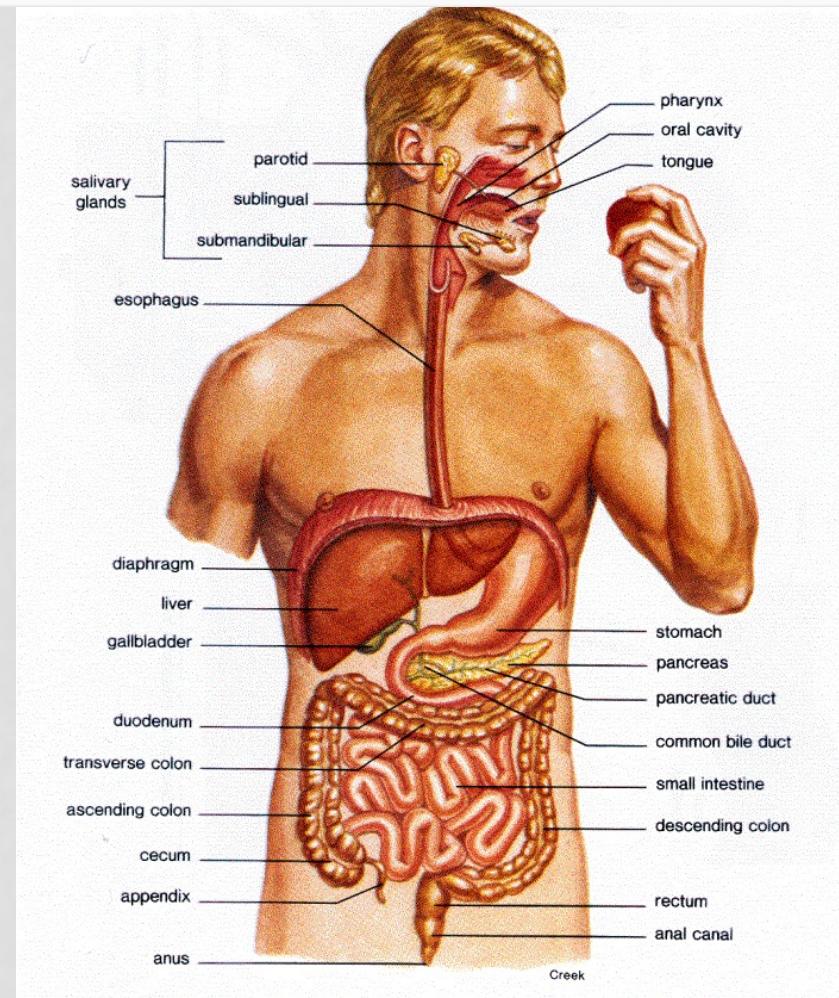


DIGESTIVE SYSTEM DISEASES AND DISORDERS

CHAPTER 14

COMMON SYMPTOMS/ ANATOMY

- Loss of appetite, weight loss, anorexia
- Nausea and vomiting
- Dehydration
- Any change in bowel habits, such as diarrhea, constipation, and flatulence
- Hemoptysis or hematemesis
- Blood or mucus in the stool
- Fever
- Pain in any area of the GI tract
- Heartburn, indigestion, dysphagia, and reflux
- Malaise, loss of strength, and fatigability
- Jaundice



STOMATITIS

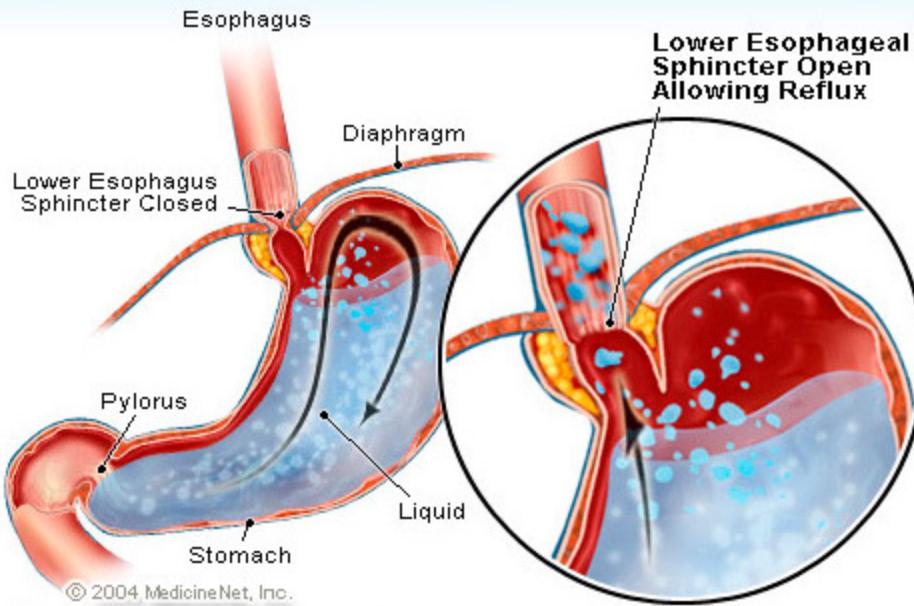
- Description
Inflammation of the oral mucosa
Herpetic (cold sore), aphthous (canker sores)
- Etiology
Herpetic: contagious HSV-1.
Aphthous: lack of B12, stress, fatigue, anxiety, food sensitivities
- Signs / Symptoms
Herpetic: Sudden onset, pain, difficulty eating and swallowing and fever. Swollen gums, blisters and ulcerating lesions on lips.
Aphthous: Burning tingling, swelling, ulcers of mucous membrane.
- Diagnostic Procedures
History and Physical exam
- Treatment
Supportive measures: Warm-water mouth rinses, topical anesthetics, antiviral medication for herpetic stomatitis.
Avoid high-acid foods, caffeine, alcohol, commercial mouthwashes, and smoking.
- Prognosis
Good. Self-limiting usually resolves in 10 days.
- Prevention
Avoid close contact with people who have cold sores. Avoid sharing utensils, glasses, or food.



GASTROESOPHAGEAL REFLUX DISEASE AND BARRETT ESOPHAGUS

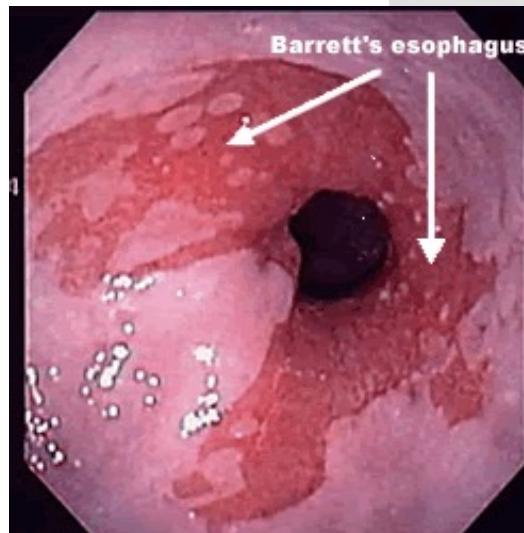
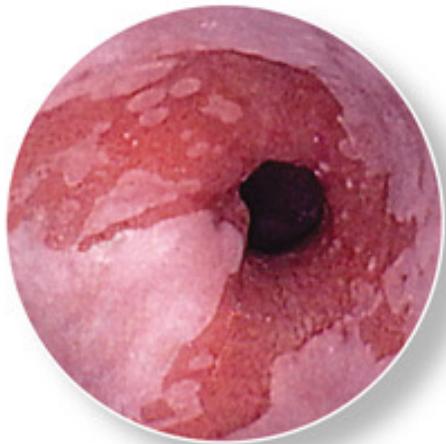
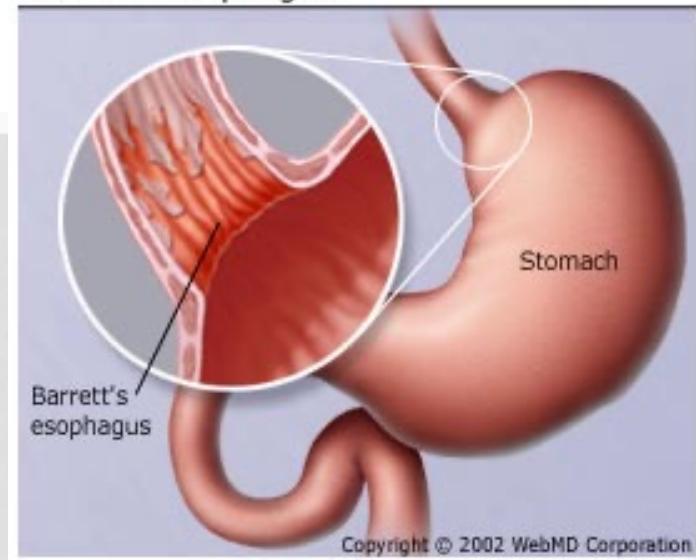
- Description
 - 10-20% of adults, 10 million cases in US
 - The backup of gastric or duodenal contents past the lower esophageal sphincter and into the esophagus without belching or vomiting
 - Barrett's Esophagus: Normal esophageal cells (squamous) replaced with abnormal cells
- Etiology
 - Abnormally weak contraction of the LES, reducing its ability to prevent reflux; abnormal relaxations of the LES or transient LES relaxations
- Signs / Symptoms
 - Heartburn, regurgitation, nausea. Symptoms worsened by exercise, bending or lying down.
- Diagnostic Procedures
 - Careful history and physical examination
 - Upper GI endoscopy or esophagogastroduodenoscopy (EGD).
 - On EGD, Barrett's has an orange /salmon colored change to mucosa. Confirm diagnosis is biopsy.
- Treatment
 - Eating low-fat, high-fiber foods. Avoid caffeine, tobacco, alcohol, chocolate, peppermint, carbonated beverages.
 - Antacids, Proton pump inhibitors (PPIs), eating several small meals.
 - Barrett's treated with long term PPI therapy.
- Prognosis
 - Varies with the underlying cause
- Prevention
 - Avoid any offending foods, reduce fat and increase fiber, don't eat before going to bed, elevate the head

