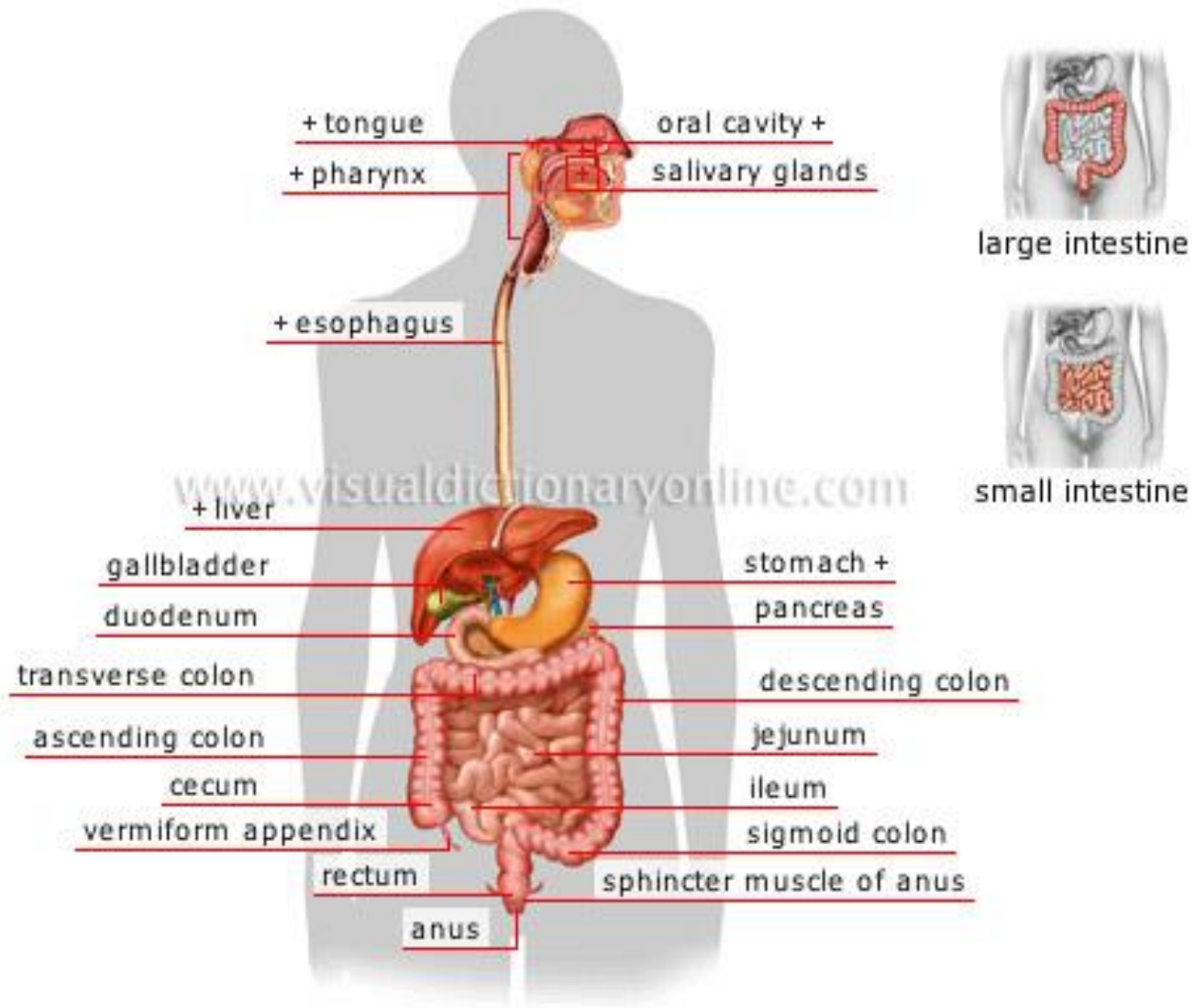


Digestive System

Adult Nursing





Anatomy and physiology

- **Mouth**

- Mechanical and chemical digestion originates here.

- Tongue and teeth are accessory organs of digestion.

- Salivary glands secrete saliva, which combines with food during mastication.



- **Esophagus**
- This organ provides for the transfer of food from the oropharynx to the stomach.
- The closure of the epiglottis prevents food from entering the trachea.
- Closure of the cardiac sphincter prevents reflux of gastric contents.



