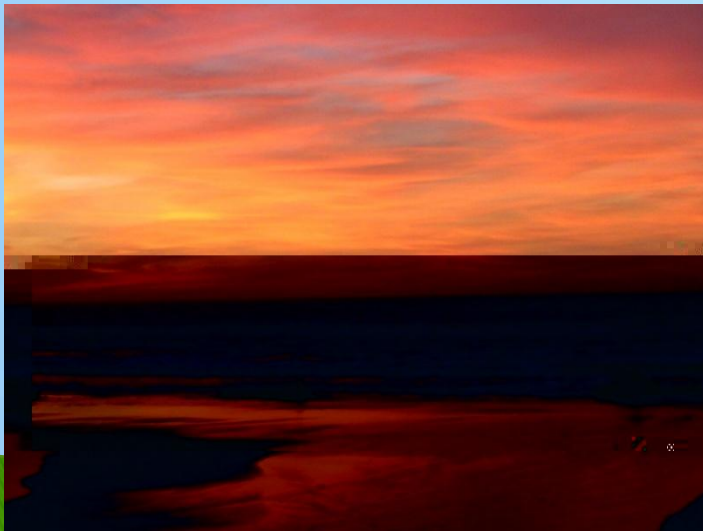


Upper and Lower Gastrointestinal Disorders



OCCC Nursing Program

NUR 143

Linda Mollino

Program Description

- ▶ This lesson will focus on disorders of the gastrointestinal system and including clinical manifestations, diagnostic testing, nursing, medical and pharmacological management.
- ▶ Discussion will be focused across the life span.

Program Objectives

- ▶ Relate clinical manifestations diagnostic test results to the pathophysiologic process involved with upper GI disorders such as: GERD, hiatal hernias, gastritis, and peptic ulcers.
- ▶ List factors predisposing to an upper gastrointestinal problem.
- ▶ Identify important assessment data to be collected on patients with an upper gastrointestinal problem.
- ▶ Relate the abnormal assessment, lab and diagnostic findings to the pathophysiology of the disorders.
- ▶ Identify common treatment modalities for this disorder.
- ▶ Explain the nursing care across the lifespan of a patient with an upper gastrointestinal problem.
- ▶ Identify common complications of upper gastrointestinal problems.
- ▶ Identify important aspects of health promotion regarding upper gastrointestinal problems.
- ▶ Identify the action, reaction/side effects and nursing implications of drugs used to treat these disorders.
- ▶ Identify the nutritional considerations for a patient with an upper gastrointestinal problem.

Program Objectives

- ▶ Describe the pathophysiology and manifestations of selected lower gastrointestinal problems.
- ▶ List factors predisposing to an lower gastrointestinal problem.
- ▶ Identify important assessment data to be collected on patients with a lower gastrointestinal problem.
- ▶ Relate the abnormal assessment, lab and diagnostic findings to the pathophysiology of the disorders.
- ▶ Identify common treatment modalities for these disorders.
- ▶ Identify common complications of lower gastrointestinal problems.
- ▶ Identify important aspects of health promotion regarding lower gastrointestinal problems.
- ▶ Identify the action, reaction/side effects and nursing implications of drugs used to treat these disorders.
- ▶ Identify the nutritional considerations for a patient with a lower gastrointestinal problem

An Endoscopic Journey through the Gastrointestinal Channel

<http://www.gastrolab.net/welcomee.htm>

Risk Factors Associated with the GI System

- ▶ Family history of GI disorders
- ▶ Chronic laxative use
- ▶ Tobacco use
- ▶ Chronic alcohol use
- ▶ Chronic high stress levels
- ▶ Allergic reactions to food or medications
- ▶ Long-term GI conditions such as ulcerative colitis may predispose to colorectal cancer
- ▶ Previous abdominal surgery or trauma may lead to adhesions
- ▶ Neurological disorders can impair movement, particularly with chewing and swallowing

GI Assessment - Subjective Data

- Nausea and/or vomiting
- Anorexia
- Difficulty swallowing
- Pain - location, intensity, duration
- Symptoms related to food, fluid, medication intake
- Assess bowel habits and problems with elimination
- ▶ Health History
- ▶ Physical Examination
- ▶ Psychosocial Examination
- ▶ Diagnostic Examination

Assessment

Demographic History

- *age, gender, culture, occupation

Personal and Family Hx ask about

- *previous GI disorders, Colitis, Hernias, Alcoholism, Diabetes, Liver disease, cancers heart disease, jaundice, gallbladder or pancreatic problems
- *have they travel out of the country
- *on medications? ASA, laxatives, NSAIDS, antacids

Diet Hx

- *what are usual meals
- *recent change in appetite, meals
- *NV with eating or pain with eating
- *frequency of pain and duration
- *caffeine or alcohol consumption
- *certain foods bother them (lactose intolerance)
- *trouble swallowing
- *have they been on a diet

Socioeconomic Status

- *gives the nurse valuable info. Regarding clients ability to buy appropriate foods and medications

Current health Status

- *what is wrong, when did it start, what have you been doing for it
- *get an accurate picture of whats going on

Change in Bowel habits

- *pattern of bowel movements
- *color and consistency of feces
- *occurrence of diarrhea or constipation
- *effective action taken to relieve diarrhea or constipation
- *presence of abdominal distention or gas

Assessment

- ▶ Unexplained weight gain or weight loss is often an early warning sign to the client that something is wrong.
 - Assess the client for : *normal weight
 - *weight gain or loss
 - *period of time for weight change
 - *change in appetite or oral intake
- ▶ Pain is a common complaint in clients with GI tract disorders. The nurse ask the client about:
 - *the presence of pain
 - *the location of pain
 - *radiation to another site
 - *factors that make the pain better or worse
 - *the time of day when the pain is worst
 - *intensity
- ▶ Get descriptors of pain, have them point to the site
- ▶ Do they smoke? More prone to oral cancer and nicotine is a gastric irritant. Get a smoking history, including number of packs they smoke a day

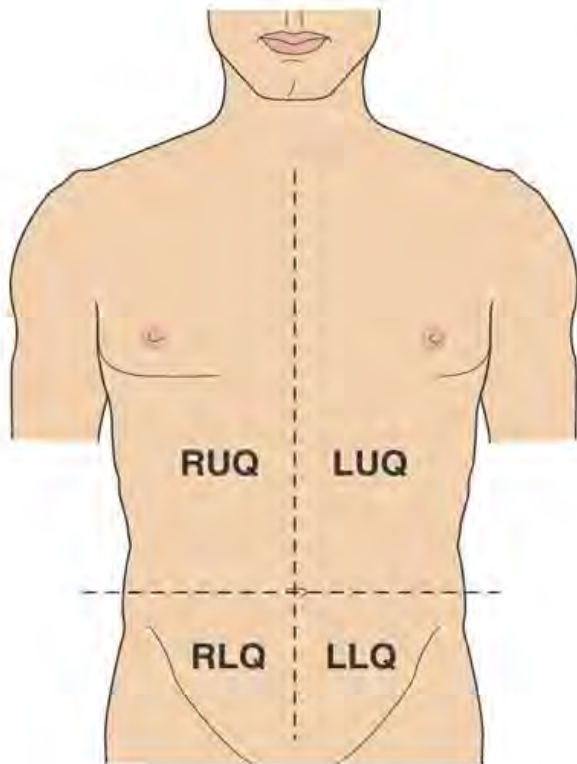
Digestion/Absorption Assessment

- Dyspepsia (indigestion): note location of discomfort, whether associated with certain foods time of day/night of occurrence, associated symptoms.
- Dysphagia: note level of sensation where problem occurs whether it occurs with food or fluids
- Heartburn: location, whether pain radiates whether it occurs before or after meals, time of day when discomfort is most noticeable, foods that aggravate or alleviating symptoms.
- Pain: character, frequency, location, duration, distribution, aggravating or alleviating factors.
- Nausea: note onset and duration, and associated s/s such as weakness, headache, vomiting and occurrence before or after meals.
- Vomiting: note onset and duration, food and fluids that can be maintained. Associated s/s such as fever and diarrhea.

GI Assessment - Objective Data

- Inspect mouth, gums, teeth, tongue, oropharynx, breath odor
- Inspect abdomen - contour, scars, masses, distention, peristalsis, tenderness
- Assess for shortness of breath at rest and dilated, visible veins in neck
- Auscultate abdomen for 5 minutes (total) to assess bowel sounds
- Measure abdominal girth
- Percuss abdomen - identify masses, fluid, air

Nursing Assessment



Midline

Aorta
Bladder
Uterus

○ = Umbilicus

Right Upper Quadrant

Liver and gallbladder
Pylorus
Duodenum
Head of pancreas
Right adrenal gland
Portion of right kidney
Hepatic flexure of colon
Portions of ascending and transverse colon

Right Lower Quadrant

Lower pole of right kidney
Cecum and appendix
Portion of ascending colon
Bladder (if distended)
Right ovary and fallopian tube
Right spermatic cord
Right ureter

Left Upper Quadrant

Left lobe of liver
Spleen
Stomach
Body of pancreas
Left adrenal gland
Portion of left kidney
Splenic flexure of colon
Portions of transverse and descending colon

Left Lower Quadrant

Lower pole of left kidney
Sigmoid colon
Portion of descending colon
Bladder (if distended)
Left ovary and fallopian tube
Uterus (if enlarged)
Left spermatic cord
Left ureter



GASTROINTESTINAL SYSTEM

- At birth the resistance of the newborn's intestinal tract to bacterial and viral infection is incompletely developed.
- As children grow, they have higher nutritional, metabolic, and energy needs.
- Children with nausea and vomiting dehydrate more quickly than adults with those symptoms.
- The infant's stomach is small and empties rapidly.
- Newborns produce little saliva until 3 months of age.
- Swallowing is reflex for the first 3 months.
- Hepatic efficiency in the newborn is immature, sometimes causing jaundice.
- The infant's fat absorption is poor because of a decreased pool of bile acid.

FIGURE 27-1 Some of the gastrointestinal system differences between the child and adult. The digestive system consists of the digestive tract and the glands that secrete digestive juices into the digestive tract. This system mechanically and chemically breaks down food and eliminates wastes.

(Art overlay courtesy of Elsevier Publishing Group, Philadelphia, PA.)

Pre-surgical Nursing Care for GI Disorders

- Monitor vital signs, pulse oximetry, lung sounds
- Calculate and record intake and output.
- Assess intravenous catheter for patency, redness, or swelling
- Supervise mealtimes to determine clients' ability to swallow
- Measure daily weight and obtain calorie count from dietitian
- If nasogastric (NG) tube in place, observe for patency

Pre and Post Surgical Care of the GI Patient

Pre-op Care

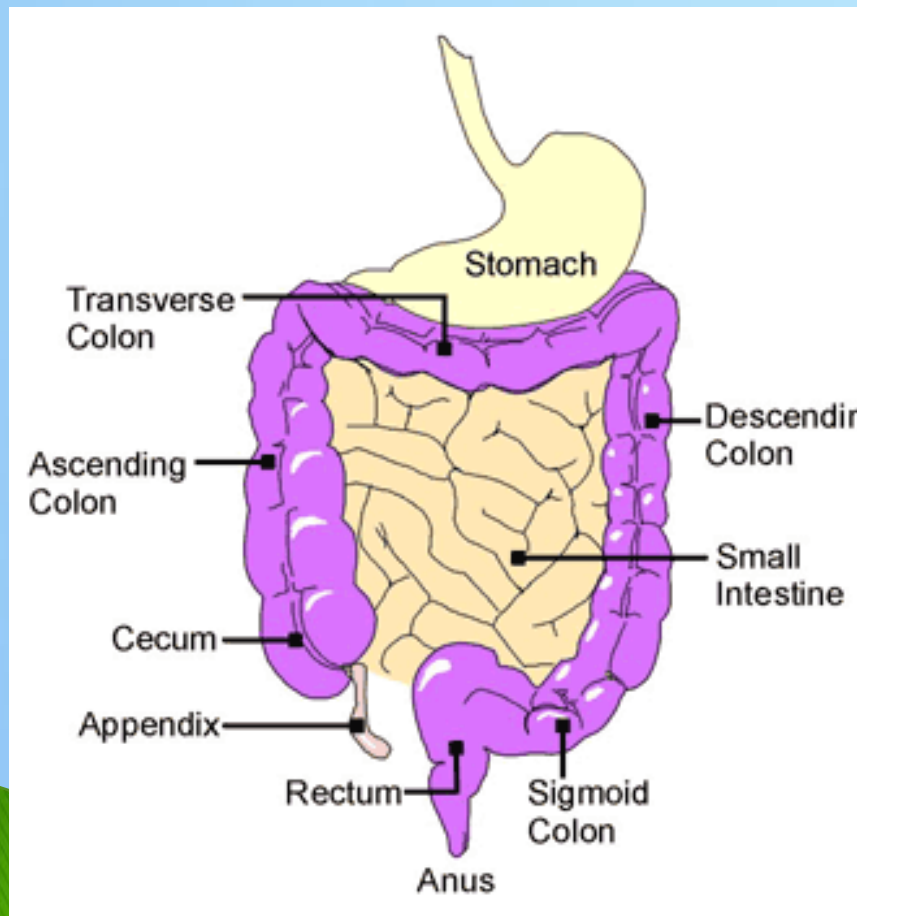
- Observe for airway patency and signs of aspiration.
- Assess vital signs.
- Encourage client to cough and deep breathe.
- Document dressing changes.
- Describe wound incision and healing.
- NPO with NG tube.
- Provide intravenous fluids.
- Assess hydration - daily weight, skin turgor.
- Give antibiotics.