Gastroesophageal Reflux



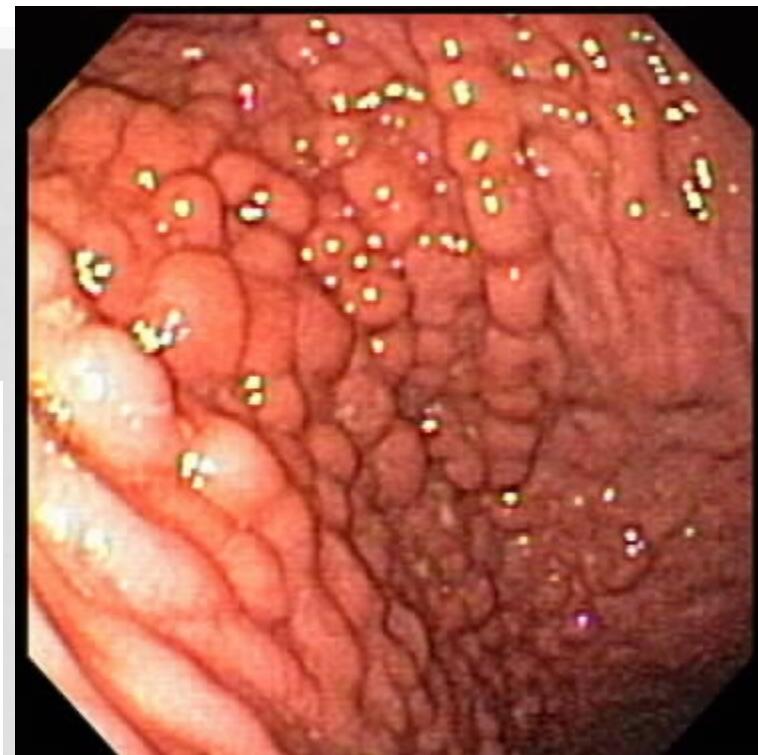
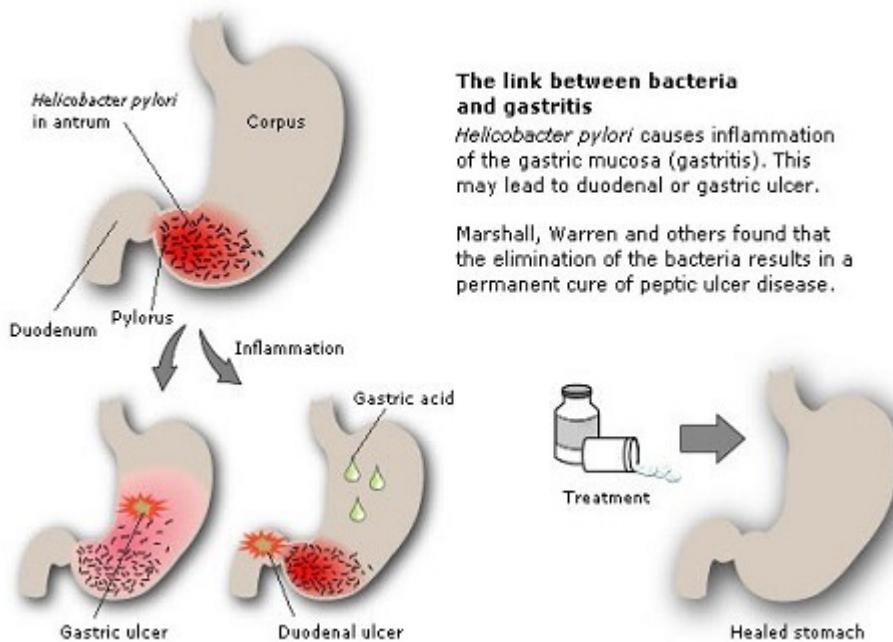
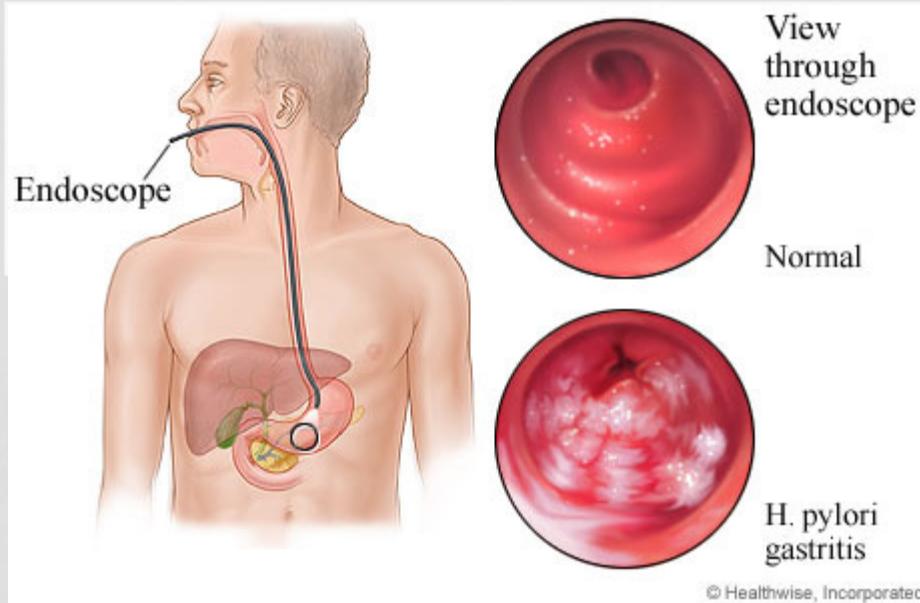
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Barrett's Esophagus



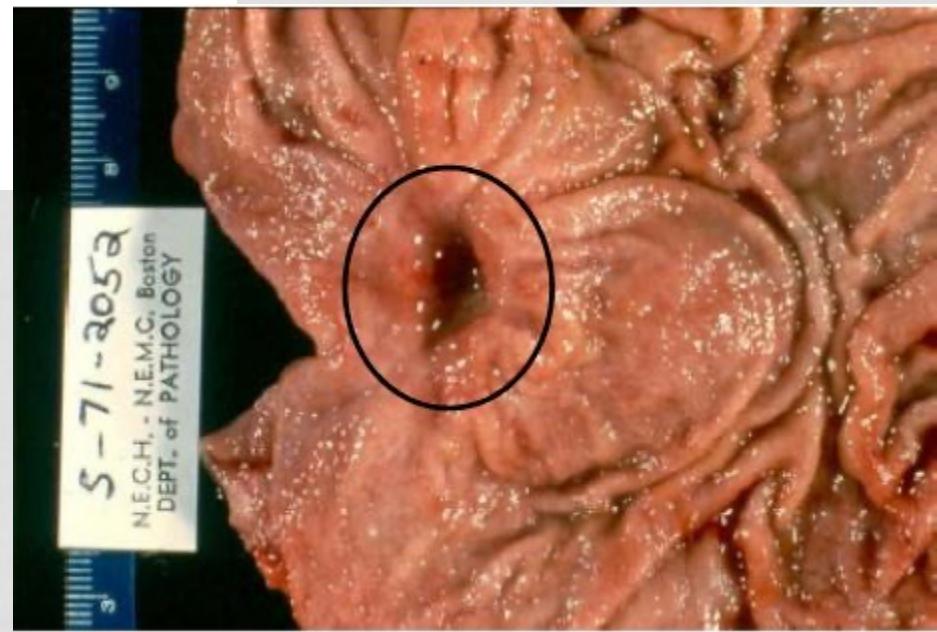
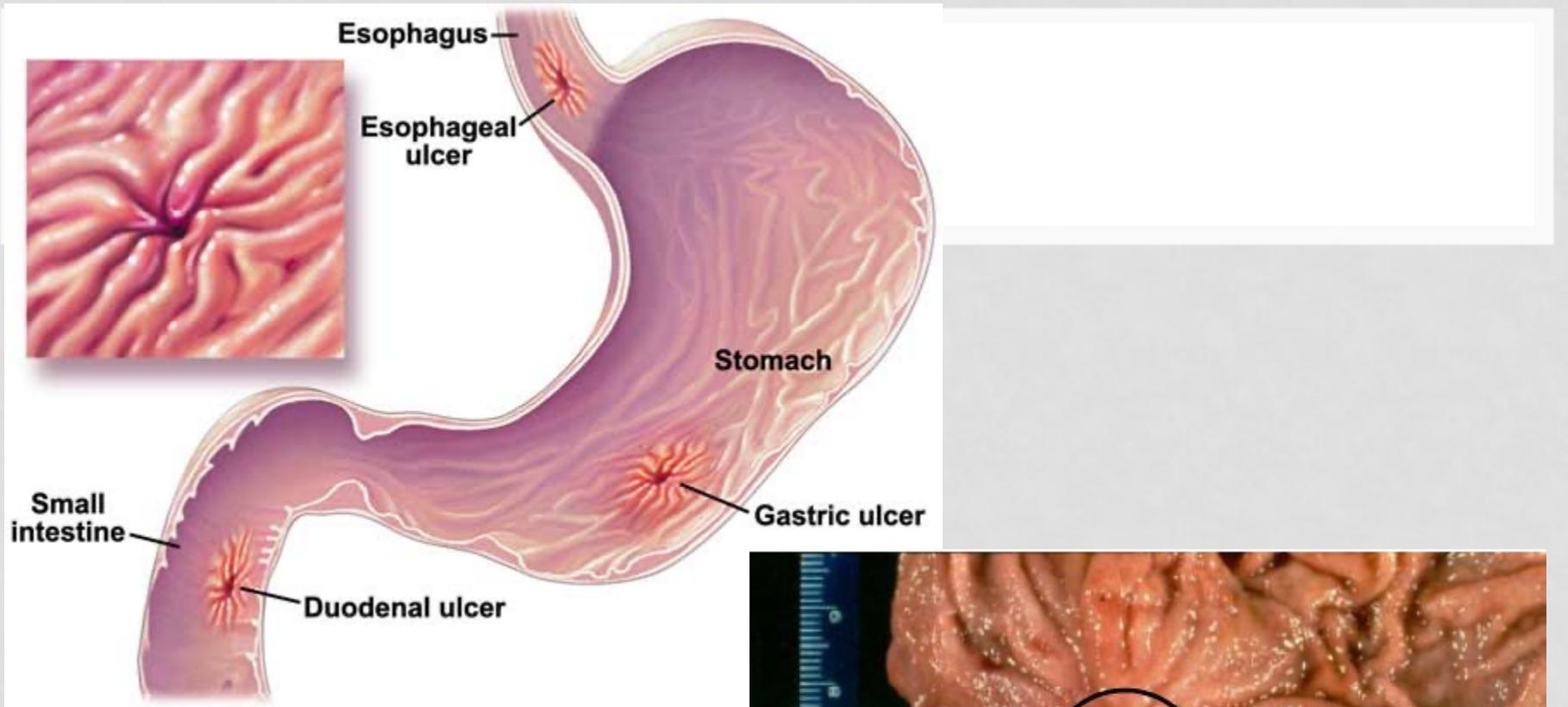
GASTRITIS

- Description
 - Inflammation and erosion of the gastric mucosa
- Etiology
 - Usually develops when the stomach's protective mucus-lined layer is weakened or damaged, allowing digestive juices to damage and inflame the stomach lining. Alcohol, caffeine, NSAIDs, H. Pylori.
- Signs / Symptoms
 - Indigestion, cramping, belching, vomiting, epigastric pain in the region of the abdomen, hematemesis (vomiting blood). Fullness in the abdomen, vague epigastric pain
- Diagnostic Procedures
 - Medical history that reveals exposure to a GI irritant may suggest this disorder; blood test for *H. pylori* antibodies
- Treatment
 - Symptoms relieved by eliminating any known irritant such as NSAIDs or alcohol. Chronic gastritis caused by *H. pylori* infection is treated by eliminating the bacteria-PPIs, antacids, acid blockers
- Prognosis
 - Good with proper treatment, untreated, gastritis may be a precursor to some stomach cancers
- Prevention
 - Avoid gastric irritants



