. colitis</td>
<td></td>
</tr>
<tr>
<td>5. cholecystitis</td>
<td></td>
</tr>
<tr>
<td>6. cholelithiasis</td>
<td></td>
</tr>
<tr>
<td>7. cholecystography</td>
<td></td>
</tr>
<tr>
<td>8. intravenous</td>
<td></td>
</tr>
<tr>
<td>9. transhepatic</td>
<td></td>
</tr>
<tr>
<td>10. cholangiography</td>
<td></td>
</tr>
<tr>
<td>11. colonoscopy</td>
<td></td>
</tr>
</tbody>
</table>

(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

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

1. ________________
2. ________________
3. ________________
4. ________________
5. ________________
6. ________________
7. ________________
8. ________________
Quiz 8D
Labeling Diagram

Directions: Label the organs of the digestive system.

1. ____________________________
2. ____________________________
3. ____________________________
4. ____________________________
5. ____________________________
6. ____________________________
7. ____________________________
8. ____________________________
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. hematemeses
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. bradypesia
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