Post-surgical Care

- Monitor for infection
 - temperature, white blood cell count
- Evaluate signs of bowel activity
- Auscultate lung sounds and use spirometer to exercise lungs
- Encourage early ambulation
- Assess pain level and medicate
- Splint wound when client is ambulating or coughing
- Provide oral care to alleviate dryness

Postsurgical Nursing Care for GI Disorders

- Advance diet when bowel sounds return.
- Ice chips, sips of water, clear liquids
- Record intake and output.
- Administer dietary supplements as needed.
- Vitamin B12, vitamin D, folic acid, calcium
- Teach signs and symptoms of complications and provide nutrition counseling.
- Allow verbalization of client's fears and emotions.



Disorders of the Mouth

Candidiasis

- caused by Candida a fungal organism normally found in the mucous membrane of the mouth, intestinal tract and vagina

Stomatitis

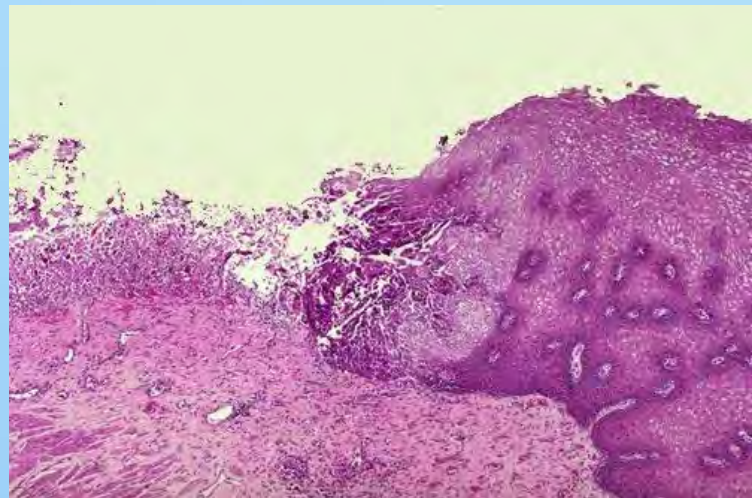
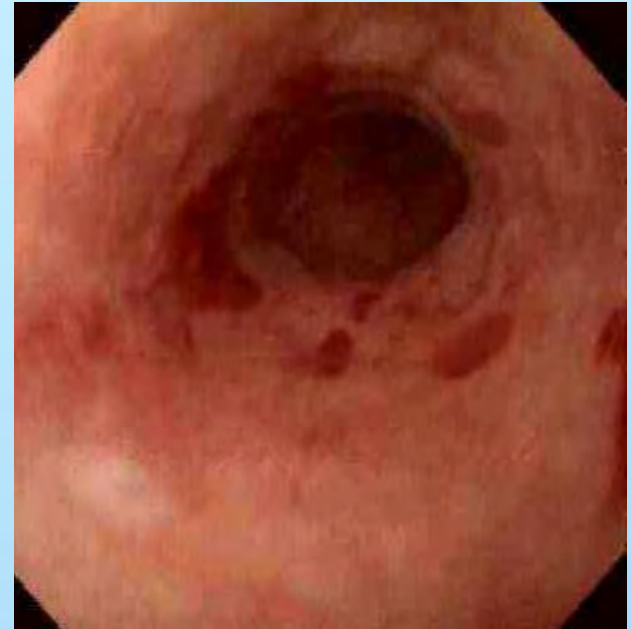
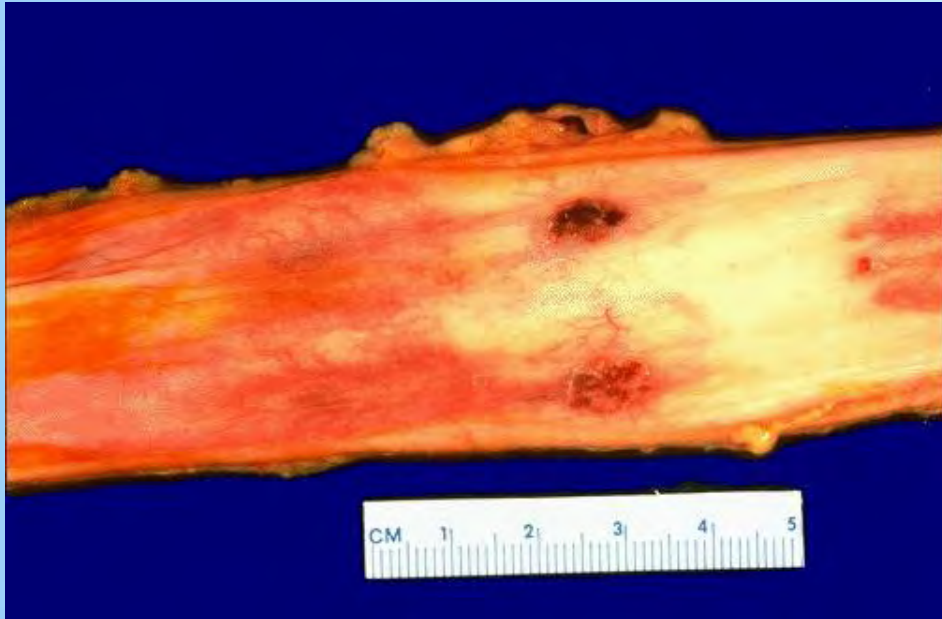
- disorder of the mouth that is characterized by inflammation and ulcerations resulting from infection, substances that irritate the mucous membranes or chemotherapy.

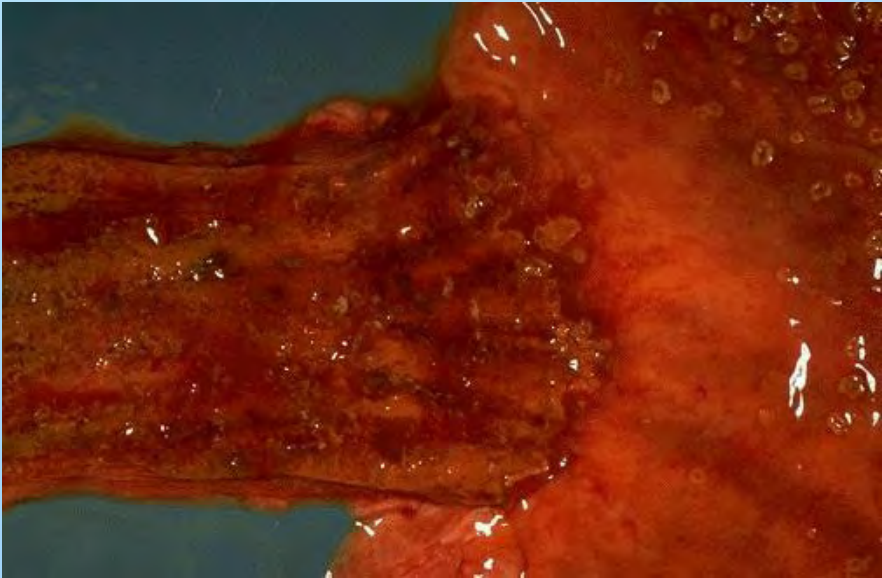
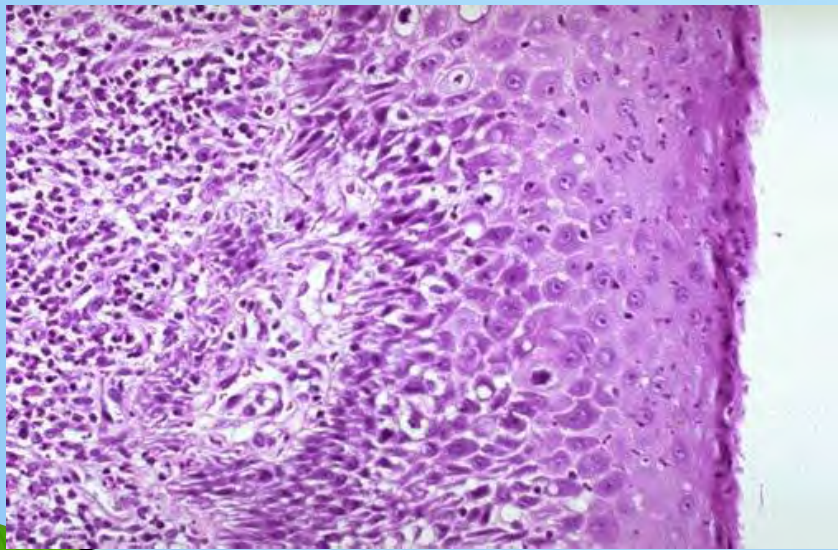
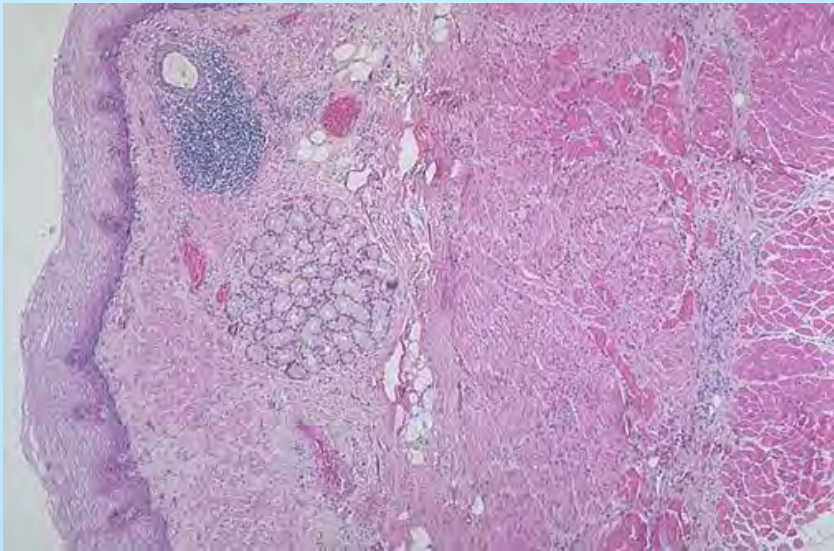
Ca of the Oral Cavity

- ▶ oral cancer accounts for 4% of cancer diagnosis in males and 2% in females
 - Tumors of the submaxillary gland: high incidence of malignancy
 - Ca of the anterior tongue and floor of the mouth seem to occur together and spread rapidly

Oral cancer. (*Source: John Radcliffe Hospital/Science Photo Library.*)







Esophageal Varices

- ▶ Dilated and tortuous veins in the submucosa of the esophagus
- ▶ They are caused by portal hypertension, are often associated with liver cirrhosis, and are at high risk for rupture if portal circulation pressure rises
- ▶ Bleeding varices is an emergency
- ▶ The goal of treatment is to control bleeding
 - prevent complications, and prevent the recurrence of a bleed

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DR. MURRA SACA.