PEPTIC ULCERS

- Description
 - Found in the lower esophagus, the stomach, pylorus, duodenum, and the jejunum.
 - Duodenum 5x more than gastric
- Etiology
 - Major risk factors: H. pylori, use of NSAIDs, alcohol (ETOH), smoking, pathological hypersecretion disorders
- Signs / Symptoms
 - Persistent “heartburn” and indigestion, nagging stomach pain, GI bleeding, hematochezia, nausea, vomiting, weight loss, peculiar sensation of hot water bubbling in the back of the throat.
 - Gastric-Pain worse after eating (wt. loss)
 - Duodenum-Pain relieved with food/antacids (wt. gain)
- Diagnostic Procedures
 - Esophagogastroduodenoscopy (EGD) or upper GI barium swallow
 - H. pylori: ELISA, Urea breath test, Stool antigen
- Treatment
 - Antibiotics to treat H. pylori- amoxicillin and clarithromycin and proton pump inhibitor
 - Prostaglandin analog to suppress ulceration, coagulation by laser or cautery to control bleeding
- Prognosis
 - Peptic ulcers tend to be chronic with remissions and exacerbations; complications include hemorrhage and perforation
 - Zollinger-Ellison Syndrome: gastrin-secreting tumor of the pancreas. High acid production.
- Prevention
 - None



GASTROENTERITIS

- Description
 - Inflammation of the stomach and small intestine
- Etiology
 - Infection from bacteria, amoebae, parasites, viruses; ingestion of toxins, allergic reactions to certain foods, drug reactions
- Signs / Symptoms
 - Diarrhea, cramping, nausea, vomiting, malaise, fever, rumbling stomach sounds
- Diagnostic Procedures
 - Medical history and physical examination; stool and/or blood culture
- Treatment
 - Symptomatic and supportive; fluid/nutritional support, antidiarrheals, antiemetics
- Prognosis
 - Varies with etiology but is generally good once the cause has been isolated and treatment has begun
- Prevention
 - Properly refrigerate all perishable food and wash hands thoroughly before handling food

CELIAC DISEASE OR CELIAC SPRUE (GLUTEN-INDUCED ENTEROPATHY)

- Description
 - A disease of the small intestine marked by malabsorption, gluten intolerance, and damage to and characteristic changes in the mucosal lining of the intestine
- Etiology
 - Autoimmune disorder in response to the gliadin fraction of gluten
- Signs / Symptoms
 - Weight loss, anorexia, abdominal distention, flatulence, intestinal bleeding, peripheral neuritis, dermatitis, muscle wasting; diarrheal, abnormally large stools characteristically light yellow to gray, greasy, and foul smelling
- Diagnostic Procedures
 - Serological test followed by biopsy is recommended, biopsy of the small intestine indicating destruction of the villi, remission of symptoms and improvement in the condition after the institution of a gluten-free diet
- Treatment
 - Lifelong strict adherence to a gluten-free diet
 - Remember: No BROW, Eat CRAP.
 - BROW: Barley, rye, oats, wheat
 - CRAP: Corn, rice, arrowroot potatoes
- Prognosis
 - With proper treatment, prognosis is good
- Prevention
 - None

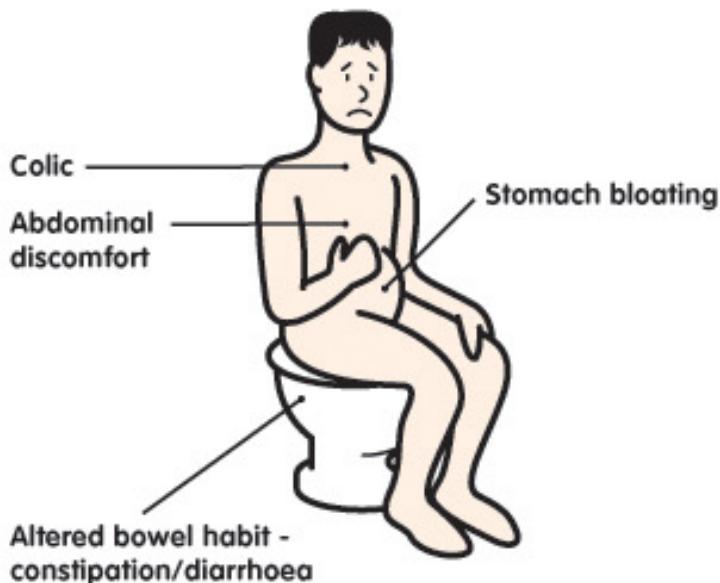
IRRITABLE BOWEL SYNDROME (IBS)

- Description
 - A complex group of symptoms marked by abdominal pain and altered bowel function-typically constipation and diarrhea
 - > 3 bowel movements (BM) a day **or** <3 BM a week
- Etiology
 - May arise from a number of underlying disorders
- Signs / Symptoms
 - Abdominal pain with constipation or constipation alternating with diarrhea; heartburn, abdominal distention, back pain, weakness, faintness, stool may be mucus covered
 - Symptoms often improved with defecation.
 - You will NOT see blood or nocturnal BMs
- Diagnostic Procedures
 - Careful client history, complete blood cell count and stool examination to rule out other illnesses
- Treatment
 - Dietary modification such as avoiding irritating foods or adding fiber, avoid caffeine and alcohol, limit intake of fatty foods, dairy products, and artificial sweeteners, increase fiber, avoid bean, cabbage, uncooked cauliflower and broccoli
- Prognosis
 - Varies according to how successfully the symptoms can be controlled
- Prevention
 - None

Snapshots at jasonlove.com



"I'm afraid that your irritable bowel syndrome has progressed. You now have furious and vindictive bowel syndrome."



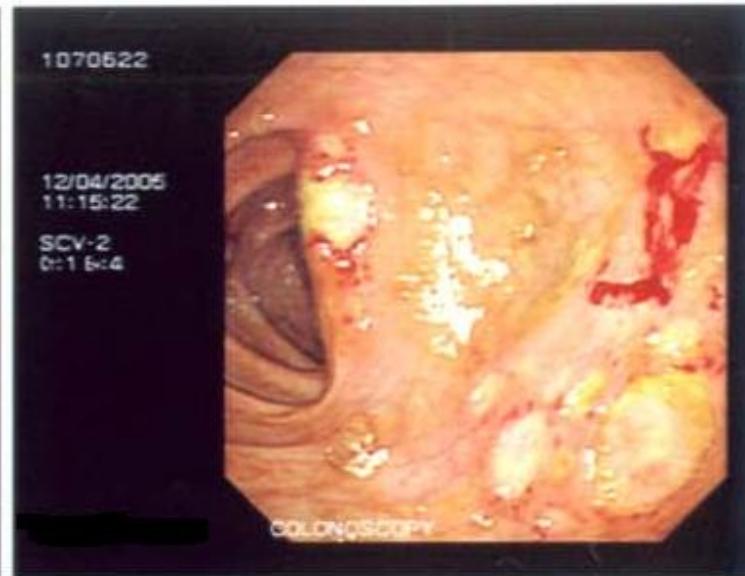
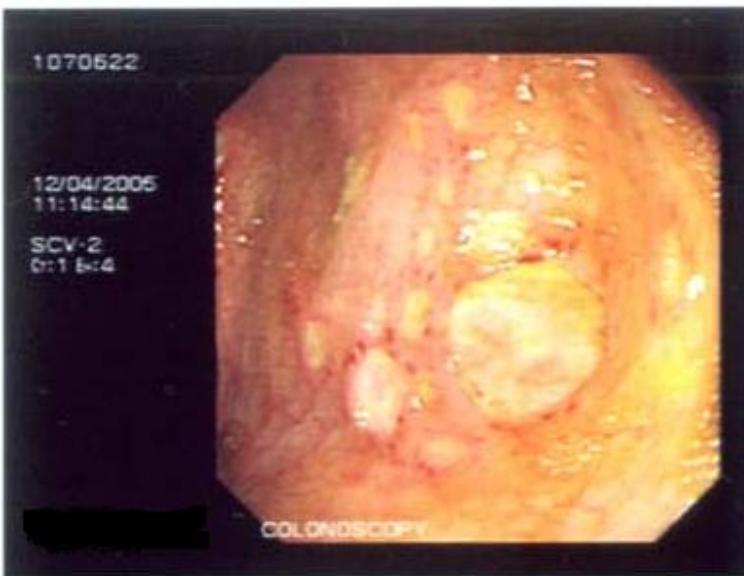
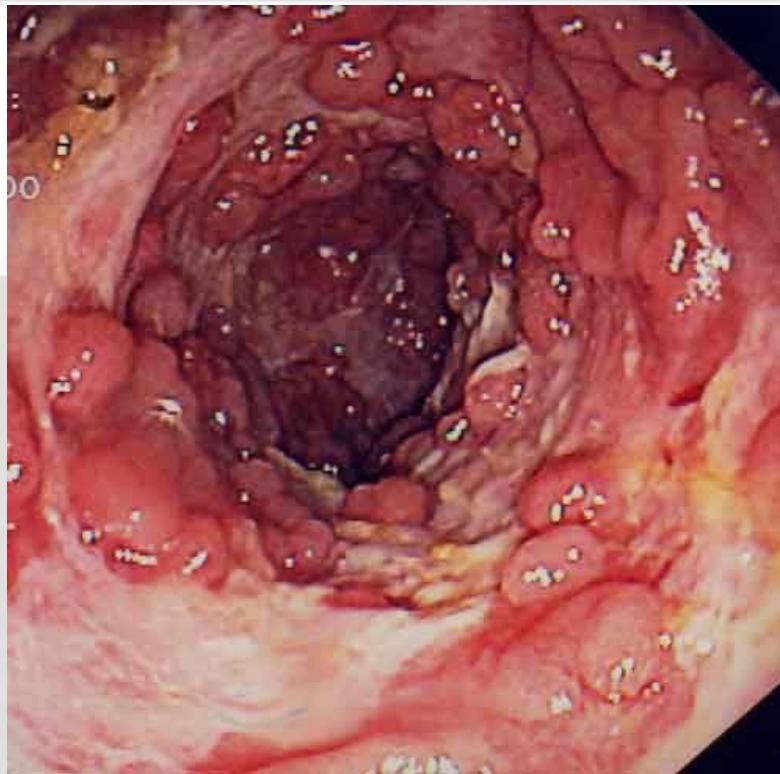
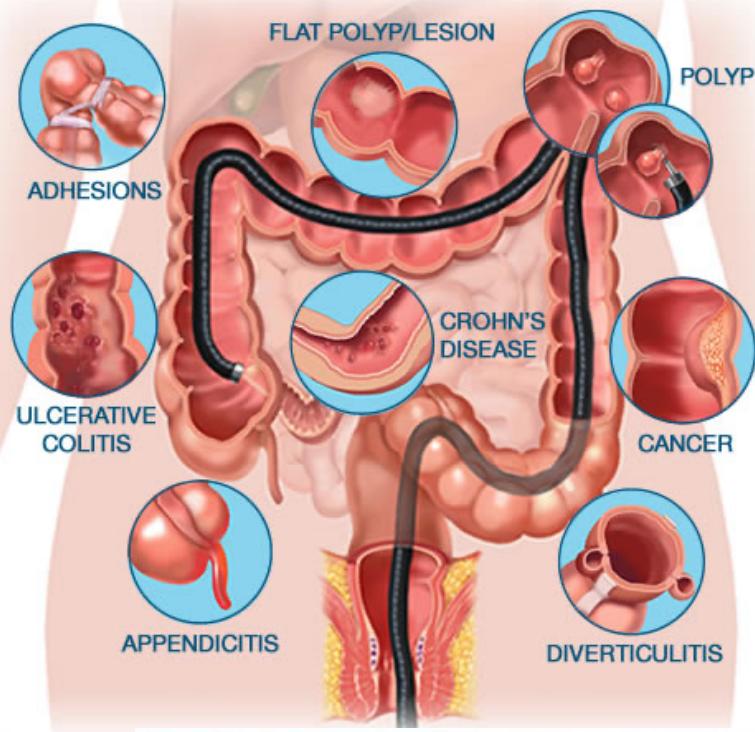
at a glance

