Medical Terminology





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Lecture Seven

DIGESTIVE SYSTEM

Word Elements * The Digestive	System	
WORD ELEMENT	REFERS TO	
abdomin/o	abdomen	
bucc/o	cheek	
cheil/o	lip	
chol/e, chol/o	bile, gall	
cholangi/o	bile duct	
cholecyst/o	gallbladder	
choledoch/o	common bile duct	
col/o, colon/o	colon	
dent/i,dent/o	teeth	
duoden/o	duodenum	
-emesis	vomit	
enter/o	intestine	
esophag/o	esophagus	
gastr/o	stomach	
gingiv/o	gums	
gloss/o	tongue	
hepat/o	liver	
ile/o	ileum	
jejun/o	jejunum	
lapar/o	abdomen	
-lith	stone	
pancreat/o	pancreas	
-pepsia	digestion	
phag/o	eating; swallowing	
-phagia	eat or swallow	
proct/o	anus and rectum	
pylor/o	pylorus	
rect/o	rectum	
-scope	device for visual examination	
-scopy	visual examination	
sial/o	salivary glands	
sigmoid/o	sigmoid colon	
stomat/o	mouth	



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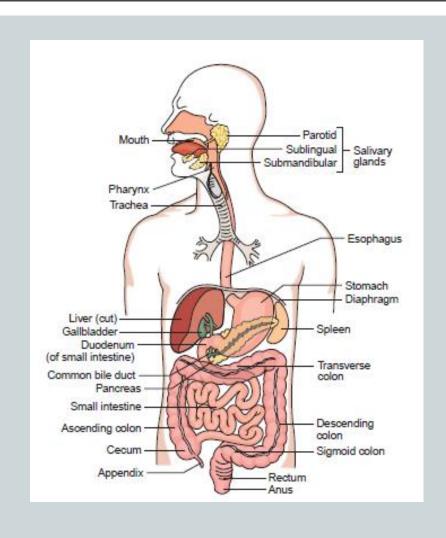
An Overview of the Digestive System

The digestive system is composed of a continuous tract beginning with the oral cavity and ending at the anus (Fig. 12-1). This tract, called the **alimentary canal** or the **gastrointestinal (GI) tract** (gastr/o means "stomach"), is complemented by accessory organs that convert food and fluids into a form that permits the body to absorb nutrients. The GI tract is divided into two sections: the *upper GI tract*, which consists of the oral cavity, esophagus, and stomach, and the *lower GI tract*, which consists of the intestines.

The three main functions of the digestive system are digestion, absorption, and elimination.

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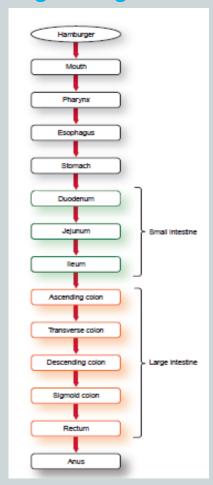
Structure and Function

The body requires food and nutrients to sustain life. However, the food we eat needs to be converted into a form our bodies can use, and that conversion is the job performed by the digestive tract and associated organs.

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Pathway of food through the gastrointestinal tract



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Accessory Organs

The salivary glands, liver, gallbladder, and pancreas, although not part of the alimentary canal, play a key role in the digestive process and are referred to as accessory organs of the digestive system.

Table 12-1 Summary of the Digestive System Organs and Functions

Organ	Functions
Oral cavity	breaks food apart by mastication (chewing); food bolus formed
Salivary glands	secretes saliva to moisten food
Pharynx	common passageway for both food and air
Esophagus	peristalsis moves food bolus downward to stomach
Stomach	converts food to semi-liquid state and imparts chemical changes
Small intestine	where most digestion and absorption takes place
Large intestine	where water is removed from the feces and elimination occurs
Liver	stores glycogen; manufactures and secretes bile; manufactures blood proteins; destroys old red blood cells; detoxifies harmful substances
Gallbladder	stores and delivers bile
Pancreas	secretes juices and enzymes into small intestine; secretes insulin

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Disorders and Treatments

Several digestive system conditions necessitate a "team approach" to assist with their many facets.

A condition may require an adjustment of dietary intake, such as a reduction or elimination of caffeine and alcohol, to promote the healing of ulcers or possibly stress-reduction techniques to prevent inflammatory bowel conditions. Various drugs are used to treat gastrointestinal disorders, and various surgeries are used to remove diseased components. Several invasive and noninvasive tests are used to diagnose conditions of the GI tract and accessory organs.

These and some of the clinical manifestations of the digestive system are discussed in the following sections.



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Disorders Of The Upper GI Tract

Disorders of the upper GI tract may involve infections, cancer, or structural problems.