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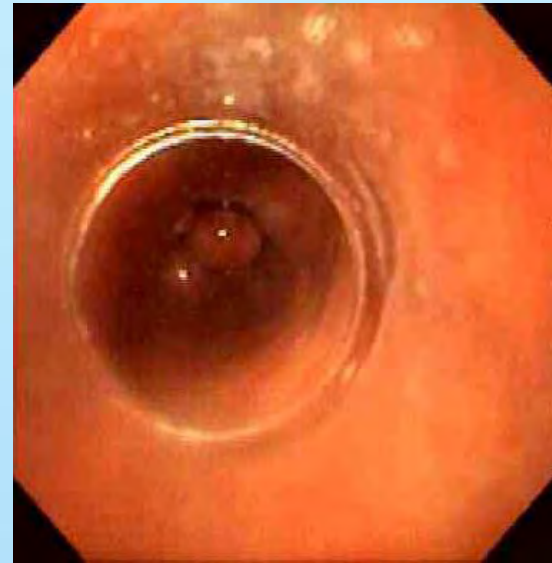
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Esophageal Varices

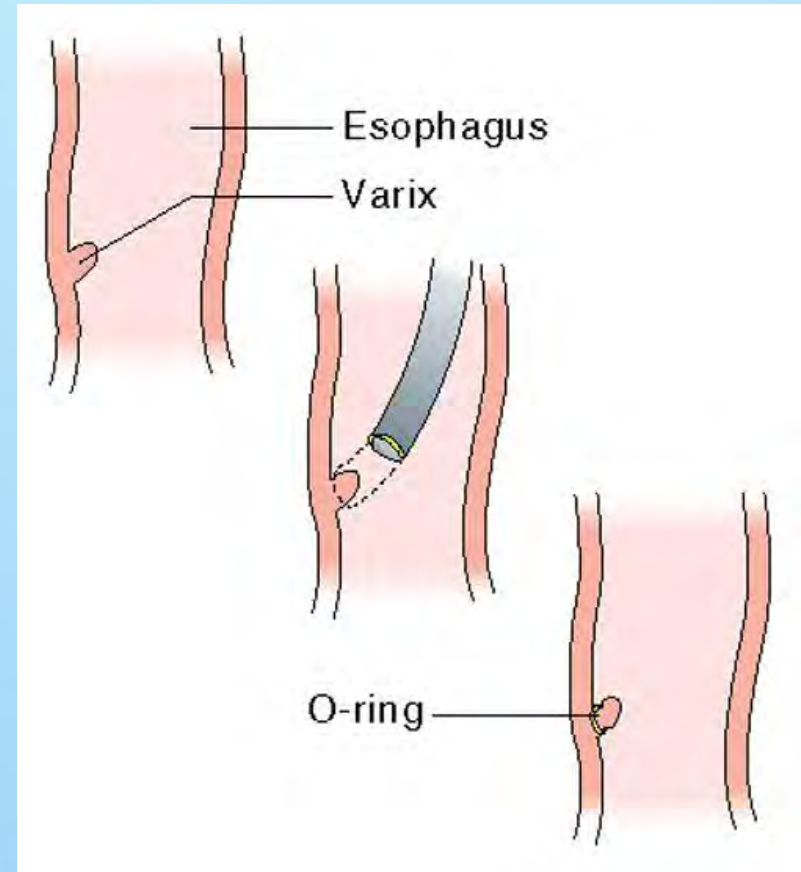
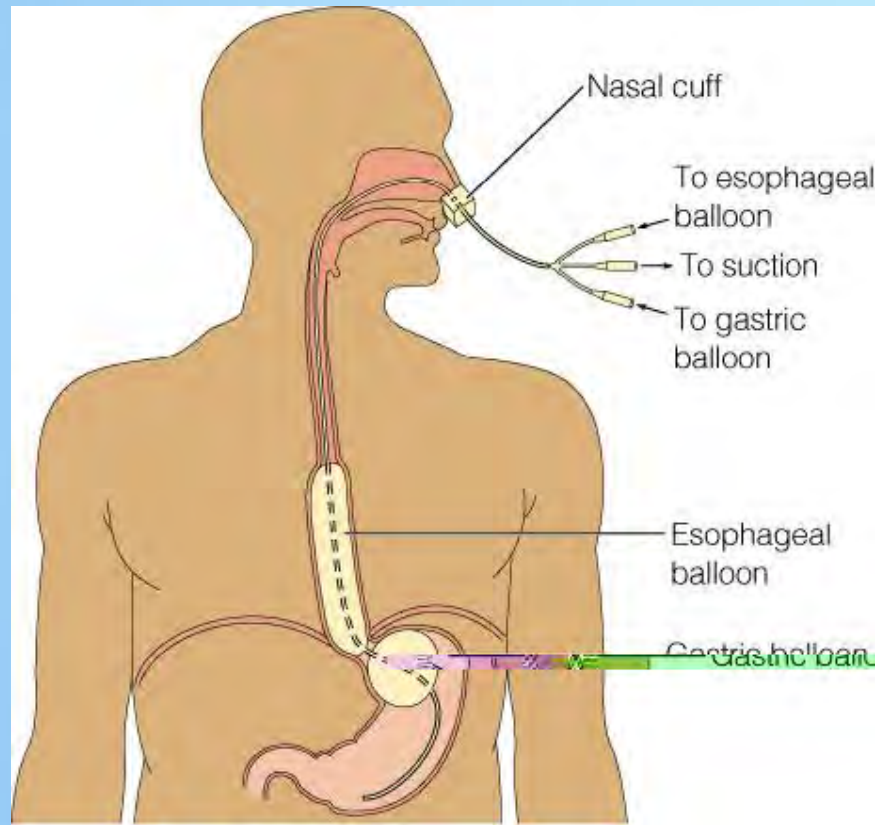
Clinical Manifestations

- ▶ Hematemesis
- ▶ Melena
- ▶ Tarry stools
- ▶ Ascites
- ▶ Jaundice
- ▶ Hepatomegaly and splenomegaly
- ▶ Dilated abdominal veins
- ▶ Hemorrhoids
- ▶ Bleeding and shock

▶ Interventions

- Monitor vital signs
- Elevate the head of the bed
- Monitor for orthostatic hypotension
- Monitor lung sounds and for the presence of respiratory distress
- Oxygen to prevent tissue hypoxia
- Maintain NPO status
- Monitor LOC
- Monitor I&O
- Administer IV fluids to restore fluid volume and electrolyte imbalances

A triple-lumen Nasogastric (Sengstaken–Blakemore) Tube



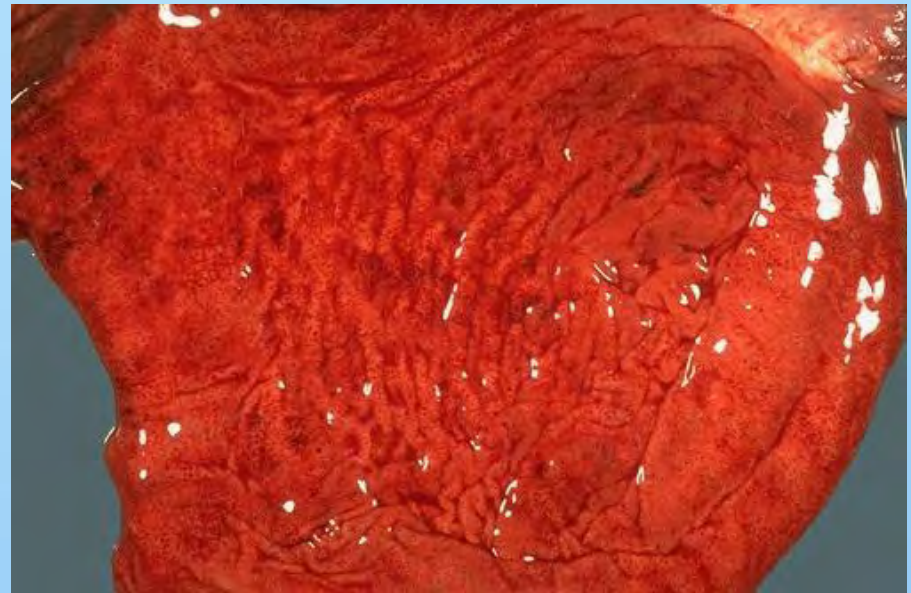
White and Duncan, Medical Surgical Nursing

Gastritis ~ Acute

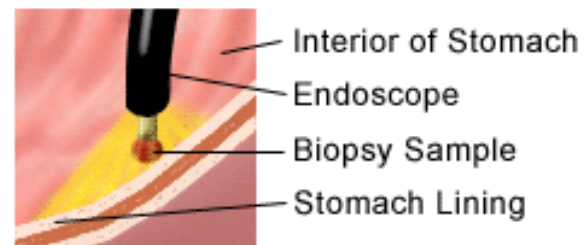
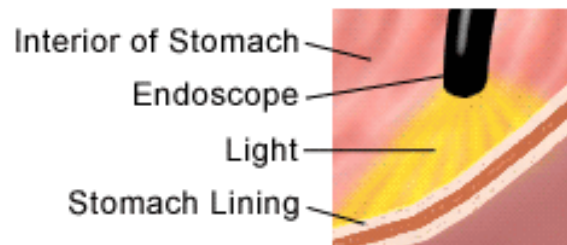
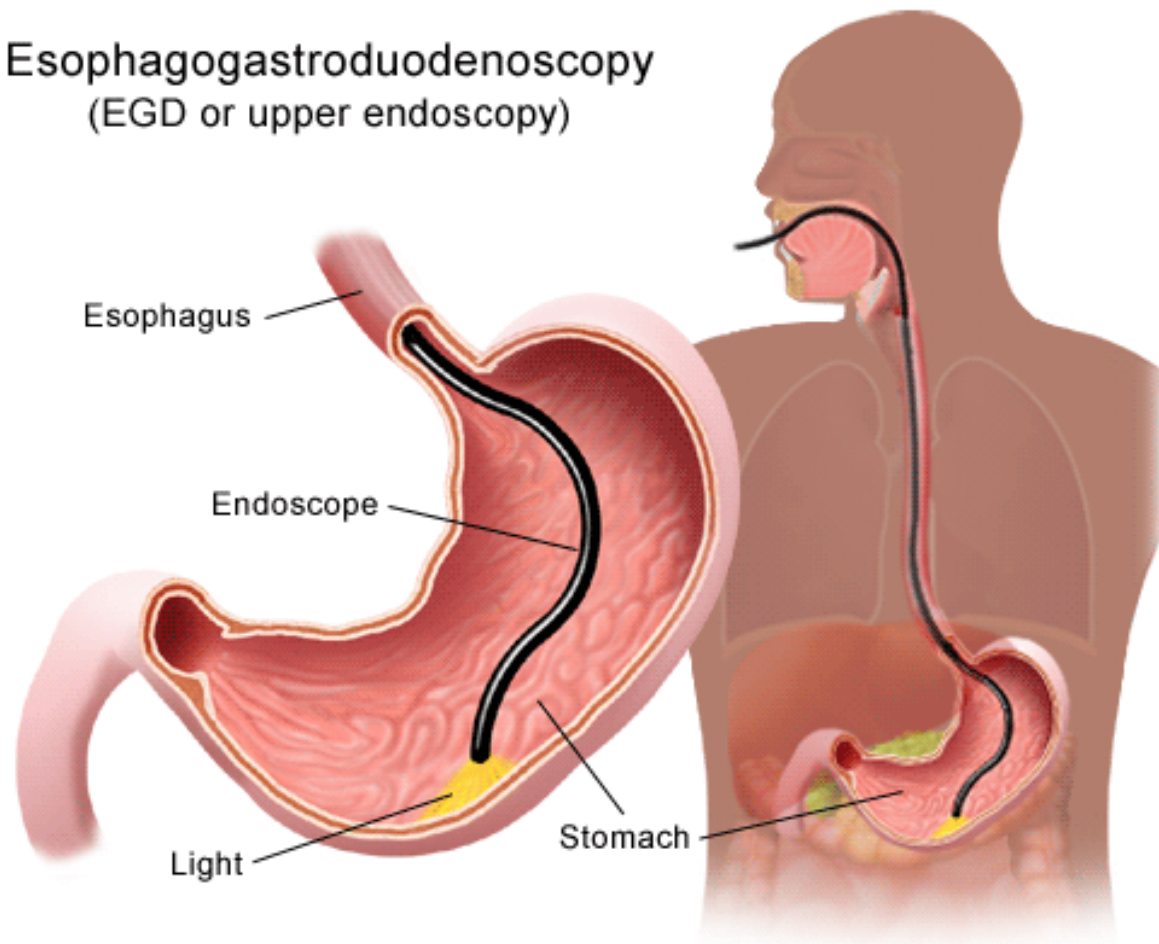
► Causes:

- Alcohol
- Aspirin
- NSAIDs
- Smoking
- Stress
- Duodenal reflux
- Chemotherapy/Radiation
- Viruses/Bacteria/Uremia
- Ingestion of an irritant





Esophagogastroduodenoscopy (EGD or upper endoscopy)



Gastritis

Medications

-  Antacids
-  Antiemetics
-  H2 antagonists
-  Antibiotics

Nursing Care

-  Identify and remove cause (encourage)
-  Monitor pain
-  Evaluate fluid status
-  Relieve symptoms

Clinical Manifestations

- Anorexia
- Epigastric pain
- Feeling full
- Abdominal tenderness
- Nausea, vomiting
- Eructation
- Decrease in Hct
- Increase in BUN
- Decreased urine output
- Anxiety
- Dehydration

Gastritis ~ Chronic

- ▶ A long term progressive disease which increases with age. It is evaluated in terms of mucosal lining changes.
- ▶ The lining of the stomach thins and atrophies.
- ▶ There is decreased function of the chief and parietal cells with less intrinsic factor produced.
 - This can lead to Pernicious Anemia
- ▶ Gastric cancer is more common in persons with chronic gastritis