Irritable Bowel Syndrome (IBS)

CROHN'S DISEASE

- Description
 - Serious, chronic, idiopathic inflammation usually of the ileum; inflammation tends to be patchy or segmented
 - 75% involvement of the terminal ileum & 25 % colon. Typically spares the rectum.
- Etiology
 - Unknown. Stress, viral, bacterial?
- Signs / Symptoms
 - Intermittent or steady abdominal pain in the right lower quadrant, diarrhea, lack of appetite, low-grade fever, weight loss, diarrhea, and variety of sores, fissures, fistulas, or strictures.
- Diagnostic Procedures
 - Diagnosed by differentiating its characteristic pattern of inflammation from those of other bowel disorders
 - Barium x-ray
 - Colonoscopy-Gold standard. Look for cobblestoning and skip lesions
- Treatment
 - Symptomatic and supportive, oral forms of mesalamine
 - Corticosteroids for flares
 - Antibiotics if infection
 - Colectomy, ileostomy.No cure
- Prognosis
 - Depends on the severity of the initial onset of the disease and clinical history but worsens over time
- Prevention
 - None

The COLONOSCOPY

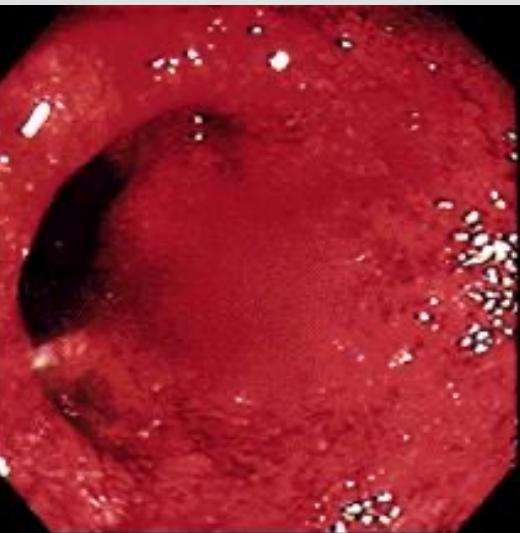


ULCERATIVE COLITIS

- Description
 - Chronic inflammation and ulceration of the colon, often beginning in the rectum or sigmoid colon and extending upward into the entire colon
- Etiology
 - Unknown.
- Signs / Symptoms
 - Recurrent bloody diarrhea often containing pus and mucus accompanied by left lower quadrant abdominal pain and severe urgency to move the bowels, fever, weight loss, signs of dehydration
- Diagnostic Procedures
 - Sigmoidoscopy or colonoscopy will reveal the mucosal lining to be friable with thick, inflammatory exudate
- Treatment
 - Anti-inflammatory agents, immunomodulators, corticosteroid treatment, surgical excision, colectomy is curative
- Prognosis
 - Complications may be life-threatening and include anemia and perforated colon with resulting septicemia
- Prevention
 - None



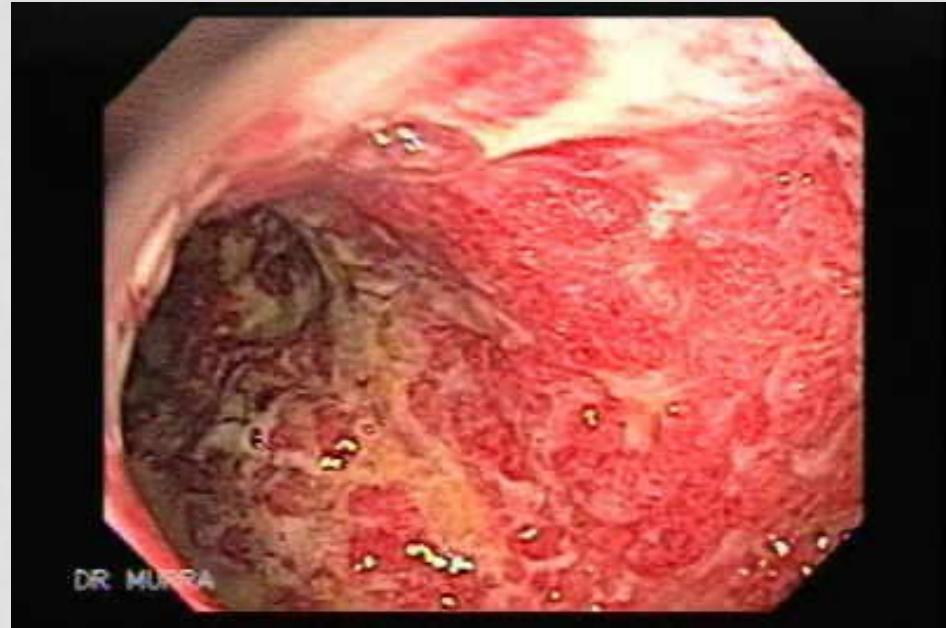
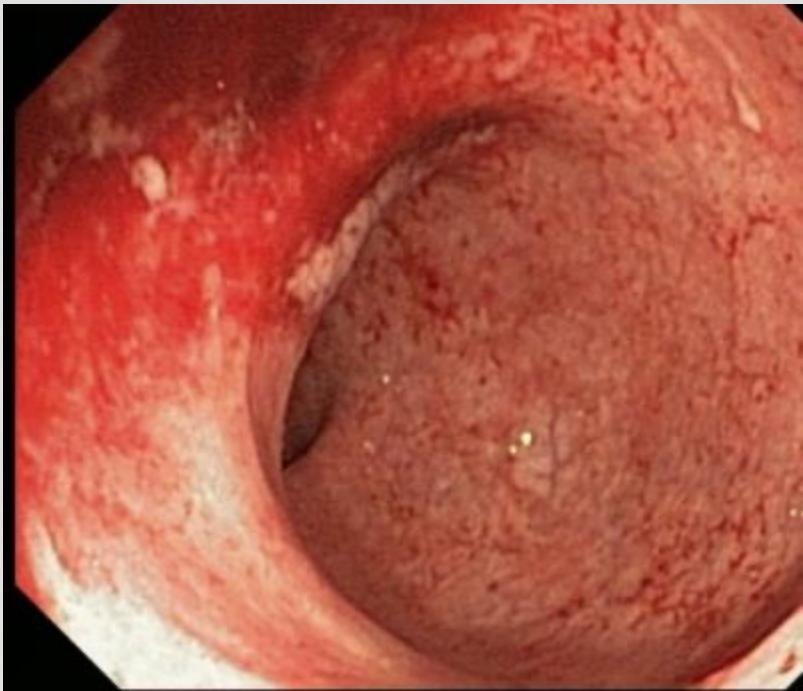
Healthy Colon



Ulcerative Colon



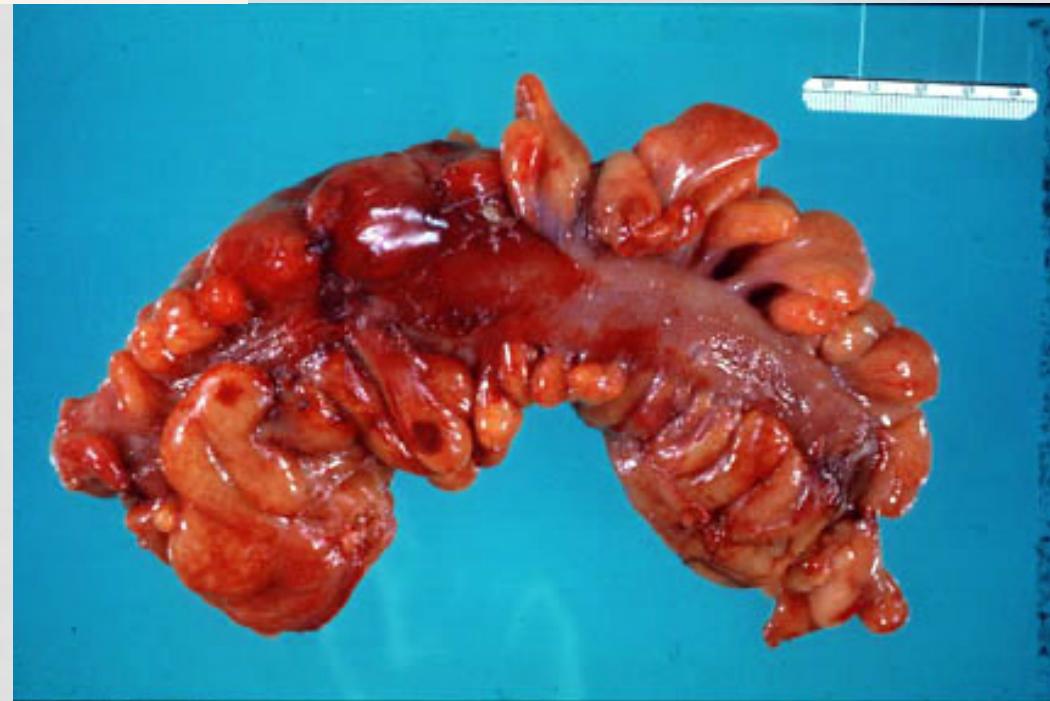
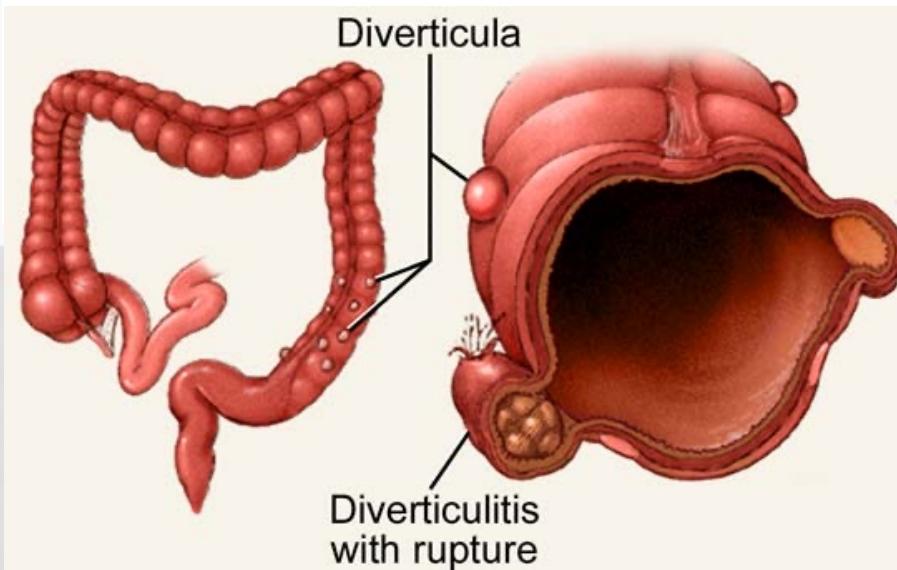
DR. MURRAY



