* Overview of Anatomy and Physiology
* Digestive system
* Organs and their functions
* Mouth: Beginning of digestion
* Teeth: Bite, crush, and grind food
* Salivary glands: Secrete saliva
* Esophagus: Moves food from mouth to stomach
* Stomach: Churn and mix contents with gastric juices
* Small intestine: Most digestion occurs here
* Large intestine: Forms and expels feces
* Rectum: Expels feces
* Overview of Anatomy and Physiology
* Accessory organs of digestion
* Organs and their functions
* Liver: Produces bile; stores it in the gallbladder
* Pancreas: Produces pancreatic juice
* Regulation of food intake
* Hypothalamus
* One center stimulates eating and another signals to stop eating
* Laboratory and Diagnostic Examinations
* Upper GI series
* Gastric analysis
* Esophagogastroduodenoscopy (EGD)
* Barium swallow
* Bernstein test
* Stool for occult blood
* Sigmoidoscopy
* Barium enema
* Colonoscopy
* Stool culture and sensitivity; stool for ova and parasites
* Flat plate of the abdomen
* Disorders of the Mouth
* Dental plaque and caries
* Etiology/pathophysiology
* Erosive process that results from the action of bacteria on carbohydrates in the mouth, which produces acids that dissolve tooth enamel
* Medical management/nursing interventions
* Remove affected area and replace with dental material
* Disorders of the Mouth
* Candidiasis
* Etiology/pathophysiology
* Infection caused by a species of *Candida*, usually *Candida albicans*
* Fungus normally present in the mouth, intestine, and vagina, and on the skin
* Also referred to as *thrush* and *moniliasis*
* Clinical manifestations/assessment
* Small white patches on the mucous membrane of the mouth
* Thick white discharge from the vagina
* Disorders of the Mouth
* Candidiasis *(continued)*
* Medical management/nursing interventions
* Pharmacological management
* Nystatin
* Ketoconazole oral tablets
* Half-strength hydrogen peroxide/saline mouthwash
* Meticulous handwashing
* Comfort measures
* Disorders of the Mouth
* Carcinoma of the oral cavity
* Etiology/pathophysiology
* Malignant lesions on the lips, oral cavity, tongue, or pharynx
* Usually squamous cell epitheliomas
* Clinical manifestations/assessment
* Leukoplakia
* Roughened area on the tongue
* Difficulty chewing, swallowing, or speaking
* Edema, numbness, or loss of feeling in the mouth
* Earache, face ache, and toothache
* Disorders of the Mouth
* Carcinoma of the oral cavity *(continued)*
* Diagnostic tests
* Indirect laryngoscopy
* Excisional biopsy
* Medical management/nursing interventions
* Stage I: Surgery or radiation
* Stage II & III: Both surgery and radiation
* Stage IV: Palliative
* Disorders of the Esophagus
* Gastroesophageal reflux disease
* Etiology/pathophysiology
* Backward flow of stomach acid into the esophagus
* Clinical manifestations/assessment
* Heartburn (pyrosis) 20 min to 2 hours after eating
* Regurgitation
* Dysphagia or odynophagia
* Eructation
* Disorders of the Esophagus
* Gastroesophageal reflux disease *(continued)*
* Diagnostic tests
* Esophageal motility and Bernstein tests
* Barium swallow
* Endoscopy
* Medical management/nursing interventions
* Pharmacological management
* Antacids or acid-blocking medications
* Dietary recommendations
* Lifestyle recommendations
* Comfort measures
* Surgery
* Disorders of the Esophagus
* Carcinoma of the esophagus
* Etiology/pathophysiology
* Malignant epithelial neoplasm that has invaded the esophagus
* 90% are squamous cell carcinoma associated with alcohol intake and tobacco use
* 6% are adenocarcinomas associated with reflux esophagitis
* Clinical manifestations/assessment
* Progressive dysphagia over a 6-month period