Gastritis

► Etiology

- Nutritional deficiency
- Medication
- Smoking
- Stress
- Immune disturbance
- Alcohol
- Drug abuse
- Duodenal reflux

► Clinical Manifestations

- Often asymptomatic
- May have Epigastric fullness
- Burning
- Pain
- Nausea/vomiting
- Flatulence
- Anorexia
- Weight loss
- Anemia

Treatment & Nursing Care

- ▶ Diagnosed with Endoscopy & Biopsy
 - Treated conservatively
- ▶ Medications
 - Antacids
 - H2 antagonists
 - Avoid aspirin and NSAIDs
- ▶ Nursing Care
 - Assist with smoking cessation
 - Limit or avoid alcohol
 - Nutritional assessment and interventions
 - Treatment of symptoms

Hiatal Hernia

Definition

- ▶ part of the stomach passes into the thoracic cavity secondary to muscle weakness

Diagnosis

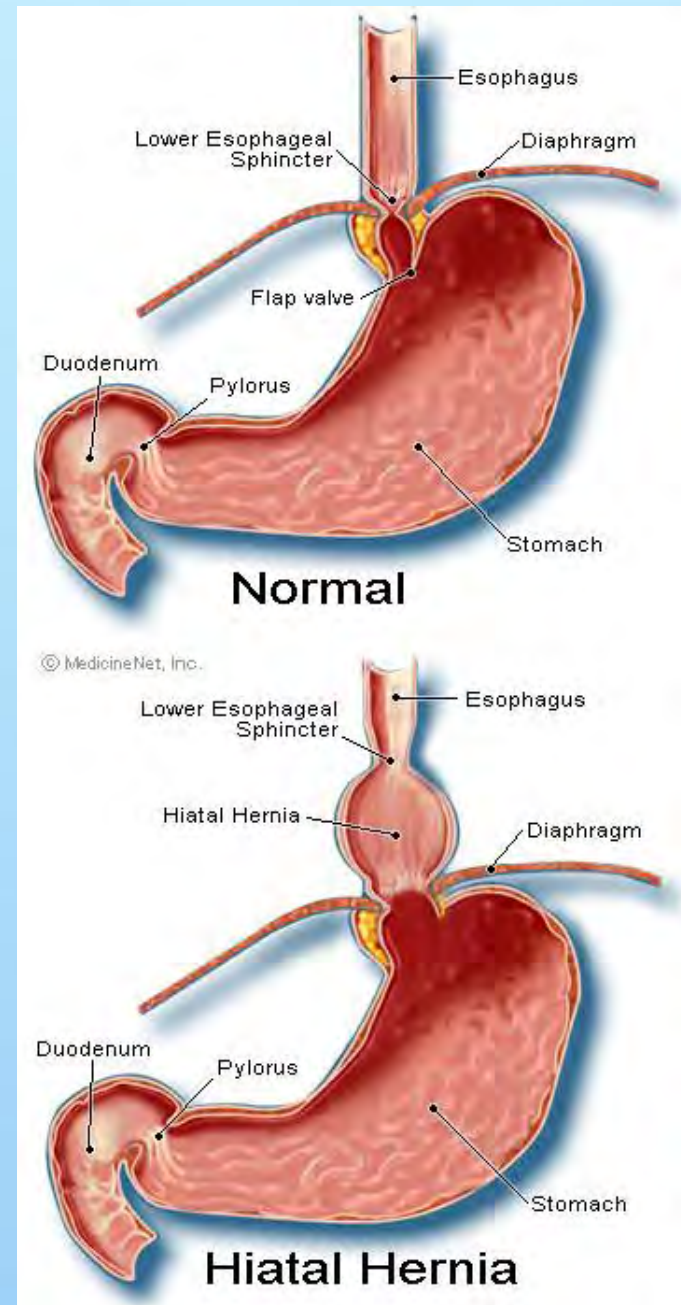
- ▶ usually with barium swallow
- ▶ Endoscopy

Signs & Symptoms

- ▶ heart burn, regurgitation

Treatment

- ▶ conservative or surgical intervention



GERD ~ Gastro-esophageal Reflux Disease

Definition

- ▶ abnormal reflux of gastric contents into the
- ▶ esophagus, the acids cause esophagitis.

Causes

- ▶ Incompetent lower esophageal sphincter (LES)
- ▶ Abnormality present in stomach
- ▶ Obesity
- ▶ Coughing, straining
- ▶ Delayed gastric emptying
- ▶ Presence of hiatal hernia

GERD

Clinical Manifestations

- ☹ Heartburn
- ☹ Retrosternal burning
- ☹ Regurgitation within three hours of a large or fatty meal

Complications

- ☹ Esophageal stricture
- ☹ Dysphagia
- ☹ Barrett's esophagus
- ☹ Pulmonary complications
- ☹ Dental erosion

Treatment & Nursing Care

Treatment

- Conservative treatment first
- Medications (similar to gastritis)
- May require surgery for hiatal hernia of strengthening the LES

Nursing Care

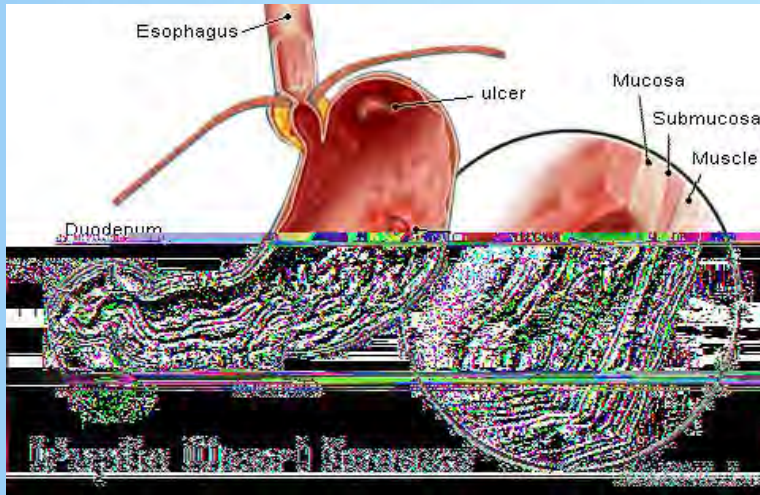
- Education: avoid reflux via
 - Eat small frequent meals
 - High protein, low fat diet
 - Stop smoking
 - Reduce alcohol
 - Control weight
 - Avoid lying down for 2-3 hours after a meal

Peptic Ulcer Disease

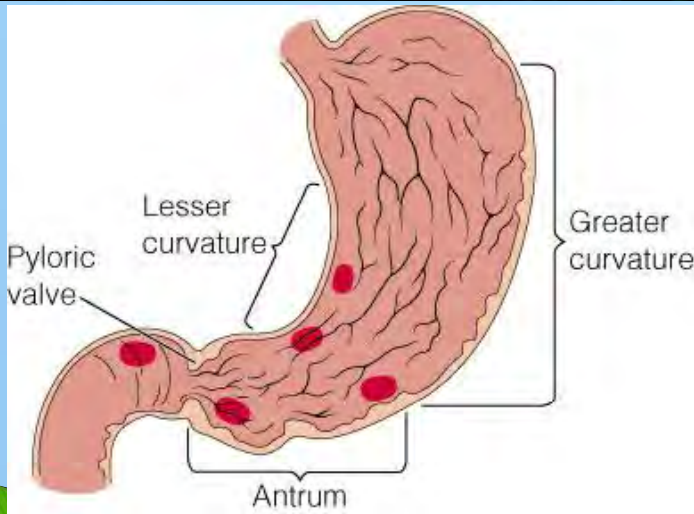
“Peptic” includes gastric and duodenal.

- ▶ *Pepsins – proteolytic enzymes*
- ▶ *Ulcers are open lesions, erosion in the mucosal lining*
- ▶ *anywhere from the esophagus to the jejunum, but*
- ▶ *most commonly the gastric area and duodenum*

Peptic Ulcer ~ causes



- ▶ Gastritis
- ▶ NSAIDs
- ▶ Alcohol
- ▶ Smoking
- ▶ Bacteria (*helicobacter pylori*)



Clinical Manifestations

- ▶ Similar to gastritis
- ▶ Heartburn
- ▶ Fatty food intolerance
- ▶ Pain, sometimes relieved by eating
- ▶ Anorexia
- ▶ Distention & eructation

Site Comparison

▶ Gastric

- Antrum of stomach
- Usually 45-70 yrs old
- Elderly women
- Higher mortality
- Pain 1-2 hours pc, worse with food
- High reoccurrence
- More malignancies
- More hemorrhage

▶ Duodenal

- 1st 2cm of duodenum
- Usually 40-60 yrs old
- 3x more often in men
- 4x more than gastric
- Pain 2-4 hrs pc & h.s, better with food
- Less reoccurrence
- Rarely malignant
- More perforation

Peptic Ulcer Disease

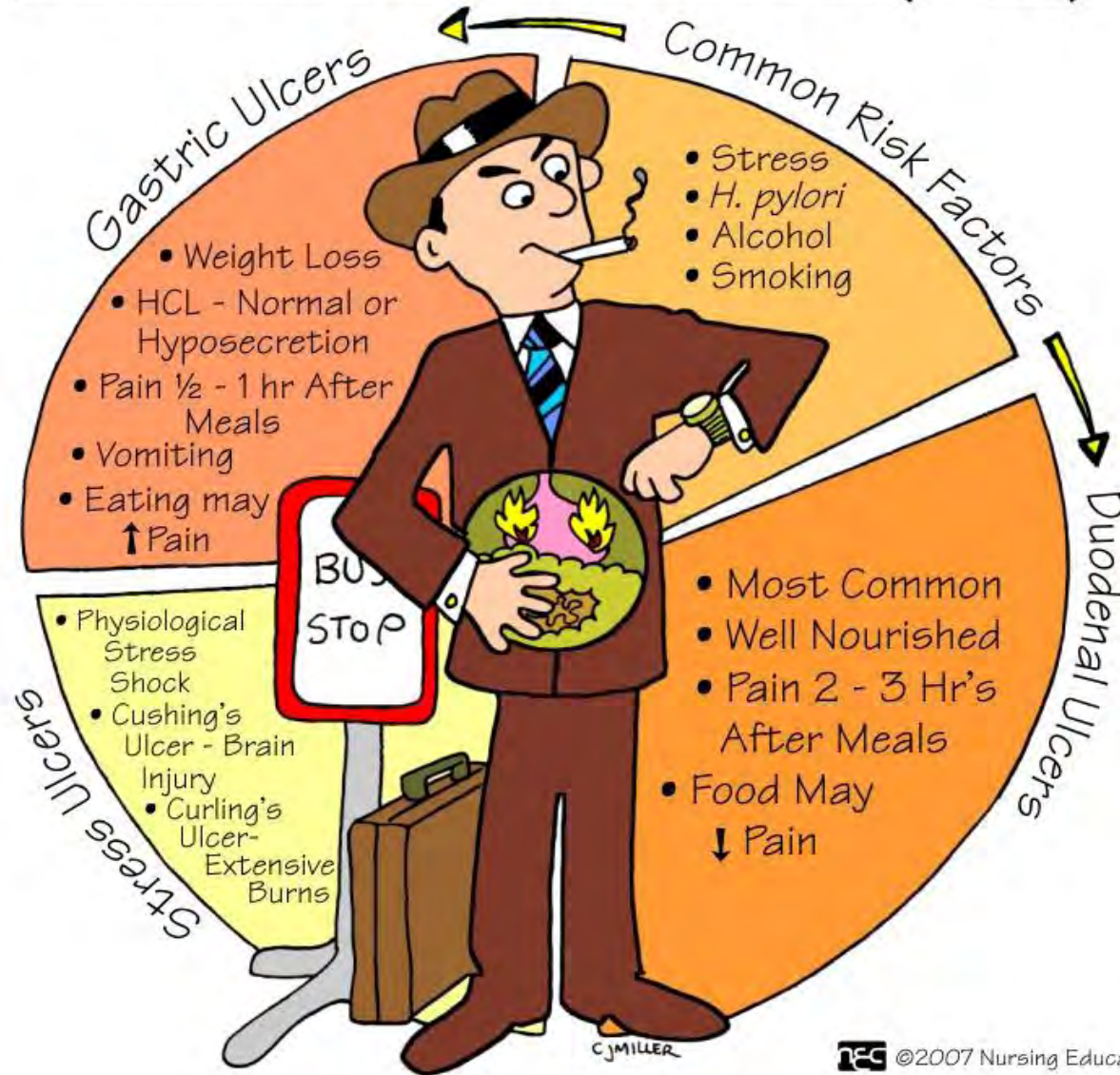
Diagnosis

- ▶ Upper GI series
- ▶ Endoscopy with biopsy
- ▶ Gastric analysis (acid content and/or bacteria)
- ▶ Fecal immunoassay, antibody
- ▶ Breath test (meretex UBT) for
 - H. Pylori