DR. MURRAY

DIVERTICULAR DISEASE

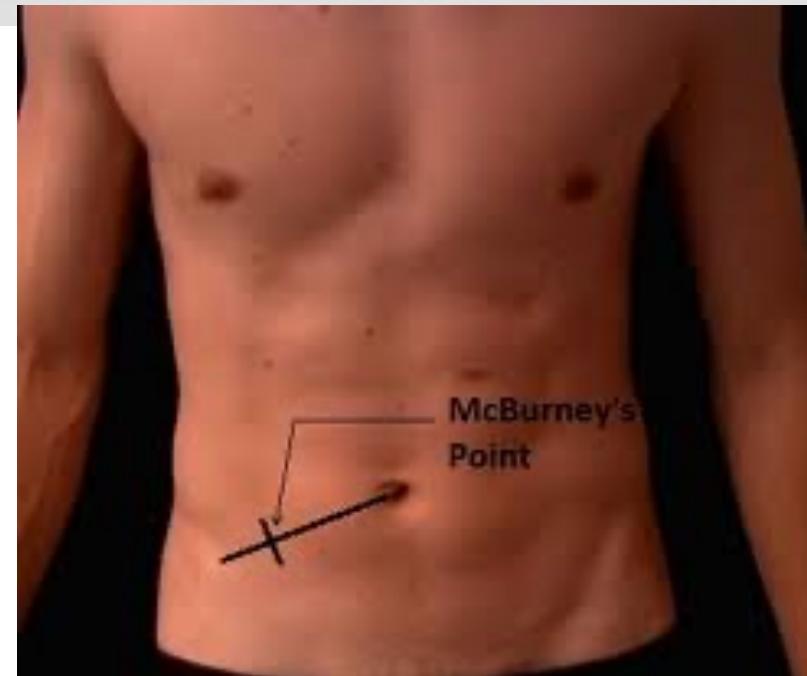
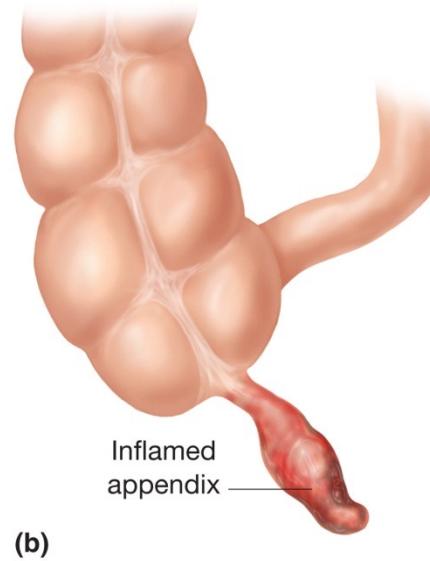
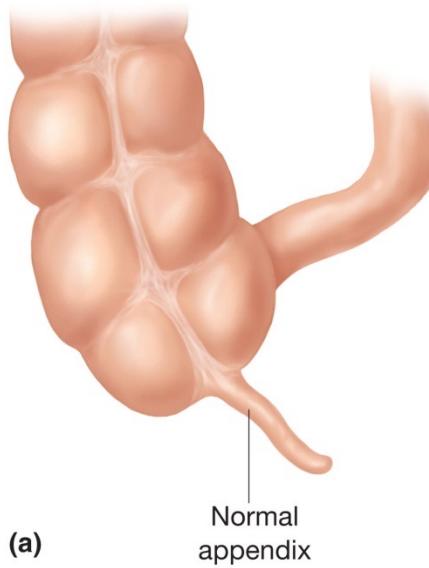
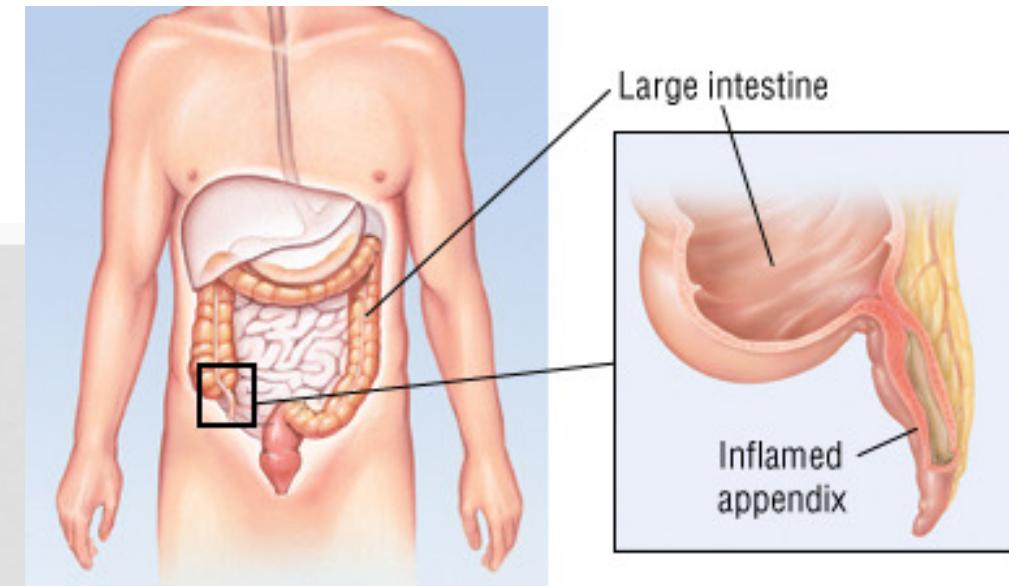
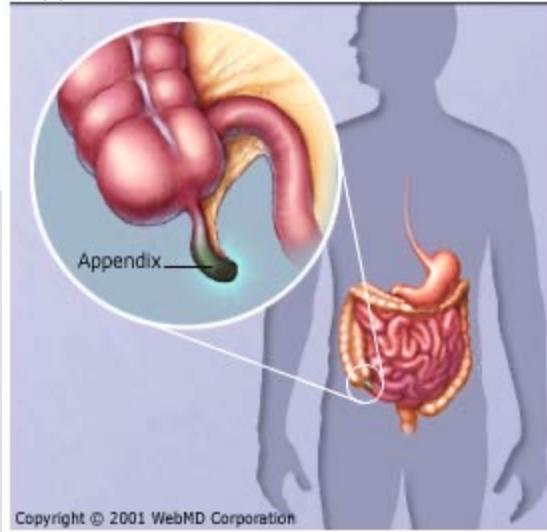
- Description
 - Bulging pouches in the GI tract wall push the mucosal lining through surrounding muscle
- Etiology
 - Colon wall thickens and accumulation of intestinal matter within a diverticulum forms a small, hard, solid, intestinal mass around a core of fecal material
- Signs / Symptoms
 - If the diverticulum ruptures, the bacteria within the colon spread into the tissues surrounding the colon, causing diverticulitis
 - Fever, pain (lower left quadrant), muscle spasms, guarding, tenderness
- Diagnostic Procedures
 - Abdominal x-rays, CT, stool specimen.
 - Examination may be sufficient
- Treatment
 - High-residue diet that includes bran, bulk additives, stool softeners, antibiotics or anticholinergic drugs
- Prognosis
 - Becomes less favorable with advancing age, proper dietary measures can generally help forestall acute episodes of the disease
- Prevention
 - None



ACUTE APPENDICITIS

- Description
 - Inflammation of the veriform appendix due to an obstruction
- Etiology
 - May be initiated by obstruction of the interior of the appendix by a fecalith, stricture, foreign body or viral infection
- Signs / Symptoms
 - Early: poorly localized perumbilical abdominal pain. Nausea, vomiting, anorexia
 - Late: Pain will eventually settle over the appendix in the right lower abdomen (McBurney's point)with "boardlike" rigidity, increased tenderness, and abdominal spasms.
 - Fever, malaise, diarrhea or constipation and tachycardia are among the later symptoms
- Diagnostic Procedures
 - Physical examination and characteristic symptomatology. Tenderness on pressure at McBurney point and the client's ability to pinpoint the area of maximum tenderness
 - Increased leukocytosis (WBC)
 - CT
- Treatment
 - Appendectomy
- Prognosis
 - With early diagnosis and treatment, the prognosis is good
- Prevention
 - None