* Sensation of food sticking in throat
* Disorders of the Esophagus
* Carcinoma of the esophagus *(continued)*
* Medical management/nursing interventions
* Radiation: May be curative or palliative
* Surgery: May be palliative, increase longevity, or curative
* Types of surgical procedures
* Esophagogastrectomy
* Esophagogastrostomy
* Esophagoenterostomy
* Gastrostomy
* Disorders of the Esophagus
* Achalasia
* Etiology/pathophysiology
* Cardiac sphincter of the stomach cannot relax
* Possible causes: Nerve degeneration, esophageal dilation, and hypertrophy
* Clinical manifestations/assessment
* Dysphagia
* Regurgitation of food
* Substernal chest pain
* Loss of weight; weakness
* Poor skin turgor
* Disorders of the Esophagus
* Achalasia *(continued)*
* Diagnostic tests
* Radiologic studies; esophagoscopy
* Medical management/nursing interventions
* Pharmacological management
* Anticholinergics, nitrates, and calcium channel blockers
* Dilation of cardiac sphincter
* Surgery
* Cardiomyectomy
* Disorders of the Stomach
* Acute gastritis
* Etiology/pathophysiology
* Inflammation of the lining of the stomach
* May be associated with alcoholism, smoking, and stressful physical problems
* Clinical manifestations/assessment
* Fever; headache
* Epigastric pain; nausea and vomiting
* Coating of the tongue
* Loss of appetite
* Disorders of the Stomach
* Acute gastritis *(continued)*
* Diagnostic tests
* Stool for occult blood; WBC; electrolytes
* Medical management/nursing interventions
* Pharmacological management
* Antiemetics
* Antacids
* Antibiotics
* IV fluids
* NG tube and administration of blood, if bleeding
* NPO until signs and symptoms subside
* Monitor intake and output
* Disorders of the Stomach
* Gastric ulcers and duodenal ulcers
* Ulcerations of the mucous membrane or deeper structures of the GI tract
* Most commonly occur in the stomach and duodenum
* Result of acid and pepsin imbalances
* *H. pylori*
* Bacterium found in 70% of patients with gastric ulcers and 95% of patients with duodenal ulcers
* Disorders of the Stomach
* Gastric ulcers *(continued)*
* Etiology/pathophysiology
* Gastric mucosa are damaged, acid is secreted, mucosal erosion occurs, and an ulcer develops
* Duodenal ulcers *(continued)*
* Etiology/pathophysiology
* Excessive production or release of gastrin, increased sensitivity to gastrin, or decreased ability to buffer the acid secretions
* Disorders of the Stomach
* Gastric and duodenal ulcers *(continued)*
* Clinical manifestations/assessment
* Pain: Dull, burning, boring, or gnawing, epigastric
* Dyspepsia
* Hematemesis
* Melena
* Diagnostic tests
* Esophagogastroduodenoscopy (EGD)
* Breath test for *H. pylori*
* Disorders of the Stomach
* Gastric and duodenal ulcers *(continued)*
* Medical management/nursing interventions
* Pharmacological management
* Antacids
* Histamine H2 receptor blockers
* Proton pump inhibitor
* Mucosal healing agents
* Antibiotics
* Dietary recommendations
* High in fat and carbohydrates; low in protein and milk products; small frequent meals; limit coffee, tobacco, alcohol, and aspirin use
* Disorders of the Stomach
* Gastric and duodenal ulcers *(continued)*
* Medical management/nursing interventions
* Surgery
* Antrectomy
* Gastroduodenostomy (Billroth I)
* Gastrojejunostomy (Billroth II)
* Total gastrectomy
* Vagotomy
* Pyloroplasty
* Disorders of the Stomach
* Gastric and duodenal ulcers *(continued)*
* Complications after gastric surgery
* Dumping syndrome
* Pernicious anemia
* Iron deficiency anemia
* Disorders of the Stomach
* Cancer of the stomach
* Etiology/pathophysiology
* Most commonly adenocarcinoma
* Primary location is the pyloric area