Medications

- ▶ Proton Pump Inhibitors
 - Omeprozole (prilosec)
- ▶ Protectant
 - Sucrafate (carafate)
- ▶ Antisecretory agent
 - misoprostol (cytotec)
- ▶ Antibiotics
 - Metronidazole (flagyl), Tetracycline
 - Clarithromycin (biaxin), Amoxicillin (amoxil, wymox)
- ▶ Antidiarrheal
 - Bismuth subsalicylate (peptobismol)

PEPTIC ULCER DISEASE (PUD)



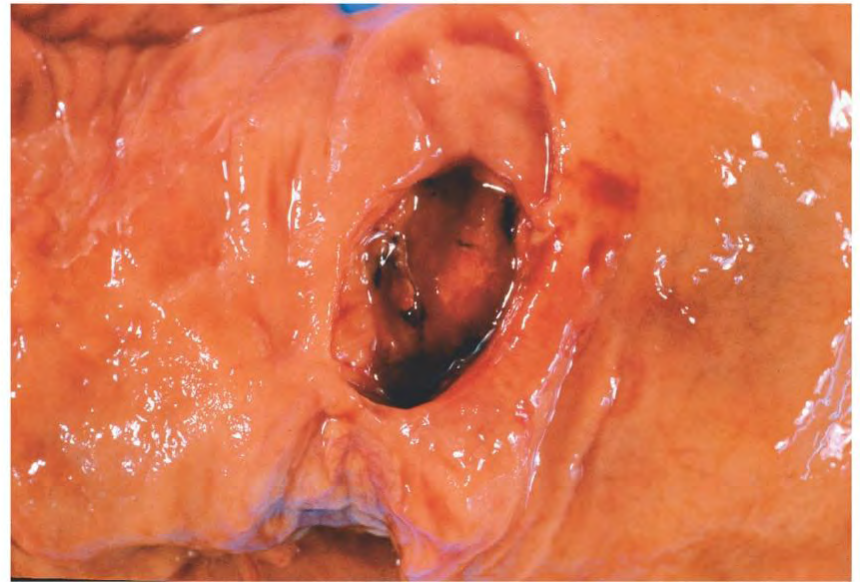
Gastric Ulcers

- ▶ Refer to Erosions that form in the stomach and are correlated to exposure to irritants such as
- ▶ Related Causes
 - NSAIDs, smoking, alcohol, food allergens, toxic chemicals, H pylori infections and impaired mucosal defenses
 - Where the epithelial cells of the stomach are not able to secrete adequate quantity or quality of mucus to protect the stomach

Clinical Manifestations

- ▶ Gnawing, sharp pain in or left of the mid-epigastric region 1 to 2 hours after eating
- ▶ Eating may not relieve pain or may increase pain
- ▶ Nausea and vomiting
- ▶ Weight loss
- ▶ Hematemesis

A large gastric ulcer. (Source: Photo Researchers, Inc.)



Intervention

- ▶ Monitor vital signs
- ▶ Monitor for bleeding
- ▶ Small, frequent bland feedings during the active phase
- ▶ Histamine H₂-receptor antagonists as prescribed to decrease the secretion of gastric acid
- ▶ Antacids to neutralize gastric secretions
- ▶ Anticholinergics to reduce gastric motility
- ▶ Mucosal barrier protectants one hour before each meal

Intervention

- ▶ Prostaglandins as prescribed for their protective and antisecretory actions
- ▶ Instruct clients to
 - avoid alcohol
 - avoid caffeine and chocolate
 - avoid smoking
 - aspirin or NSAIDs
 - obtain adequate rest and reduce stress
- ▶ Interventions during active bleeding
 - Monitor vital signs
 - Monitor for signs of dehydration, hypovolemic shock, sepsis, and respiratory insufficiency
 - Monitor I&O
 - Maintain NPO status
 - IV fluid replacement
 - Monitor hemoglobin and hematocrit
 - Blood transfusions may be prescribed
 - NG tube for decompression and for access for lavage

Duodenal Ulcers

- ▶ A break in the mucosa of the duodenum
- ▶ Risk factors and causes include
 - alcohol intake
 - smoking
 - stress
 - caffeine,
 - the use of aspirin
 - corticosteroids and NSAIDs
 - infection with *Helicobacter pylori*
- ▶ The goals of treatment are to:
 - eliminate the cause
 - decrease gastric acidity
 - prevent complications
- ▶ Complications include bleeding, perforation, gastric outlet obstruction, and intractable disease



Intervention

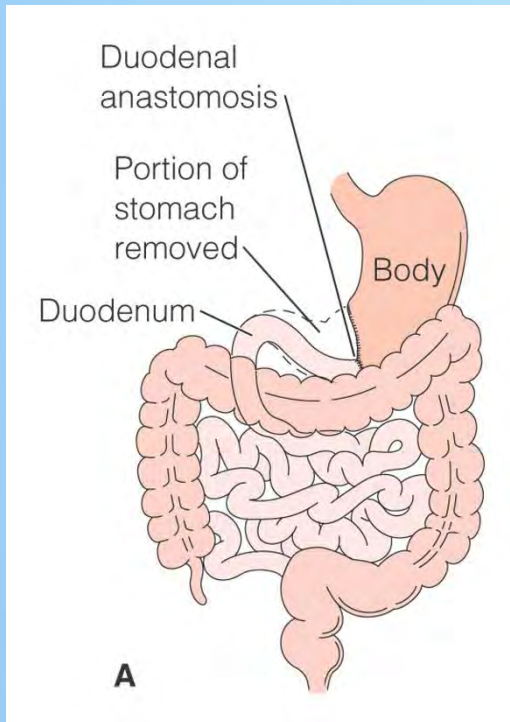
- ▶ Monitor vital signs
 - ▶ Perform abdominal assessment
 - ▶ Instruct the client in a bland diet with small, frequent meals
 - ▶ Provide for adequate rest
 - ▶ Encourage the cessation of smoking
 - ▶ Instruct the client to avoid alcohol intake
 - caffeine
 - use of aspirin
 - corticosteroids
 - NSAIDs
 - ▶ Administer antacids to neutralize acid secretions
- ▶ Post-op
 - Monitor vital signs
 - Position in Fowler's for comfort and to promote drainage
 - Monitor I&O
 - Administer fluids and electrolyte replacements IV
 - Assess bowel sounds
 - Monitor nasogastric suction
 - Do not irrigate NG tube or remove NG tube

Surgical Treatment

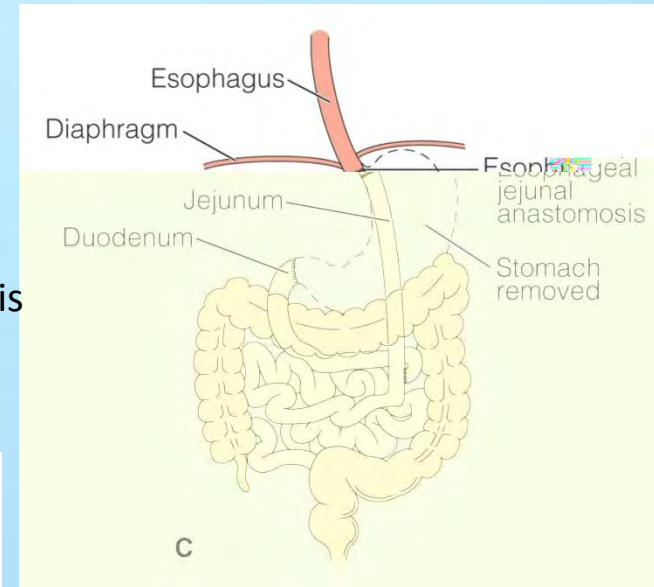
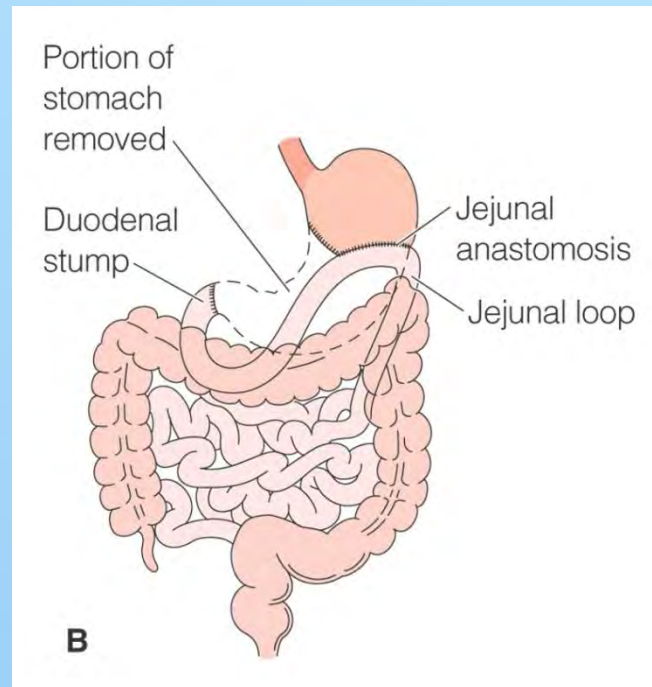
- ▶ Total Gastrectomy:
 - also called esophagojejunostomy; removal of the stomach with attachment of the esophagus to the jejunum or duodenum
- ▶ Vagotomy:
 - surgical division of the vagus nerve to eliminate the vagal impulses that stimulate hydrochloric acid secretion in the stomach
- ▶ Gastric resection:
 - also called antrectomy; involves removal of the lower half of the stomach and usually includes a vagotomy
- ▶ Billroth I:
 - also called gastroduodenostomy; partial gastrectomy with the remaining segment anastomosed to the duodenum
- ▶ Billroth II:
 - also called gastrojejunostomy: partial gastrectomy with the remaining segment anastomosed to the jejunum

Partial and total Gastrectomy Procedures.

Partial Gastrectomy with Anastomosis to the Duodenum.



Partial gastrectomy with Anastomosis to the Jejunum.



Total Gastrectomy with Anastomosis of the Esophagus to the Jejunum.

Nursing Care

General Nursing Care

- ▶ Assist with removing precipitating causes
 - smoking, ETOH, NSAIDs
- ▶ Monitor and report symptoms (n/v, pain)
- ▶ Monitor: IV fluids, NG tube, diet modifications, possible blood transfusion

Post operative Gastrectomy Surgery

- ▶ Elevate HOB, educate and assist with splinting when coughing, TCDB q2
- ▶ Assess pain and administer pain medications as ordered
- ▶ NG to low intermittent suction (assess output)
- ▶ Monitor vital signs, dressing, & abdomen for distention

Complications

Peptic Ulcers ~ General complications

- Hemorrhage
- Perforation
- Gastric outlet obstruction

Post Operative Complications

- Hemorrhage

Post prandial hypoglycemia

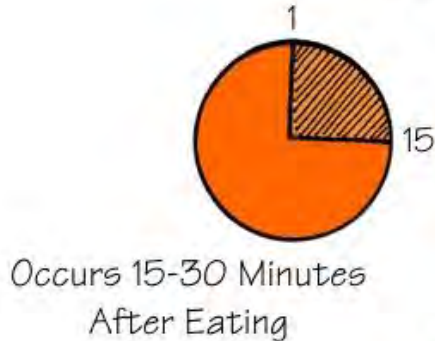
Dumping Syndrome

- ▶ Rapid emptying of the gastric contents into the small intestine
- ▶ Occurs following gastric resection
- ▶ Clinical Manifestations
 - Symptoms occurring 30 minutes after eating
 - Nausea and vomiting
 - Abdominal cramping
 - Feelings of fullness
 - Diarrhea
 - Palpitation
 - Tachycardia
 - Perspiration
 - Weakness and dizziness