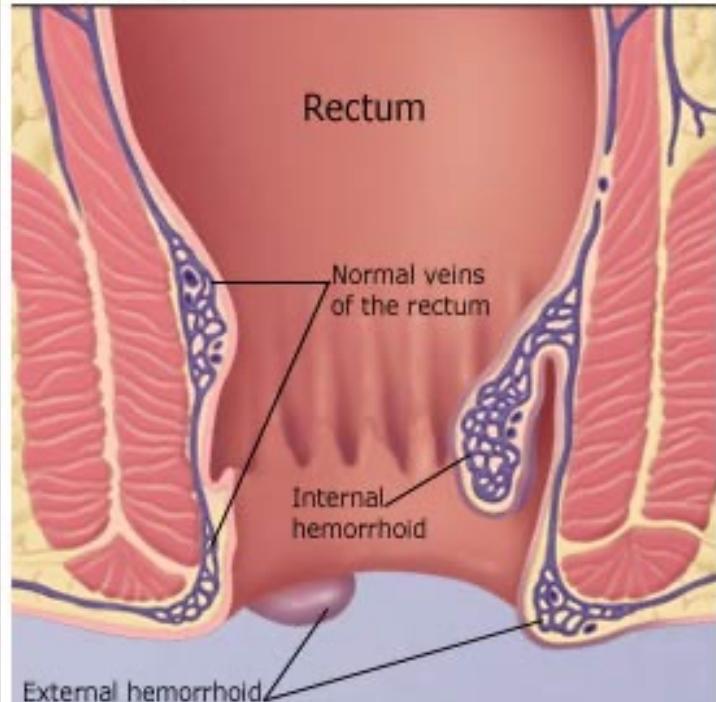
Appendicitis



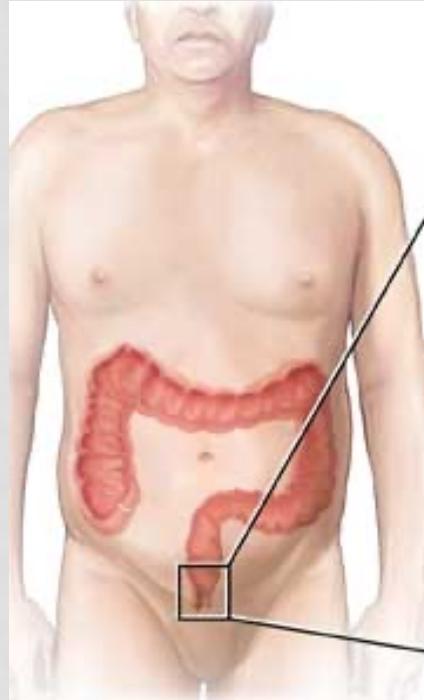
HEMORRHOIDS

- Description
 - Dilated, tortuous veins in the mucous membrane of the anus or rectum
- Etiology
 - Straining at stool, chronic constipation or diarrhea, prolonged sitting, pregnancy, anal intercourse, anorectal infections
- Signs / Symptoms
 - Rectal bleeding, pruritus, vague discomfort, hemorrhoids may protrude from the anus
- Diagnostic Procedures
 - Physical examination will reveal external hemorrhoids, proctoscopy will reveal internal hemorrhoids
- Treatment
 - High-fiber diet and using stool softeners, over-the-counter suppositories and creams can calm inflammation
- Prognosis
 - With proper treatment, prognosis is good
- Prevention
 - Avoiding straining at stool and adherence to a proper diet and exercise regimen

Hemorrhoids

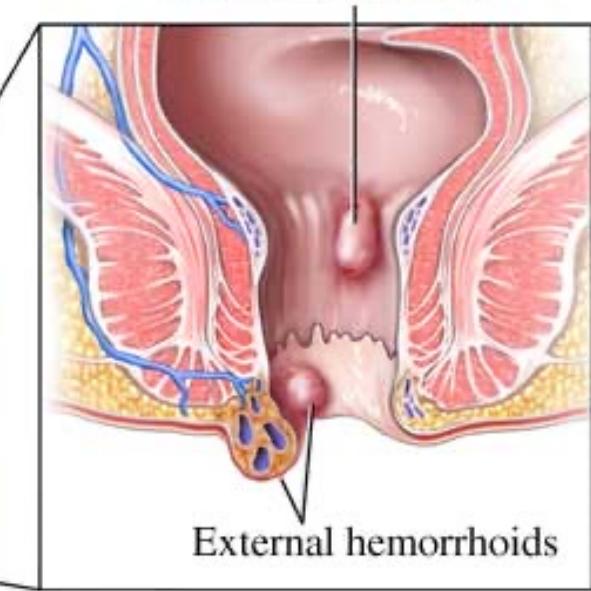


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Internal hemorrhoid

External hemorrhoids



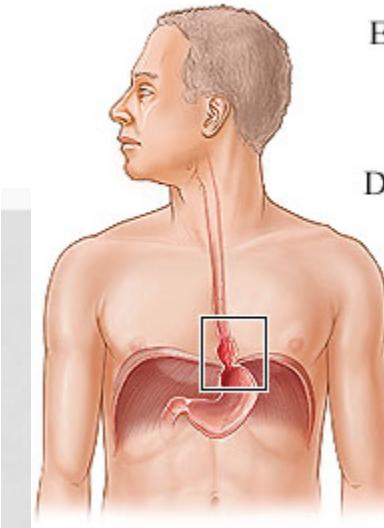
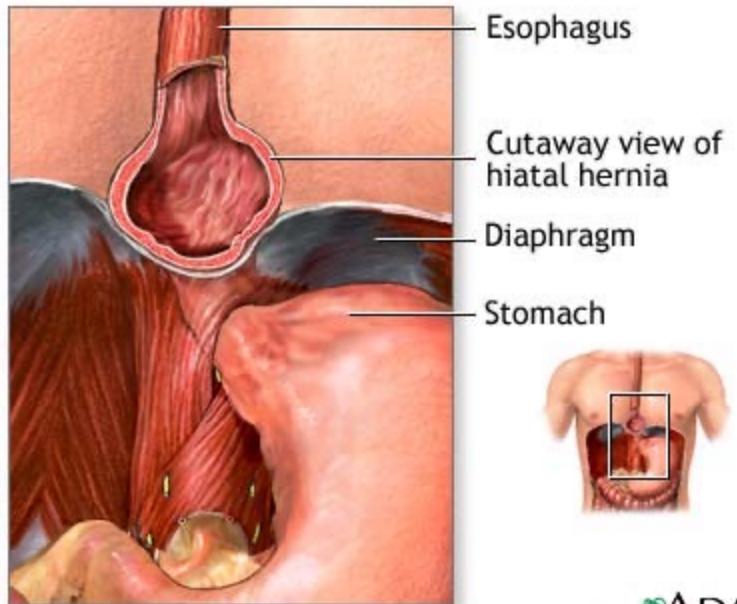
DIARRHEA

- Description
 - The frequent passage of feces with an accompanying increase in fluidity and volume
- Etiology
 - The result of an abrupt increase in intestinal motility, malabsorption syndrome, gastritis, lactose intolerance, IBS, Crohn disease, ulcerative colitis, GI tumors, bacterial infections
- Signs / Symptoms
 - May vary in fluidity and volume, may be accompanied by flatulence, abdominal distension, fever, headache, anorexia, vomiting, malaise, and cramping
- Diagnostic Procedures
 - Bacterial cultures, proctoscopy, radiological studies, tests for occult blood
- Treatment
 - Relief of symptoms and correction of underlying disorders, clear liquids may be prescribed
- Prognosis
 - Depends on the cause
- Prevention
 - Cases of diarrhea due to infectious agents can often be prevented by following proper hygiene and sanitation procedures



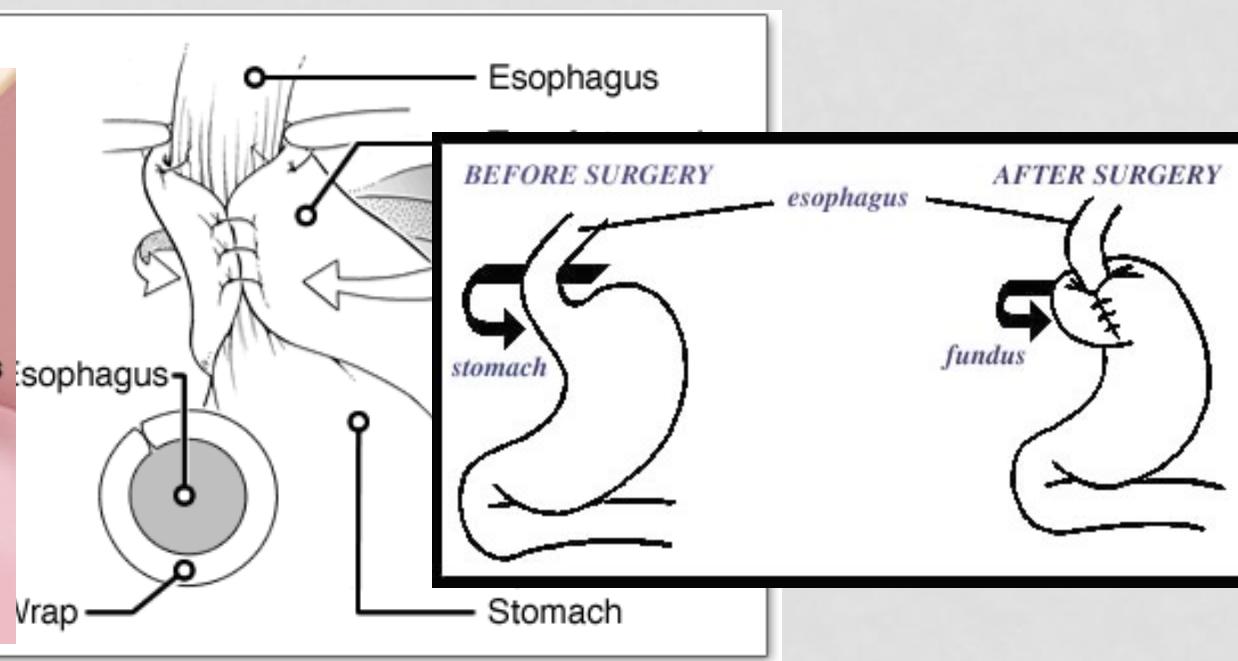
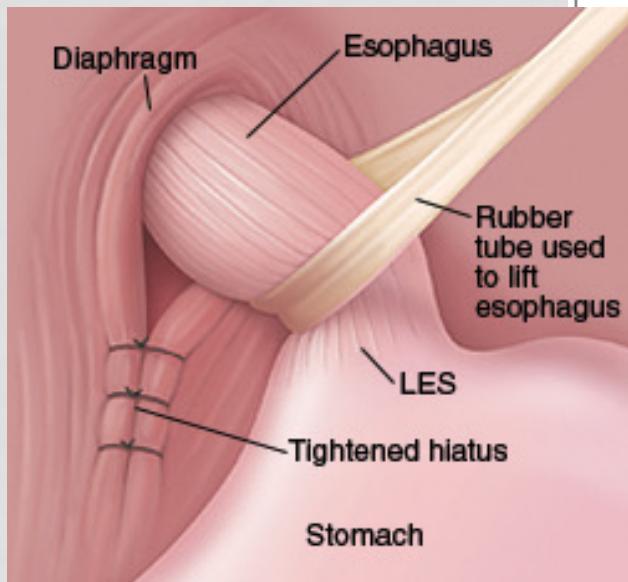
HIATAL HERNIA

- Description
 - The protrusion of some portion of the stomach into the thoracic cavity through the opening in the diaphragm through which the esophagus passes
- Etiology
 - The cause is unclear. Increased intra-abdominal pressure, weakening of the gastroesophageal junction.
 - Severe coughing, straining, lifting heavy objects.
- Signs / Symptoms
 - Over half of hiatal hernias may remain asymptomatic; heartburn, esophageal reflux, dysphagia, or severe pain if a large portion of the stomach is caught above the diaphragm
- Diagnostic Procedures
 - Chest x-ray, barium x-ray, endoscopy and biopsy
- Treatment
 - Surgery, dietary modification, antacids, stool softeners and laxatives
- Prognosis
 - Good with proper treatment; complications include stricture, significant bleeding, pulmonary aspiration, or strangulation
- Prevention
 - None