* Risk factors:
* History of polyps
* Pernicious anemia
* Hypochlorhydria
* Gastrectomy; chronic gastritis; gastric ulcer
* Diet high in salt, preservatives, and carbohydrates
* Diet low in fresh fruits and vegetables
* Disorders of the Stomach
* Cancer of the stomach *(continued)*
* Clinical manifestations/assessment
* Early stages may be asymptomatic
* Vague epigastric discomfort or indigestion
* Postprandial fullness
* Ulcer-like pain that does not respond to therapy
* Anorexia; weight loss
* Weakness
* Blood in stools; hematemesis
* Vomiting after fluids and meals
* Disorders of the Stomach
* Cancer of the stomach *(continued)*
* Diagnostic tests
* GI series
* Endoscopic/gastroscopic examination
* Stool for occult blood
* RBC, hemoglobin, and hematocrit
* Medical management/nursing interventions
* Surgery
* Partial or total gastric resection
* Chemotherapy and/or radiation
* Disorders of the Intestines
* Infection
* Etiology/pathophysiology
* Invasion of the alimentary canal by pathogenic microorganisms
* Most commonly enters through the mouth in food or water
* Person-to-person contact
* Fecal-oral transmission
* Long-term antibiotic therapy can cause an overgrowth of the normal intestinal flora
(*C. difficile*)
* Disorders of the Intestines
* Infection *(continued)*
* Clinical manifestations/assessment
* Diarrhea
* Rectal urgency
* Tenesmus
* Nausea and vomiting
* Abdominal cramping
* Fever
* Disorders of the Intestines
* Infection *(continued)*
* Diagnostic tests
* Stool culture
* Medical management/nursing interventions
* Antibiotics
* Fluid and electrolyte replacement
* Kaopectate
* Pepto-Bismol
* Disorders of the Intestines
* Irritable bowel syndrome
* Etiology/pathophysiology
* Episodes of alteration in bowel function
* Spastic and uncoordinated muscle contractions of the colon
* Clinical manifestations/assessment
* Abdominal pain
* Frequent bowel movements
* Sense of incomplete evacuation
* Flatulence, constipation, and/or diarrhea
* Disorders of the Intestines
* Irritable bowel syndrome *(continued)*
* Diagnostic tests
* History and physical examination
* Medical management/nursing interventions
* Pharmacological management
* Anticholinergics
* Milk of magnesia
* Mineral oil
* Opioids
* Antianxiety agents
* Dietary recommendations
* Bulking agents
* Disorders of the Intestines
* Ulcerative colitis
* Etiology/pathophysiology
* Ulceration of the mucosa and submucosa of the colon
* Tiny abscesses form that produce purulent drainage, slough the mucosa, and ulcerations occur
* Clinical manifestations/assessment
* Diarrhea—pus and blood; 15 to 20 stools per day
* Abdominal cramping
* Involuntary leakage of stool
* Disorders of the Intestines
* Ulcerative colitis *(continued)*
* Diagnostic tests
* Barium studies, colonoscopy, stool for occult blood
* Medical management/nursing interventions
* Pharmacological management
* Azulfidine, Dipentum, Rowasa, corticosteroids, Imodium
* Dietary recommendations: No milk products or spicy foods; high-protein, high-calorie; total parenteral nutrition
* Stress control
* Assist patient to find coping mechanisms
* Disorders of the Intestines
* Ulcerative colitis *(continued)*
* Medical management/nursing interventions
* Surgical interventions
* Colon resection
* Ileostomy
* Ileoanal anastomosis
* Proctocolectomy
* Kock pouch
* Disorders of the Intestines
* Crohn’s disease
* Etiology/pathophysiology
* Inflammation, fibrosis, scarring, and thickening of the bowel wall
* Clinical manifestations/assessment
* Weakness; loss of appetite
* Diarrhea: 3 to 4 daily; contain mucus and pus
* Right lower abdominal pain
* Steatorrhea
* Anal fissures and/or fistulas