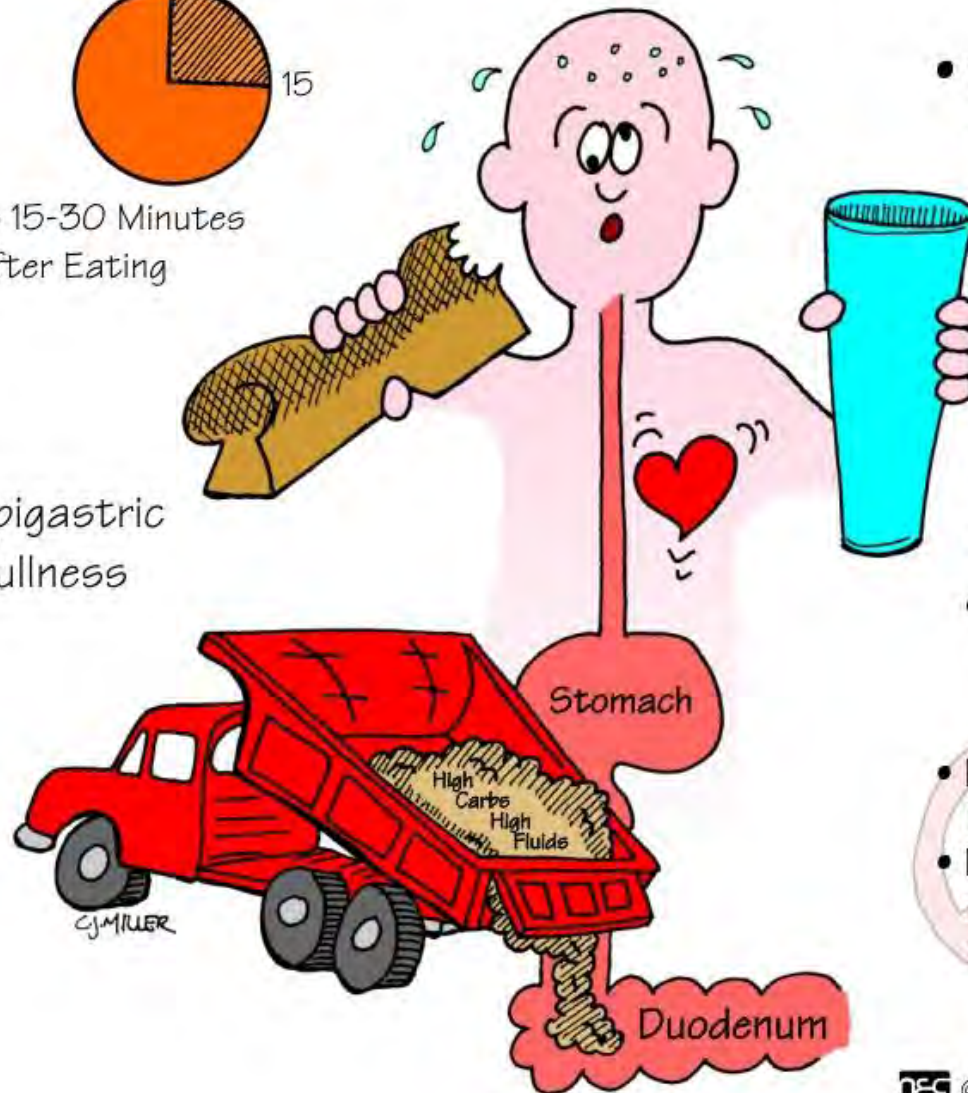
Intervention

- ▶ High-protein, high-fat, low-carbohydrate diet
- ▶ Small meals and to avoid fluids with meals
- ▶ Instruct clients to avoid sugar and salt
- ▶ Instruct clients to lie down after meals
- ▶ Antiperistaltic and antispasmodic medications to delay gastric emptying

DUMPING SYNDROME



- Epigastric Fullness



- Weakness
 - Dizziness, vertigo
 - Diaphoresis
- Tachycardia
- Abdominal Cramping
- Self-Limiting

- No Fluids With Meals
- No High Carbs i.e., Bread, Potatoes

Vitamin B₁₂ Deficiency

- ▶ Results from either an inadequate intake of vitamin B₁₂ or a lack of absorption of ingested vitamin B₁₂ from the intestinal tract
- ▶ Pernicious anemia results from a deficiency of intrinsic factor, which is necessary for intestinal absorption of vitamin B₁₂
- ▶ Clinical Manifestations
 - Severe pallor
 - Fatigue
 - Weight loss
 - Smooth, beefy tongue
 - Slight jaundice
 - Paresthesias of the hands and feet
 - Disturbances with gait and balance

Gastroenteritis

- ▶ Etiology ~
 - Infectious agents: viruses, bacteria, parasites
 - Chemical toxins
 - Miscellaneous: food allergies, drug reactions
- ▶ Pathophysiology ~
 - Inflammation of the mucosa of the stomach and small intestine
- ▶ Diagnosis ~
 - Client history & symptoms
- ▶ Signs & symptoms
 - Stomach & abdominal pain
 - Vomiting & diarrhea
- ▶ Treatment
 - Fluid & electrolyte replacement
 - Antidiarrheal drugs
 - Antiinfectives/antiparasitics
 - Rule out: appendicitis, IBS or IBD
- ▶ Prevention
 - HANDWASHING!
 - Treatment of questionable water/food (travel)

Irritable Bowel Syndrome (IBS)

- ▶ Common & complex digestive problem
 - 10 – 15% western population
 - More women than men seek care for IBS
 - Stress, psychological factors & food intolerance precipitate IBS symptoms
- ▶ Symptoms are functional ~ affects motility
 - IBS with diarrhea
 - IBS with constipation
 - IBS alternating diarrhea & constipation
- ▶ Does not cause more serious conditions

Irritable Bowel Syndrome (IBS)

Signs & Symptoms

- abdominal distention, pain, flatulence
- altered bowel function (constipation/diarrhea)

Treatment

- Symptom focused
- Dietary changes
- Antispasmodic agents
- Antidiarrheal
- Serotonergic agents

Prevention ~ stress management, relaxation

Intervention

- ▶ Reassure that the problem is self-limiting and intermittent and will resolve
- ▶ Encourage the maintenance of a healthy well-balanced, moderate-fiber diet
- ▶ Encourage health promotion activities such as exercise and school activities
- ▶ Inform the parents of psychosocial resources if required

Table 20-1**Foods That May Aggravate Chronic Diarrhea**

FOODS	REASON
Milk, ice cream, yogurt, soft cheeses, cottage cheese	Contain lactose, which requires the enzyme lactase to digest; lactase deficiency common
Apple juice, pear juice, grapes, honey, dates, nuts, figs, fruit-flavored soft drinks	Contain fructose, which can draw fluid into the bowel when consumed in large quantities
Table sugar	Contains sucrose, which requires the enzyme sucrase to digest
Apple juice, pear juice, sugarless gums and mints	May contain sorbitol, a sugar that is not absorbed and can pull fluid into intestine
Antacids	Magnesium-containing antacids increase peristalsis and can draw fluid into the bowel
Coffee, tea, cola drinks, power-the-counter analgesics	Contain caffeine, which can increase peristalsis

Inflammatory Bowel Disease

Etiology~

- ▶ Crohn's Disease and Ulcerative Colitis are autoimmune disorders referred to as inflammatory bowel disease (IBD)

Pathophysiology ~

- ▶ Chronic inflammation of the intestine with periods of remission and exacerbation. The cause is unknown, no cure

Diagnosis ~

- ▶ Used to determine Crohn's vs. Ulcerative Colitis
- ▶ Stool specimen, serum lab tests, sigmoidoscopy/colonoscopy, biopsy

Inflammatory Bowel Disease

Crohn's

- ▶ Inflammation: All layers of the bowel
- ▶ Location: anywhere
 - (mouth to anus)
- ▶ Areas involved: not continuous
- ▶ Diarrhea
- ▶ Colicky abdominal pain
- ▶ Weight loss
- ▶ Malabsorption if small bowel involved
- ▶ Occasional rectal bleeding
- ▶ May have fever

Ulcerative Colitis

- ▶ Inflammation: mucosal layer of bowel
- ▶ Location: starts at rectum, cecum
- ▶ Areas involved: continuous pattern
- ▶ Bloody diarrhea
- ▶ Mild disease: 1-2 stools/day, small amounts of blood
- ▶ Moderate: 4-5 stools/day, increased bleeding, fever, malaise, anorexia
- ▶ Severe: 10-20 stools/day with mucous and blood. Fever, weight loss, anemia, tachycardia, dehydration

Inflammatory Bowel Disease (IBD)

Crohn's Disease



Ulcerative colitis

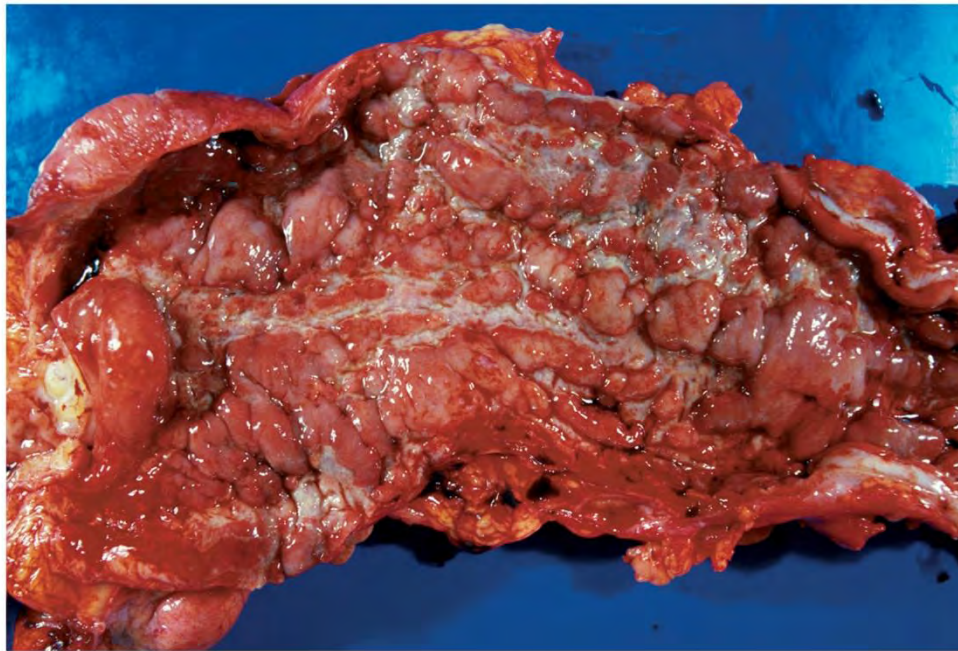


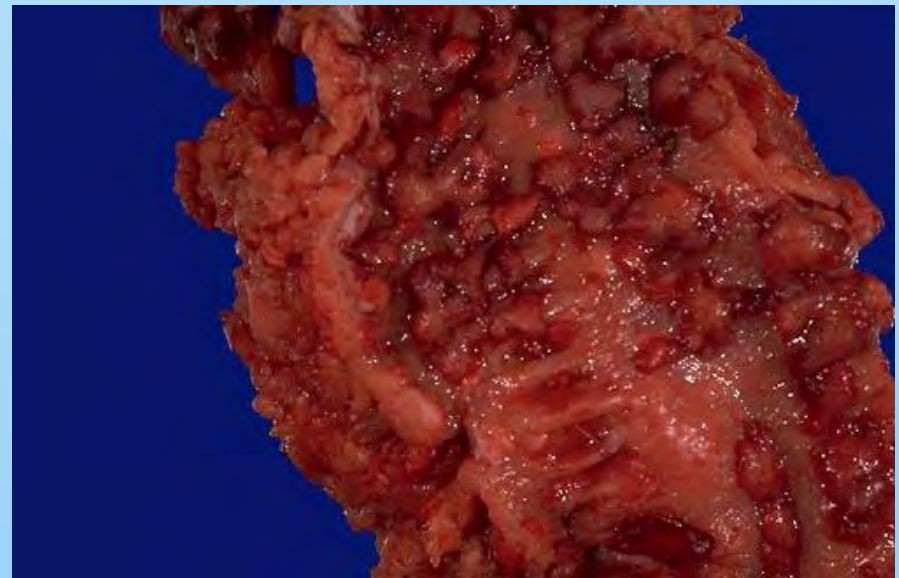
Ulcerative Colitis

- ▶ Ulcerative and inflammatory disease of the bowel that results in poor absorption of nutrients
- ▶ Commonly begins in the rectum and spreads upward toward the cecum
- ▶ The colon becomes edematous and may develop bleeding lesions and ulcers
- ▶ The ulcers may lead to perforation
- ▶ Scar tissue develops and causes loss of elasticity and loss of ability to absorb nutrients
- ▶ Characterized by various periods of remission and exacerbation

Clinical Manifestations

- ▶ Acute ulcerative colitis results in vascular congestion, hemorrhage, edema, and ulceration of the bowel mucosa
- ▶ Chronic ulcerative colitis causes muscular hypertrophy, fat deposits, and fibrous tissue with bowel thickening, shortening, and narrowing