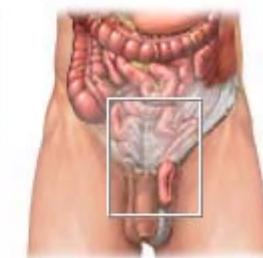
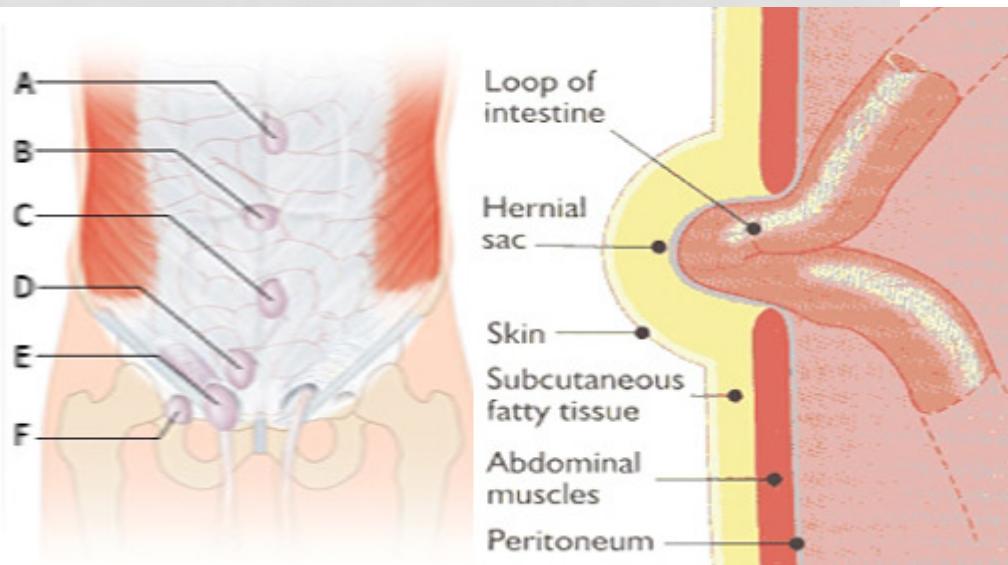
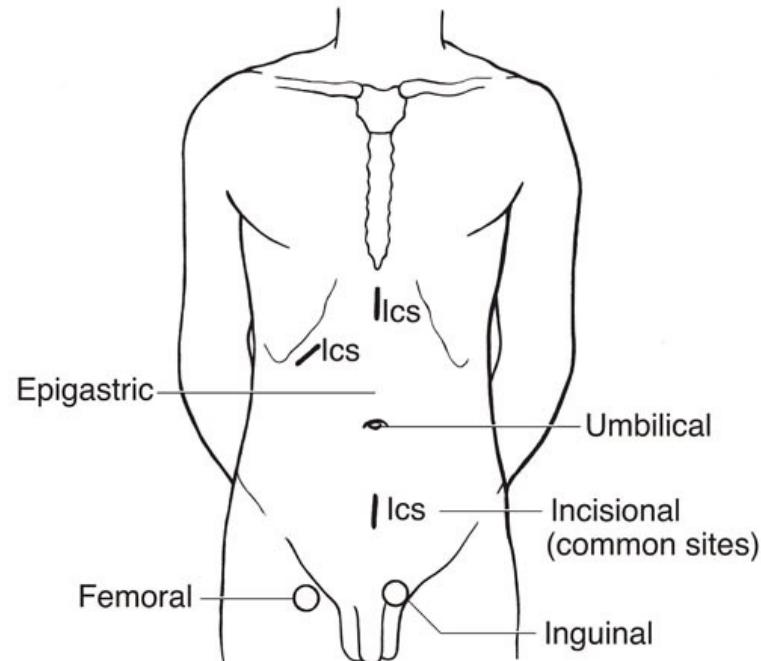
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ADAM.



ABDOMINAL AND INGUINAL HERNIAS

- Description
 - **Abdominal:** protrusion of an internal organ, typically a portion of the intestine, through an abnormal opening in the musculature of the abdominal wall; **Inguinal:** the most common type and occur in men more often than in women
- Etiology
 - May result from a congenital weakness in the abdominal wall or muscle or increased pressure within the abdomen, heavy lifting, pregnancy, obesity, and straining at stool
- Signs / Symptoms
 - Appearance over the herniated area of a lump that tends to disappear when the person is supine; sharp steady accompanying pain may be present in the groin, strangulation of a herniated portion of the intestine will cause severe pain and can cause bowel obstruction
- Diagnostic Procedures
 - Physical examination reveals the herniated area, medical history of sharp abdominal pain when lifting or straining
- Treatment
 - Umbilical hernias-may require only taping or binding the affected area until the hernia closes;
 - Femoral and inguinal- require reduction of the hernia and trussing the weakened portion of the abdominal wall; Corrective surgical procedures indicated
- Prognosis
 - Excellent with proper treatment and care
- Prevention
 - Follow recommended guidelines for lifting objects, maintaining soft stool consistency and practicing moderate exercise



Inguinal hernia
occurs when a portion of the small intestine enters the inguinal canal

CHOLELITHIASIS AND CHOLECYSTITIS

- Description

- Cholelithiasis-the formation or presence of stone-like masses called gallstones within the gallbladder or bile ducts;
- Cholecystitis is a severe inflammation of the interior wall of the gallbladder
- Cholangitis-infection of common bile duct

- Etiology

- Cholelithiasis (biliary colic)-obesity, high-calorie diets, certain drugs, oral contraceptives multiple pregnancies, and increasing age; 5 F's of gallstones: fat, female, forty, fertile, fair
- Cholecystitis- obstruction of bile ducts by gallstones

- Signs / Symptoms

- A classic “gallbladder attack” results; acute onset of upper right quadrant abdominal pain radiating to the shoulder and back, nausea and vomiting may accompany the attack; flatulence, belching, and heartburn, typically tend to follow ingestion of large meals or fatty foods;
- Cholecystitis is the gradual onset of upper right quadrant pain that usually remains localized over the area of the gallbladder, ceases once the gallstones are passed, the pain of acute cholecystitis doesn't tend to subside after a few hours; anorexia, nausea, vomiting, and a low-grade fever and chills
- Cholangitis: Charcot's triad: Fever, RUQ pain, Jaundice

- Diagnostic Procedures

- Clinical history of the characteristic pain of biliary colic suggest a diagnosis of gallstones;
- Gallbladder ultrasound

- Treatment

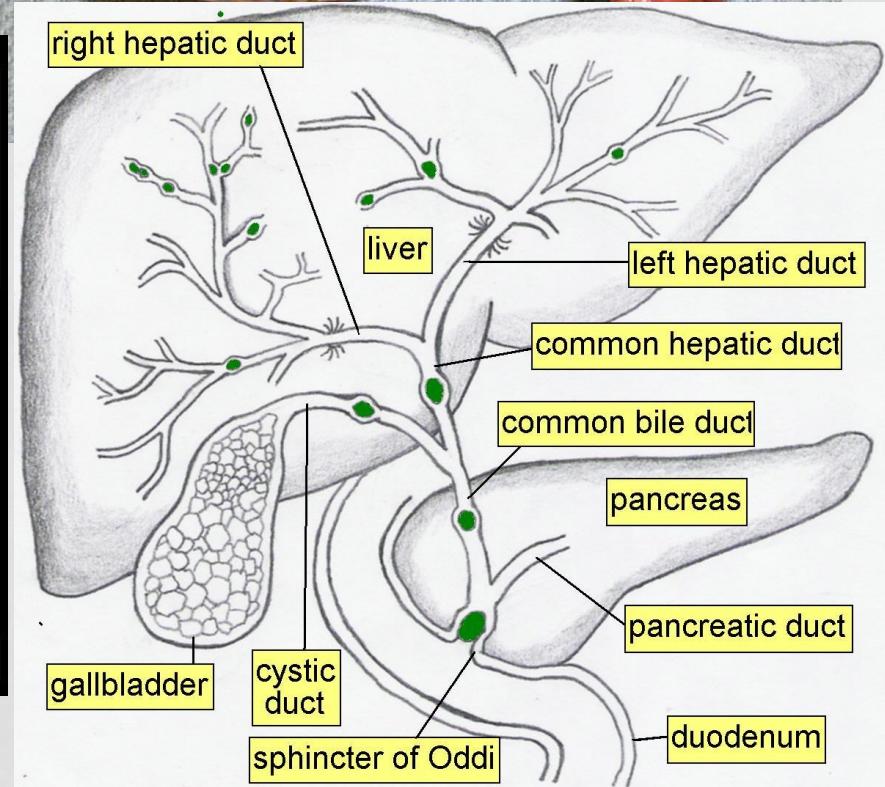
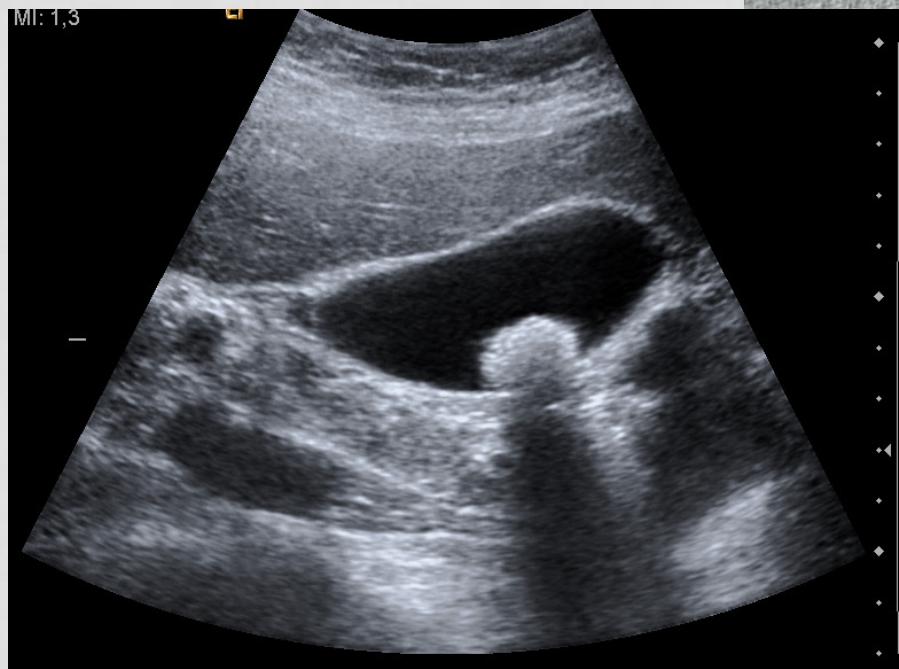
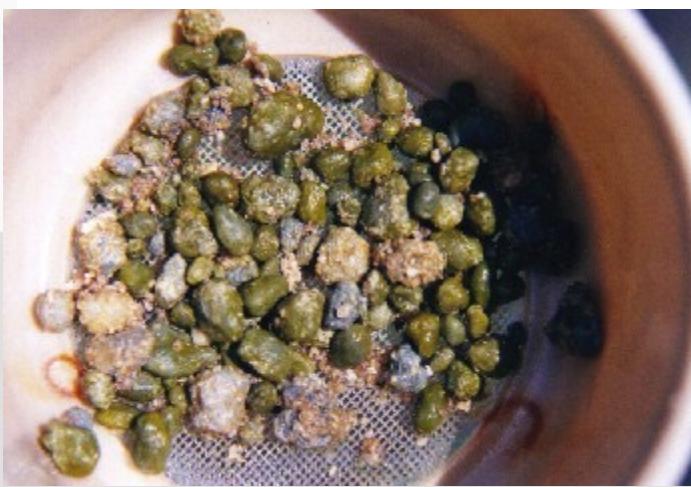
- Bowel rest, analgesia, and IV antibiotics and hydration;
- Laparoscopic cholecystectomy,
- Cholelithiasis- insertion of a flexible catheter, extracorporeal shock wave, dissolving cholesterol-based stones through bile acid therapy