- **Stomach**
- Is a hollow, one-liter muscular pouch.
- Secrete pepsin, rennin, lipase, mucus, hydrochloric acid, and intrinsic factor for digestion.
- Mixes and stores chyme.



- **Small intestine**
- Small intestine consists of duodenum, jejunum, and ileum.
- Chyme, in liquid or semiliquid form, enters the duodenum through the pyloric sphincter.
- Bile and pancreatic secretions enter the duodenum through the common bile duct at the ampulla of Vater.
- Small intestine digests food.
- Small intestine absorbs nutrients
- Small intestine is lined with villi that contain capillaries and lymphatic.
- Motor activity of the small intestine includes mixing and peristalsis.



Large intestine

Large intestine consists of the cecum, colon, rectum, and anus.

Segments of the colon are the cecum, ascending colon, transverse colon, descending colon, and sigmoid colon.

Chyme enters the cecum through the ileocecal valve.

Large intestine has several functions.

Absorption of fluid and electrolytes.

Synthesis of vitamin K by intestinal bacteria.

Storage of fecal material.

Chyme becomes more solid as water is absorbed through the intestinal wall of the colon.

Defecation is the movement of feces from the rectum through anal sphincter.



- **Risk factors for developing GI disorders**
- Diet: low fiber
- Smoking
- Alcohol consumption
- Inactivity
- Stress
- Contaminated water and food
- Anger, fear, or anxiety
- Family history
- History of previous GI dysfunction
- Culturally based reluctance to discuss personal hygiene and health habits.



- **Signs and symptoms of digestive disease**
- Inadequate diet
- Change in bowel habits
- Constipation
- Diarrhea
- Flatus
- Complaints of indigestion
- Change in weight
- Nausea and vomiting
- Abdominal pain
- Difficulty in swallowing
- Loss of appetite
- Dysphagia



- Abnormal color and consistency of stool
- a-Melina
- b- clay
- c-frothy
- d-steatorrhea
- e-occult blood in stool
- Abnormal bowel sounds
- Abnormal distention
- Rectal bleeding
- Jaundice
- Edema
- Hematemesis
- Anorexia



- **Diagnostic tests and procedures**
- **1- Upper GI series**
- Definition and purpose
- Fluoroscopic procedure using barium as a contrast medium
- Examination of the esophagus, stomach, duodenum, and other portions of the small bowel after swallowing barium.
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- **2-Lower GI series (Barium enema)**
- Definition and purpose
- Fluoroscopic procedure using barium as a contrast medium
- Examination of the large intestine after administration of barium. Via an enema

- **3- Endoscopy**
- Procedure using an endoscope
- Direct visualization of the esophagus and stomach.
- **4- Fecal occult blood test.**
- Laboratory test using a reagent.
- Analysis of stool for blood.
- **5- Fecal fat**
- Laboratory test using a stain.
- Analysis of stool for fat.
- **6- Proctosigmoidoscopy**
- Procedure using a lighted scope.
- Direct visualization of the sigmoid colon, rectum, and anal canal.



- **7- Barium swallow**
- Procedure using barium as a contrast medium.
- Fluoroscopic examination of the pharynx and esophagus after administration of barium.
- **8- Gastric analysis**
- Procedure that aspirates the contents of the stomach through nasogastric (NG) tube.
- Fasting analysis to measure the acidity of gastric secretions.
- **9- Ultrasonography**
- Noninvasive procedure examination that uses echoes from sound waves.
- Visualization of body organs.



- **Blood chemistry**
- Laboratory test of a blood sample.
- Analysis for potassium, sodium, calcium, phosphorus, glucose, bicarbonate, blood urea nitrogen (BUN), creatinine, protein, albumin, osmolality, amylase, lipase, alkaline phosphatase, ammonia, bilirubin, lactic dehydrogenase, (LDH), bromsulphalein (BSP) test, serum aspartate aminotransferase (AST), formerly serum glutamic oxaloacetic transaminase (SGOT), serum alanine aminotransferase (ALT), formerly serum glutamic pyruvic transaminase (SGPT),



- **Hematologic studies**
- Laboratory test of a blood sample.
- Analysis for red blood cells (RBCs), white blood cells (WBCs), platelets, prothrombin time (PT), partial thromboplastin time (PTT), hemoglobin (Hgb), hematocrit (Hct).



Thank You