- 1- stomatitis: (stomat/o means "mouth").
- 2- gingivitis: (gingiv/i means "gums") occur in the oral cavity.
- 3- Parotiditis: (also known as parotitis), is an inflammation of the parotid gland that is characterized by a swelling of the gland.
- 4- Dysphagia: is difficulty in swallowing
- 5- esophagitis : (esophag/o means "esophagus"; -itis means "inflammation of") inflammation of esophagus .
- 6- A hiatal hernia: is a condition in which part of the stomach protrudes through the opening (hiatus) in the diaphragm into the thoracic cavity. This type of hernia often causes heartburn or epigastric (epi- means "above"; gastr/o means "stomach"; -ic is an adjective suffix) pain and is usually diagnosed by means of a barium swallow upper GI test or endoscopy.
- 7- GERD (gastroesophageal reflux disease) is the upward flow of stomach acid into the esophagus. This condition creates pain in the *epigastric* (above the stomach or just below the breast bone) region.



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Disorders Of The Lower GI Tract

Disorders of the lower GI tract include obstructions, inflammation, or structural abnormalities.

Some of these conditions are described below.

- Crohn disease is an inflammation in the mucosal lining of the intestine.
- Melena (bloody stools), anorexia, weight loss, and fatigue.
- Appendicitis is a common acute inflammatory disease. It can become abscessed and may rupture, causing peritonitis (an inflammation of the peritoneum, which is the sac that lines the abdominal cavity).
- Diverticula are abnormal pouches in the intestinal wall.
- Diverticulosis occurs when these pouches develop in the colon.
- Intestinal obstruction refers to a lack of movement of the intestinal contents through the intestine. The condition occurs more frequently in the small intestine.
- Inguinal hernia is the protrusion of a small loop of intestine through a weak spot in the lower abdominal wall or groin. Surgical repair is the most frequent type of treatment.
 Cancer of the GI tract frequently affects the colon and rectum.



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Disorders Of The Accessory Organs Of The Digestive System

Many of the conditions that affect the digestive system accessory organs are obstructions caused

by stones, tumors, or inflammatory processes. A few of these are described below.

- Cholelithiasis: Describes a condition in which calculi or stones reside in the gallbladder.
- •Jaundice: (yellowish color of the skin). The normal course of treatment is surgical removal of the gallbladder.
- Hepatitis is an inflammation of the liver . Jaundice, or icterus, is a symptom of hepatitis. The whites of the eyes and mucous membranes take on a yellow appearance caused by the presence of bilirubin in the blood.
- Cirrhosis (cirrh means "yellow") of the liver is a chronic liver disease; the liver becomes firm

and nodular, and the disease can progress to necrosis and liver failure. It is characterized by jaundice, fatigue, and ascites (fluid in the peritoneal cavity).



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Pharmacology

Medications can be prescribed to relieve symptoms, or they may be obtained over the counter.

Some of the common drug classifi cations for the digestive system are as follows:

- Antacids neutralize acid production.
- Antidiarrheals are drugs that relieve diarrhea by absorbing the excess fl uid or by decreasing

intestinal motility.

- Antiemetics are taken to relieve vomiting.
- Antifl atulence drugs are taken to reduce gas (fl atus).
- Emetics stimulate or induce vomiting.
- H2 blockers are drugs used to treat ulcers and conditions such as GERD. They act by blocking the release of acid.
- Protein pump inhibitors are medications prescribed to reduce the production of acid by blocking an enzyme that is necessary for acid production. The reduction of acid prevents ulcers and allows any ulcers that exist in the esophagus, stomach, and duodenum to heal.
- Protective agents are taken for ulcers. They provide a topical protective layer over the ulcer, allowing it to heal.

For some digestive disorders, nutrition, vitamins and medications must be given intravenously

(IV). These patients are considered NPO (can take "nothing by mouth").



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Abbreviation Table For The Digestive System

Abbreviation Table • The Digestive System		
MEANING		
barium enema		
bowel movement		
esophagogastroduodenoscopy		
gallbladder		
gallbladder X-ray series		
gastroesophageal reflux disease		
gastrointestinal		
hydrochloric acid		
irritable bowel syndrome		
lower esophageal sphincter		
nasogastric tube		
nothing by mouth		
per os, or by mouth		
total parenteral nutrition		
upper gastrointestinal		
	barium enema bowel movement esophagogastroduodenoscopy gallbladder gallbladder X-ray series gastroesophageal reflux disease gastrointestinal hydrochloric acid irritable bowel syndrome lower esophageal sphincter nasogastric tube nothing by mouth per os, or by mouth total parenteral nutrition	