* Disorders of the Intestines
* Crohn’s disease *(continued)*
* Medical management/nursing interventions
* Pharmacological management
* Corticosteroids
* Azulfidine
* Antibiotics
* Antidiarrheals; antispasmodics
* Enteric-coated fish oil capsules
* B12 replacement
* Disorders of the Intestines
* Crohn’s disease *(continued)*
* Medical management/nursing interventions
* Dietary recommendations
* High-protein
* Elemental
* Hyperalimentation
* Avoid
* Lactose-containing foods, brassica vegetables, caffeine, beer, monosodium glutamate, highly seasoned foods, carbonated beverages, fatty foods
* Surgery
* Segmental resection of diseased bowel
* Disorders of the Intestines
* Appendicitis
* Etiology/pathophysiology
* Inflammation of the vermiform appendix
* Lumen of the appendix becomes obstructed, the
*E. coli* multiplies, and an infection develops
* Clinical manifestations/assessment
* Rebound tenderness over the right lower quadrant of the abdomen (McBurney’s point)
* Vomiting
* Low-grade fever
* Elevated WBC
* Disorders of the Intestines
* Appendicitis *(continued)*
* Diagnostic tests
* WBC
* Roentgenogram
* Ultrasound
* Laparoscopy
* Medical management/nursing interventions
* Appendectomy
* Disorders of the Intestines
* Diverticular disease
* Etiology/pathophysiology
* Diverticulosis
* Pouch-like herniations through the muscular layer of the colon
* Diverticulitis
* Inflammation of one or more diverticula
* Disorders of the Intestines
* Diverticular disease *(continued)*
* Clinical manifestations/assessment
* Diverticulosis
* May have few, if any, symptoms
* Constipation, diarrhea, and/or flatulence
* Pain in the left lower quadrant
* Diverticulitis
* Mild to severe pain in the left lower quadrant
* Elevated WBC; low-grade fever
* Abdominal distention
* Vomiting
* Blood in stool
* Disorders of the Intestines
* Diverticular disease *(continued)*
* Medical management/nursing interventions
* Diverticulosis with muscular atrophy
* Low-residue diet; stool softeners
* Bed rest
* Diverticulosis with increased intracolonic pressure and muscle thickening
* High-fiber diet
* Sulfa drugs
* Antibiotics; analgesics
* Disorders of the Intestines
* Diverticular disease *(continued)*
* Medical management/nursing interventions *(continued)*
* Surgery
* Hartmann’s pouch
* Double-barrel transverse colostomy
* Transverse loop colostomy
* Disorders of the Intestines
* Peritonitis
* Etiology/pathophysiology
* Inflammation of the abdominal peritoneum
* Bacterial contamination of the peritoneal cavity from fecal matter or chemical irritation
* Clinical manifestations/assessment
* Severe abdominal pain; nausea and vomiting
* Abdomen is tympanic; absence of bowel sounds
* Chills; weakness
* Weak rapid pulse; fever; hypotension
* Disorders of the Intestines
* Peritonitis *(continued)*
* Diagnostic tests
* Flat plate of the abdomen
* CBE
* Medical management/nursing interventions
* Pharmacological management
* Parenteral antibiotics
* Analgesics
* IV fluids
* Position patient in semi-Fowler’s position
* Surgery
* Repair cause of fecal contamination
* Removal of chemical irritant
* NG tube to prevent GI distention
* Disorders of the Intestines
* External hernias
* Etiology/pathophysiology
* Congenital or acquired weakness of the abdominal wall or postoperative defect
* Abdominal
* Femoral or inguinal
* Umbilical
* Disorders of the Intestines
* External hernias *(continued)*
* Clinical manifestations/assessment
* Protruding mass or bulge around the umbilicus, in the inguinal area, or near an incision
* Incarceration
* Strangulation
* Diagnostic tests
* Radiographs
* Palpation
* Disorders of the Intestines
* External hernias *(continued)*