Clinical Manifestations

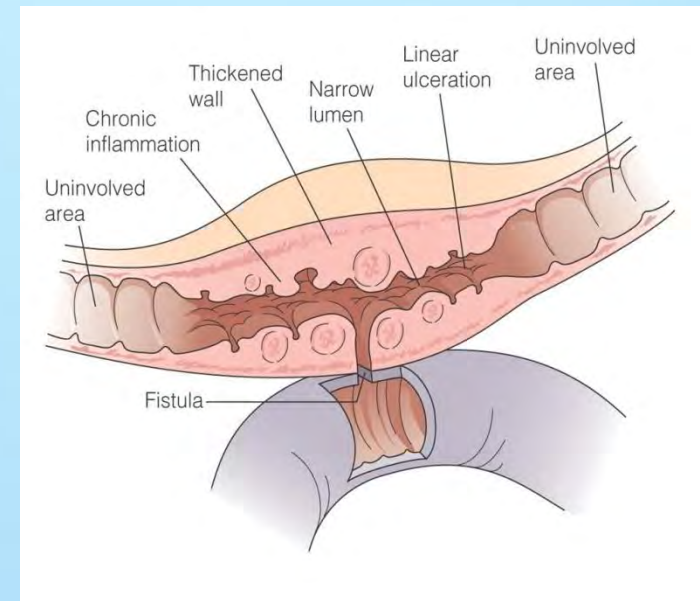
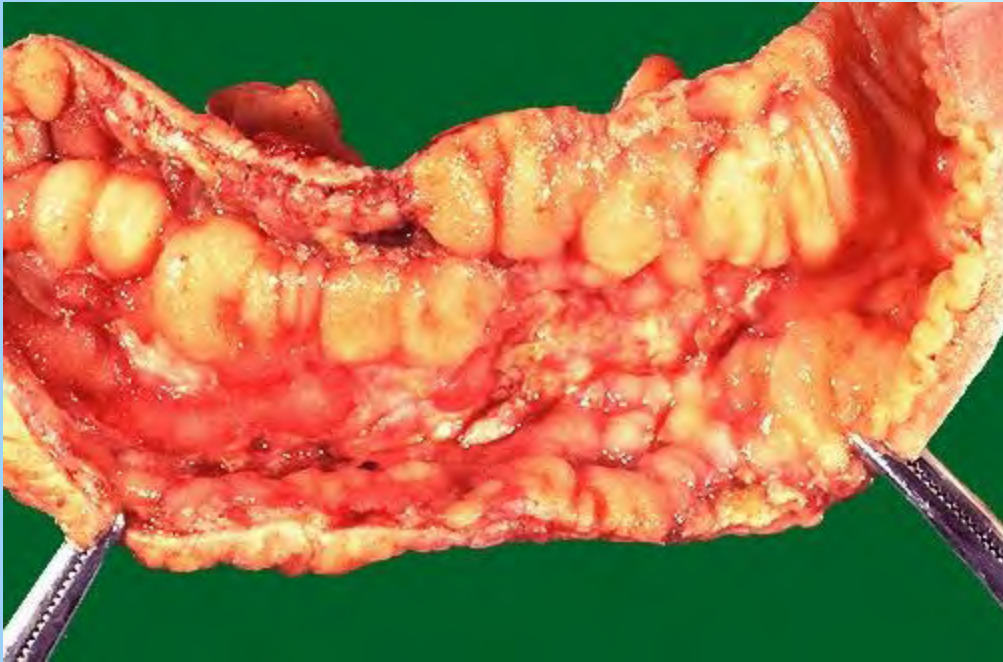
- ▶ Anorexia
- ▶ Weight loss
- ▶ Malaise
- ▶ Abdominal tenderness and cramping
- ▶ Severe diarrhea that may contain blood and mucus
- ▶ Dehydration and electrolyte imbalances
- ▶ Anemia
- ▶ Vitamin K deficiency

▶ Intervention

- Acute Phase
- Maintain NPO status and administer IVs and electrolytes
- TPN may be prescribed during an acute phase
- Restrict the client's activity to reduce intestinal activity
- Monitor bowel sounds
- Monitor for abdominal tenderness and cramping
- Monitor stools, noting color, consistency, and the presence or absence of blood

Crohn's Disease (Regional Enteritis)

- ▶ An inflammatory disease that can occur anywhere in the GI tract but most often affects
 - the terminal ileum and leads to thickening and scarring
 - a narrowed lumen
 - fistulas
 - ulceration
 - abscesses
- ▶ It is characterized by remissions and exacerbations



Crohn's Disease

Clinical Manifestations

- ▶ Fever
- ▶ Cramp-like pain after meals
- ▶ Diarrhea semisolid and may contain mucus, pus, and blood
- ▶ Abdominal distention
- ▶ Anorexia, nausea, and vomiting
- ▶ Weight loss
- ▶ Anemia
- ▶ Dehydration
- ▶ Electrolyte imbalances

Intervention

- ▶ Acute
 - Maintain NPO status
 - Administer IVs and electrolyte
- ▶ TPN may be prescribed during an acute phase
- ▶ Restrict the client's activity to reduce intestinal activity
- ▶ Monitor:
 - ▶ bowel sounds
 - ▶ For abdominal tenderness and cramping
 - ▶ stools, noting color, consistency, and the presence or absence of blood

CROHN'S DISEASE

- Familial Tendencies
- Peaks Ages 15-40 Yrs
- ? Autoimmune Factors
- Nausea & Vomiting

- Abdominal Pain and Distention
- Tenderness in RLQ



- Severe Diarrhea
- Low Grade Fever
- Bloody Stools
- Weight Loss
- Severe Malabsorption

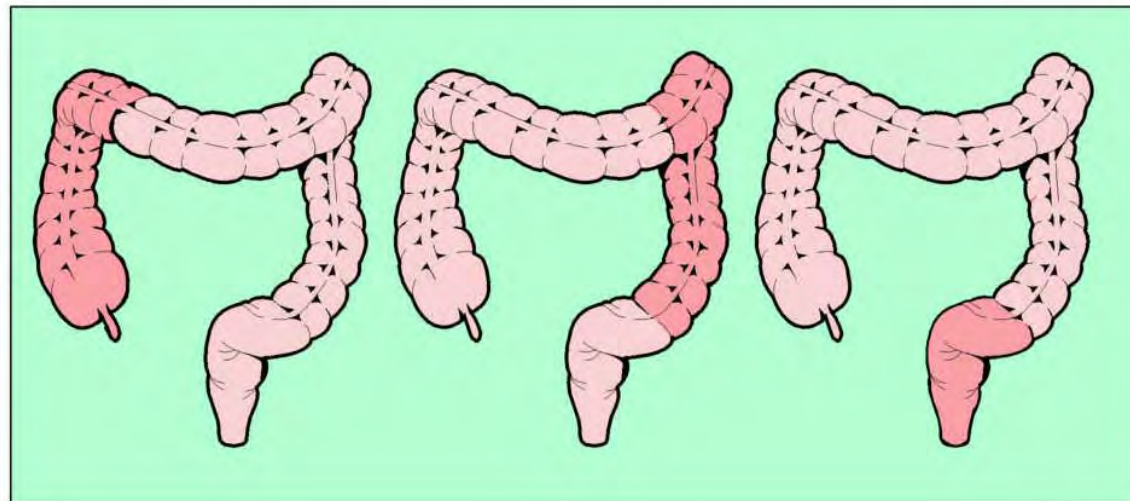
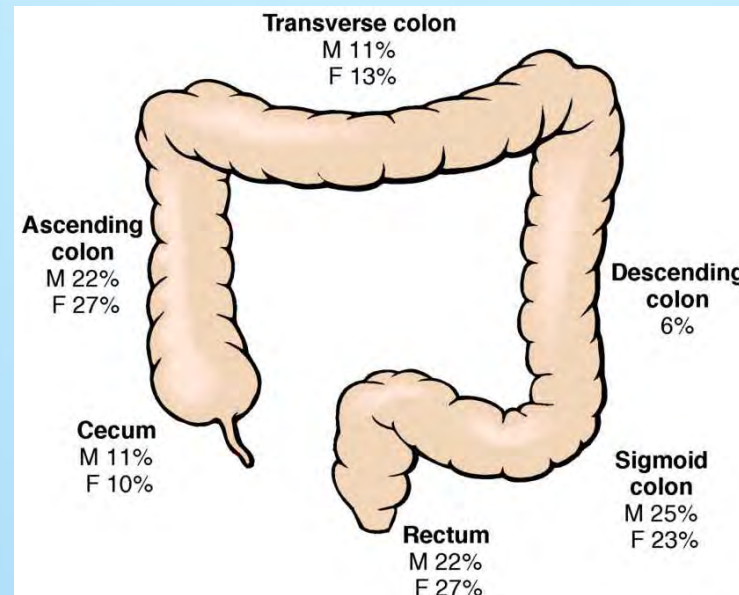
* Later S & S's *

- Dehydration
- Electrolyte Imbalance
- Anemia

* Complications *

- Intra-abdominal Abscesses
- Intestinal Fistulas
- Peritonitis
- Development of Fistulas





Preop Colostomy/Ileostomy

- ▶ Consult with an enterostomal therapist to assist in identifying optimal placement of the ostomy
- ▶ Instruct the client to eat a low-residue diet for a day or two prior to surgery
- ▶ Administer intestinal antiseptics and antibiotics to decrease bacterial content of the colon and to soften and decrease the bulk of the contents of the colon
- ▶ Administer laxatives and enemas

Postop Colostomy

- ▶ Assess the functioning of the colostomy
- ▶ Expect that stool is liquid immediate postoperative but becomes more solid depending on the area of the colostomy
 - ascending colon—liquid stool
 - transverse colon—loose to semiformed
 - descending colon—close to normal
- ▶ Monitor the pouch system for proper fit and signs of leakage
- ▶ Empty pouch when one-third full
- ▶ Fecal matter should not be allowed to remain on the skin



Treatment

- ▶ *Goal* = rest the bowel, control inflammation & infection, correct malnutrition, alleviate stress, provide symptomatic relief, improve quality of life

Medications

- ▶ *Crohn's*: aminosalicylates, antimicrobials, corticosteroids, biologics
- ▶ Immunosuppressants
- ▶ *Ulcerative colitis*: aminosalicylates, corticosteroids are the mainstays
- ▶ Surgical therapy: ulcerative colitis curative, Crohn's not curative
- ▶ Nutritional therapy: a goal of adequate nutrition, fluid & electrolyte replacement

Intestinal Obstruction

Etiology ~

- ▶ Intestinal contents can not pass through the gastrointestinal (GI) tract.
- ▶ Mechanical obstruction: detectable occlusion of the intestinal lumen.
- ▶ CA is the most common for the large bowel, then volvulus, diverticuli
- ▶ Nonmechanical obstruction: neuromuscular or vascular disorder.
- ▶ Paralytic (adynamic) ileus is the most common. Vascular obstructions are rare and 2nd to interference of blood supply to bowel.
- ▶ Pathophysiology ~
 - Fluid, gas and intestinal contents accumulate proximal to obstruction leading to distention, possible bowel collapse,

Obstruction in the
small intestine



Obstruction in
the colon



Clinical Manifestations

General symptoms: nausea, vomiting, abdominal pain,

- ▶ Distention (lower), inability to pass flatus, obstipation,
- ▶ high pitched bowel tones (BT's) above the obstruction, absent BT's,
- ▶ High in the small intestine: rapid onset, projectile vomiting, bile like
- ▶ Distal small intestine: gradual onset, orange/brown fecal smelling
 - vomitus 2nd to bacterial overgrowth
- ▶ Lower intestine: persistent colicky abd. Pain
- ▶ Mechanical: waves of pain
- ▶ Paralytic: constant, generalized pain
- ▶ Strangulation: severe, constant, rapid onset pain

Treatment

Conservative ~

- ▶ Bowel rest: NPO, NG tube bowel decompression, analgesics,
- ▶ IVF with electrolytes

Surgery ~

- ▶ Perforation/strangulation
- ▶ Following failed conservative treatment or change in condition

Nursing Management:

- ▶ Monitor for dehydration, electrolyte imbalance, comfort measures

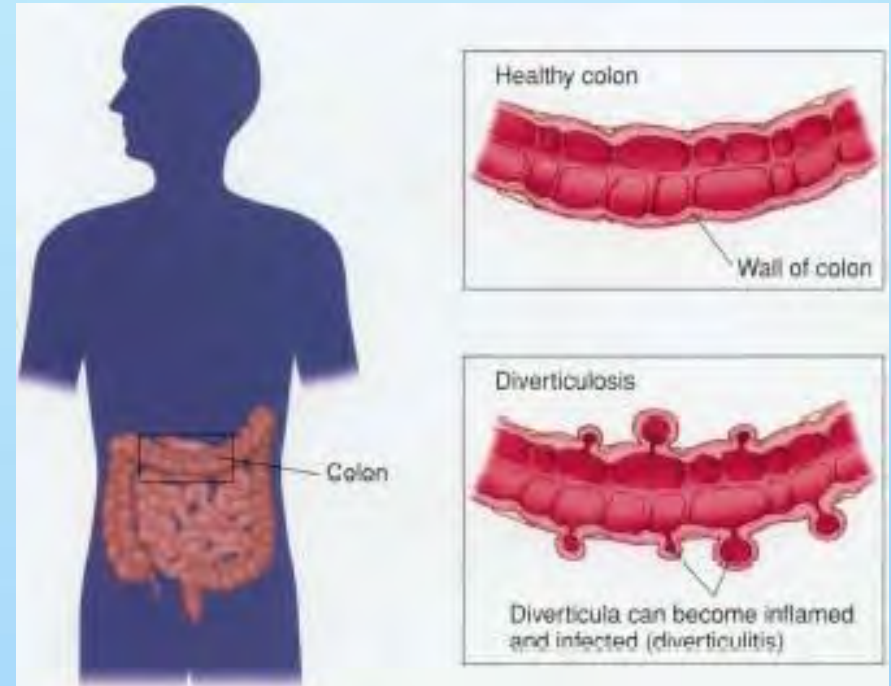
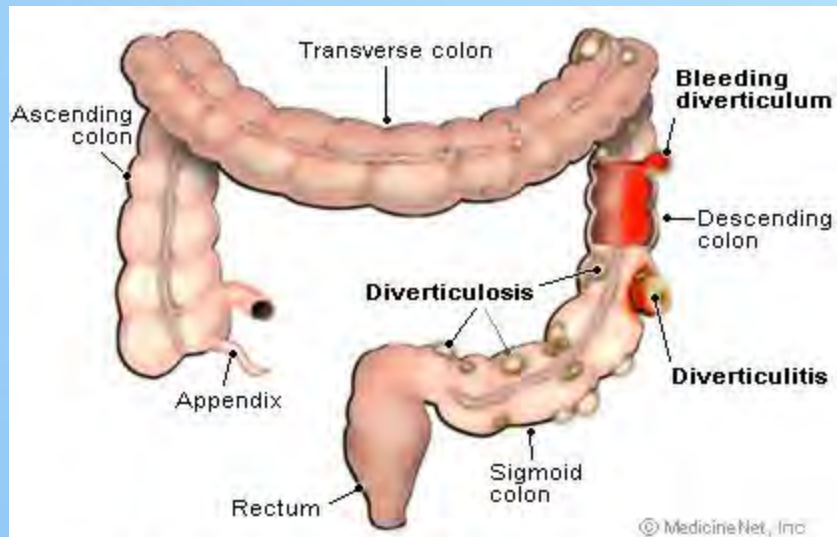
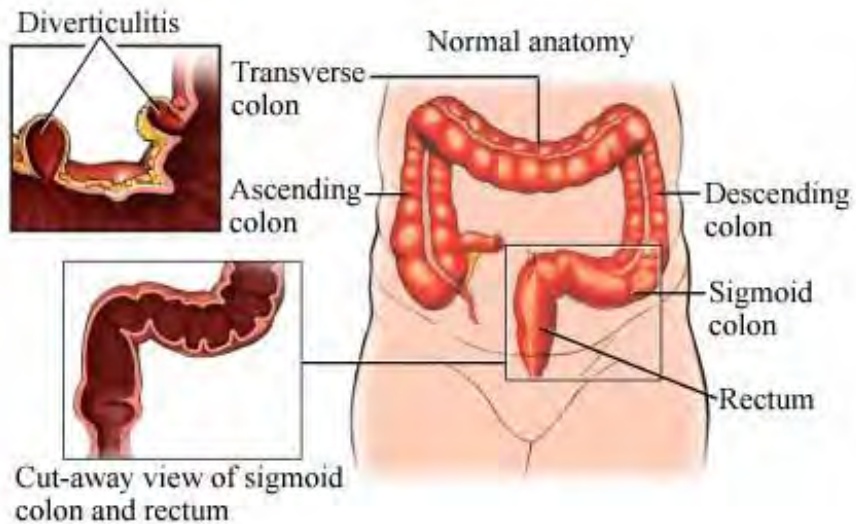
Diverticulosis and Diverticulitis

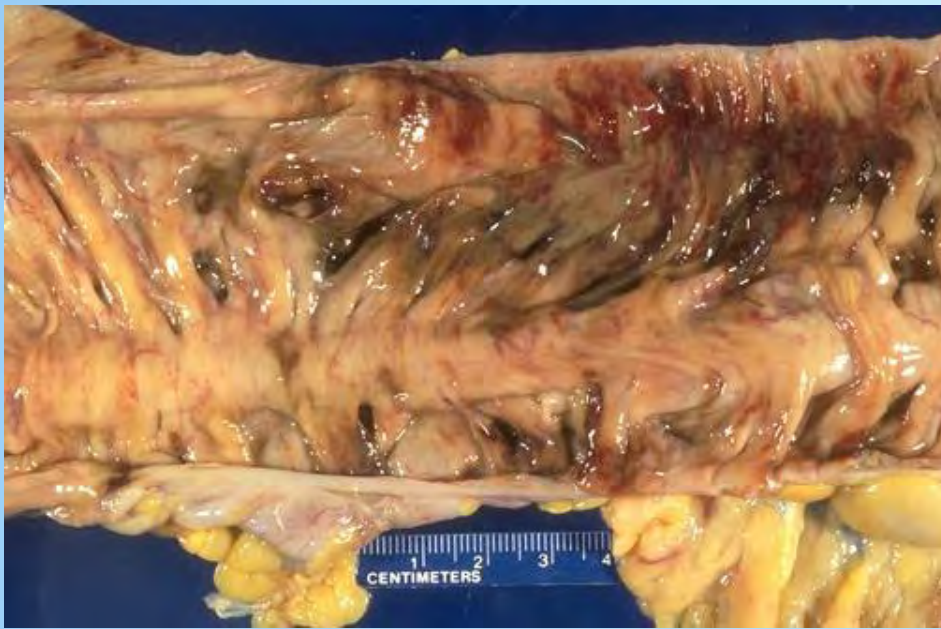
▶ Diverticulosis

- Outpouching or herniations of the intestinal mucosa
- They can occur in any part of the intestine but are most common in the sigmoid colon

▶ Diverticulitis

- Inflammation of one or more diverticuli
- Results when diverticulum perforates with local abscess formation





Diverticulosis

Interventions

- Monitor for signs of complications
 - bowel perforation with peritonitis
 - abscess and/or fistula formation
 - frank hemorrhage
 - complete intestinal obstruction
- Monitor for signs of intestinal perforation:
 - low BP
 - rapid and weak pulse
 - distended abdomen
 - elevated temperature
- Monitor for signs of intestinal obstruction:
 - vomiting (may be fecal contents)
 - pain, constipation
 - abdominal distention

Etiology~

- ▶ Unknown in the ascending colon, sigmoid colon deficiency in
- ▶ dietary fiber, aging process (elasticity loss)

Pathophysiology ~

- ▶ Smooth muscle thickens, slow transit time, increased water
- ▶ absorbed into stool, stool size decreases, intraluminal pressure rises, diverticula forms

Diagnosis~

- ▶ Barium enema, abdominal x-rays, colonoscopy

Diverticulosis

Signs & Symptoms

- ▶ Majority of patients are asymptomatic
- ▶ Abdominal pain, changes in bowel habits
- ▶ 15% of patients progress to diverticulitis

Treatment

- ▶ High fiber diet

Prevention

- ▶ High fiber diet with fruits/veggies
- ▶ Decrease intake of fat and red meat
- ▶ Weight reduction and exercise

Diverticulitis

Etiology ~

- ▶ Retention of stool and bacteria in the diverticulum, forming a
 - hardened mass (fecalith) which leads to inflammation and usually small perforations

Diagnosis ~

- ▶ Serum lab (CBC), Abdominal x-rays

Signs & Symptoms~

- Localized abdominal pain, fever, leukocytosis, occasionally a
- palpable mass

Treatment ~

- Bowel rest to decrease inflammation
- NPO, IVF, Broad spectrum antibiotics
- Surgery may be needed

▶ Prevention~

- As with diverticulosis

Intervention

- ▶ Provide bed rest during the acute phase
- ▶ Maintain NPO status or provide clear liquids during the acute phase as prescribed
- ▶ Introduce a fiber-containing diet gradually when the inflammation is resolved
- ▶ Instruct the client to refrain from lifting, straining, coughing, or bending to avoid increased intra-abdominal pressure
- ▶ Administer antibiotics and pain medication as prescribed
- ▶ Monitor for perforation, hemorrhage, fistulas, and abscesses
- ▶ Instruct the client on the signs and symptoms of diverticular disease such as fever, abdominal pain, and bloody stools

Discharge Teaching

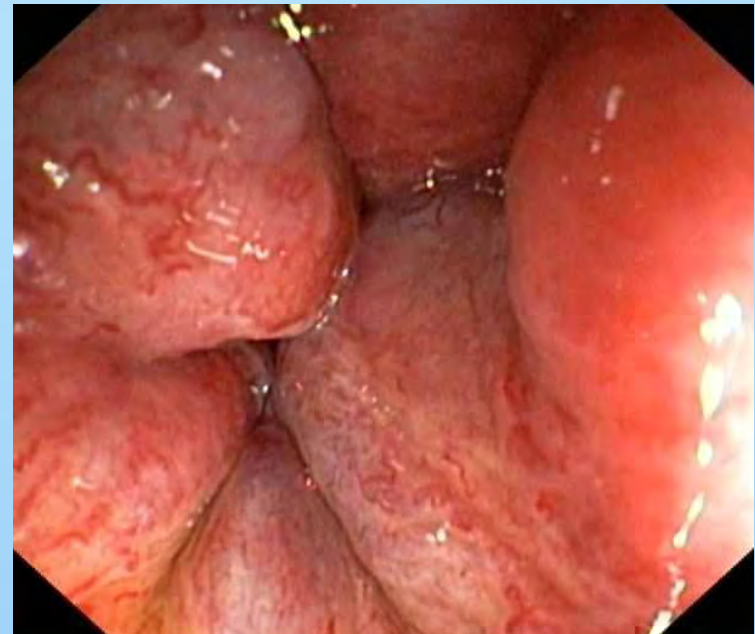
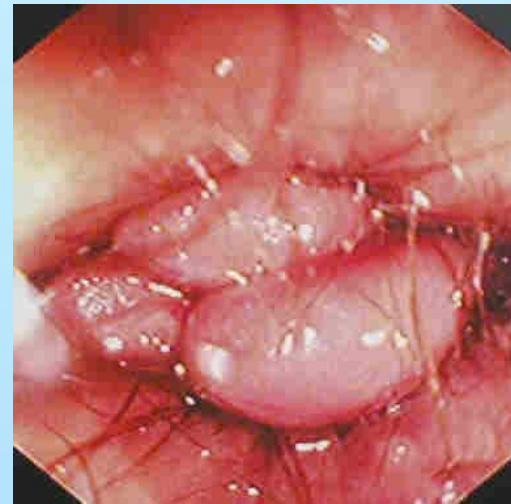
- ▶ Instruct clients to eat a diet high in cellulose such as wheat bran, whole grains, and cereals
- ▶ Instruct clients to eat fruits and vegetables with a high fiber content and to avoid foods containing indigestible roughage or seeds
- ▶ Instruct the client to avoid gas-forming foods, hot and cold liquids, and alcohol
- ▶ Instruct the client to avoid enemas and laxatives other than bulk-forming products such as psyllium (Metamucil)

Surgical Treatment

- ▶ Colon resection with primary anastomosis
- ▶ Temporary or permanent colostomy may be required for increased bowel inflammation
- ▶ Surgery is performed only if the ulcer is unresponsive to medications or if
 - hemorrhage, obstruction, or perforation occurs

Hemorrhoids

- ▶ Dilated varicose veins of the anal canal
- ▶ May be either internal, external, or prolapsed
- ▶ Internal hemorrhoids lie above the anal sphincter and cannot be seen upon inspection of the peri-anal area
- ▶ External hemorrhoids lie below the anal sphincter and can be seen on inspection
- ▶ Prolapsed hemorrhoids can become thrombosed or inflamed
- ▶ Hemorrhoids are caused from
 - portal hypertension
 - straining
 - irritation
 - increased venous or abdominal pressure



Hemorrhoids

► Clinical Manifestations

- Bright red rectal bleeding
- Pain associated with thrombosis
- Rectal itching
- Mucus rectal discharge

► Treatment

- Apply cold packs to the anal rectal area followed by sitz baths
- Apply topical anesthetics
- Encourage a high-fiber diet and fluids to promote bowel movements without straining
- Administer stool softeners