* Medical management/nursing interventions
* If no discomfort, hernia is left unrepaired, unless it becomes strangulated or obstruction occurs
* Truss
* Surgery
* Synthetic mesh is applied to weakened area of the abdominal wall
* Disorders of the Intestines
* Hiatal hernia
* Etiology/pathophysiology
* Protrusion of the stomach and other abdominal viscera through an opening in the membrane or tissue of the diaphragm
* Contributing factors: obesity, trauma, aging
* Clinical manifestations/assessment
* Most people display few, if any, symptoms
* Gastroesophageal reflux
* Disorders of the Intestines
* Hiatal hernia *(continued)*
* Medical management/nursing interventions
* Head of bed should be slightly elevated when lying down
* Surgery
* Posterior gastropexy
* Transabdominal fundoplication (Nissen)
* Disorders of the Intestines
* Intestinal obstruction
* Etiology/pathophysiology
* Intestinal contents cannot pass through the GI tract
* Partial or complete
* Mechanical
* Non-mechanical
* Clinical manifestations/assessment
* Vomiting; dehydration
* Abdominal tenderness and distention
* Constipation
* Disorders of the Intestines
* Intestinal obstruction *(continued)*
* Diagnostic tests
* Radiographic examinations
* BUN, sodium, potassium, hemoglobin, and hematocrit
* Medical management/nursing interventions
* Evacuation of intestine
* NG tube to decompress the bowel
* Nasointestinal tube with mercury weight
* Surgery
* Required for mechanical obstructions
* Disorders of the Intestines
* Colorectal cancer
* Etiology/pathophysiology
* Malignant neoplasm that invades the epithelium and surrounding tissue of the colon and rectum
* Second most prevalent internal cancer in the United States
* Clinical manifestations/assessment
* Change in bowel habits; rectal bleeding
* Abdominal pain, distention, and/or ascites
* Nausea
* Cachexia
* Disorders of the Intestines
* Cancer of the colon *(continued)*
* Diagnostic tests
* Proctosigmoidoscopy with biopsy
* Colonoscopy
* Stool for occult blood
* Medical management/nursing interventions
* Radiation
* Chemotherapy
* Disorders of the Intestines
* Cancer of the colon *(continued)*
* Medical management/nursing interventions *(continued)*
* Surgery
* Obstruction
* One-stage or two-stage resection
* Two-stage resection
* Colorectal cancer
* Right or left hemicolectomy
* Anterior rectosigmoid resection
* Disorders of the Intestines
* Hemorrhoids
* Etiology/pathophysiology
* Varicosities (dilated veins)
* External or internal
* Contributing factors
* Straining with defecation, diarrhea, pregnancy, CHF, portal hypertension, prolonged sitting and standing
* Clinical manifestations/assessment
* Varicosities in rectal area
* Bright red bleeding with defecation
* Pruritus
* Severe pain when thrombosed
* Disorders of the Intestines
* Hemorrhoids *(continued)*
* Medical management/nursing interventions
* Pharmacological management
* Bulk stool softeners
* Hydrocortisone cream
* Topical analgesics
* Sitz baths
* Ligation
* Sclerotherapy; cryotherapy
* Infrared photocoagulation
* Laser excision
* Hemorrhoidectomy
* Disorders of the Intestines
* Anal fissure
* Linear ulceration or laceration of the skin of the anus
* Usually caused by trauma
* Lesions usually heal spontaneously
* May be excised surgically
* Anal fistula
* Abnormal opening on the surface near the anus
* Usually from a local abscess
* Common in Crohn’s disease
* Treated by a fistulectomy or fistulotomy
* Nursing Process
* Nursing diagnoses
* Disorders of the Intestines
* Fecal incontinence
* Potential causes
* Medical management/nursing interventions
* Biofeedback training
* Bowel training
* Patient education
* Dietary recommendations