- Prognosis

- Generally good with prompt treatment

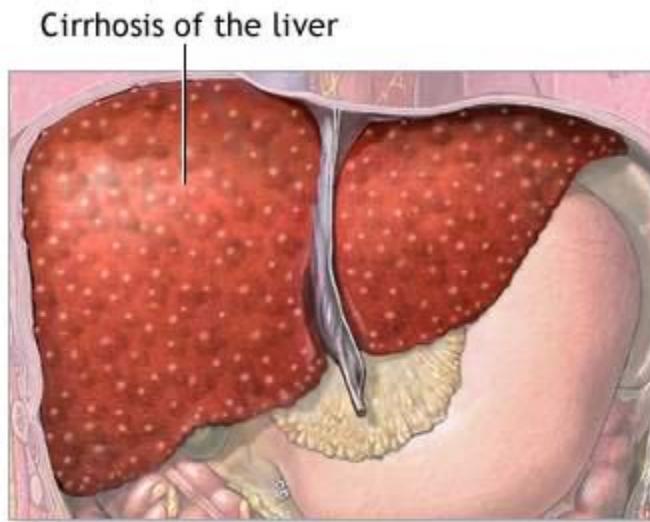
- Prevention

- None; high-fat diets are to be avoided



CIRRHOSIS

- Description
 - Chronic, irreversible, degenerative disease of the liver characterized by the replacement of normal liver cells with fibrous scar tissue and other alterations in liver structure
- Etiology
 - Portal, nutritional or alcoholic cirrhosis, also caused by chronic hepatitis B,C, and D; nonalcoholic fatty liver disease, biliary cirrhosis, certain inherited diseases, some toxins, and congestive heart failure
- Signs / Symptoms
 - Nausea, vomiting, anorexia, dull abdominal ache, weakness, fatigability, weight loss, pruritus, peripheral neuritis, bleeding tendencies, edema of the legs, ascites, and jaundice
- Diagnostic Procedures
 - Palpation reveals the liver to be enlarged and firm-if not hard- with a blunt edge
- Treatment
 - Adequate rest and diet, restriction of alcohol, vitamin and mineral supplements, liver transplantation
- Prognosis
 - Poor in advanced cirrhosis, especially for alcoholic cirrhosis should the person continue drinking
- Prevention
 - No known prevention unless alcohol is a contributing factor, then treatment for alcoholism may be necessary



VIRAL HEPATITIS

- Description
 - The infection and subsequent inflammation of the liver caused by any one of several viruses- Hepatitis A, B, C, D, and E viruses
- Etiology
 - HAV, Hepatitis B, HCV, HDV, HEV, HGV
- Signs / Symptoms
 - Flulike-malaise, fatigue, anorexia, myalgia, fever, dark-colored urine, clay-colored stools, rashes, hives, abdominal pain or tenderness, pruritus, jaundice
- Diagnostic Procedures
 - The specific type of hepatitis has to be established; specific blood tests will show liver enzymes, the antibody-antigen type, and viral proteins or genetic material
- Treatment
 - Bed rest, adequate diet, fluid intake are advised, antiemetics may be ordered
- Prognosis
 - The particular type of hepatitis and extent of liver damage determine the prognosis; serious consequences include cirrhosis, liver cancer, and acute fulminant hepatitis
- Prevention
 - When individuals are exposed to HAV, IgG may be administered as a preventive measure

HEPATITIS A

Hepatitis A is most commonly spread by eating or



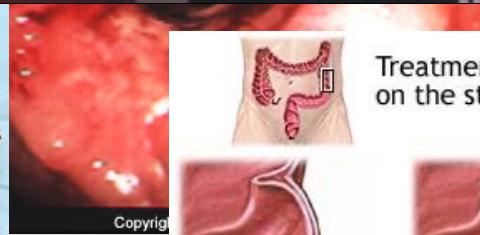
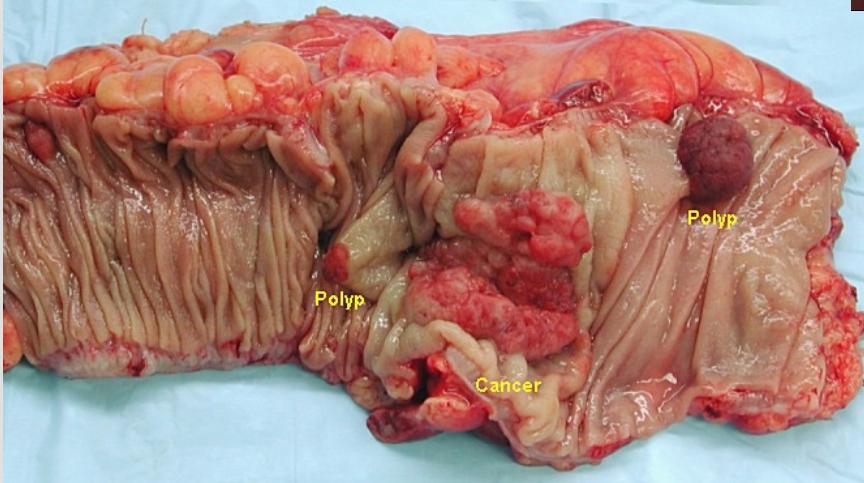
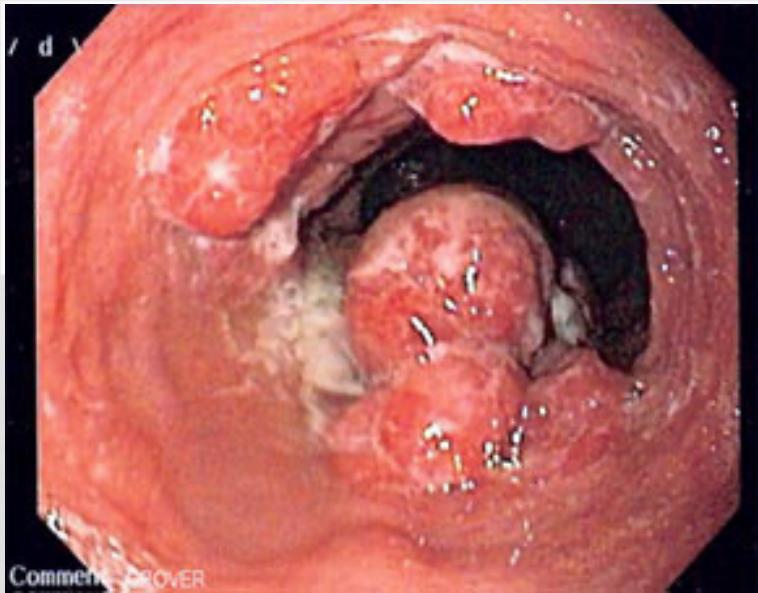
Viral Hepatitis - Overview

Type of Hepatitis

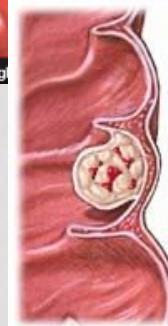
	A	B	C	D	E
Source of virus	feces	blood/ blood-derived body fluids	blood/ blood-derived body fluids	blood/ blood-derived body fluids	feces
Route of transmission	fecal-oral	percutaneous permucosal	percutaneous permucosal	percutaneous permucosal	fecal-oral
Chronic infection	no	yes	yes	yes	no
Prevention	pre/post- exposure immunization	pre/post- exposure immunization	blood donor screening; risk behavior modification	pre/post- exposure immunization; risk behavior modification	ensure safe drinking water

COLORECTAL CANCER

- Description
 - The collective designation for a variety of malignant neoplasms that may arise in either the colon or rectum
 - 90% occur in patients .>50 yo
 - 2nd most common cause of cancer death
- Etiology
 - Higher incidence in societies that have a diet high in red meat and low in fiber
 - Family history seen in 25% of colon CA. Risk increase in patients with IBS
- Signs / Symptoms
 - Rectal bleeding and blood in the stool may occur, pallor, ascites, cachexia, lymphadenopathy, hepatomegaly. Wt loss.
- Diagnostic Procedures
 - Colonoscopy at age 40.
 - Only tumor biopsy can verify colorectal cancer, but other tests can help in detection; digital examination of the rectum may be sufficient to detect rectal tumors
- Treatment
 - Surgery to remove the tumor, adjacent tissues, and any affected lymph nodes is the treatment of choice; chemotherapy and radiation therapy may be used
 - Colostomy
- Prognosis
 - Varies; early diagnosis and treatments provide and a greater chance of cure
- Prevention
 - A high-fiber, low-fat diet may reduce the risk of colorectal cancer



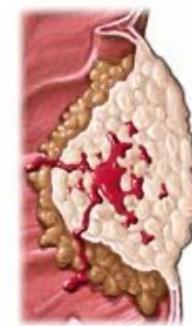
Treatment of colon cancer depends on the stage, or extent, of disease



Stage I



Stage II

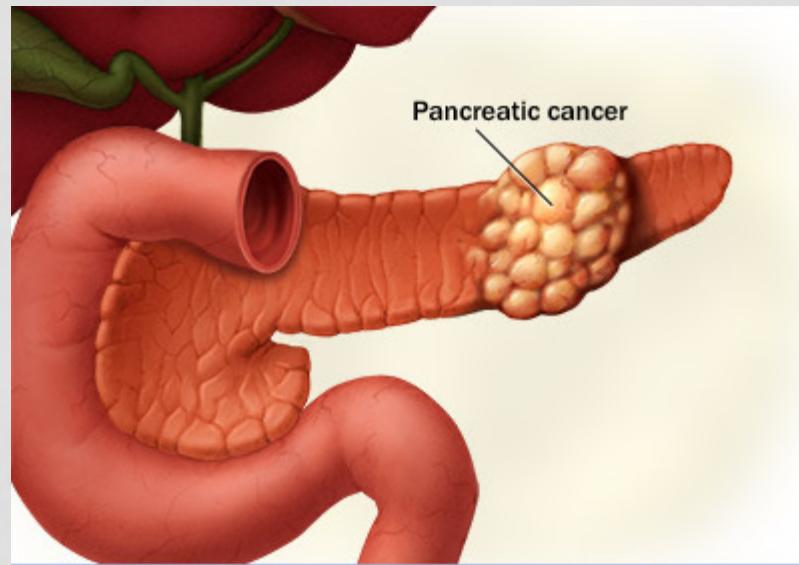
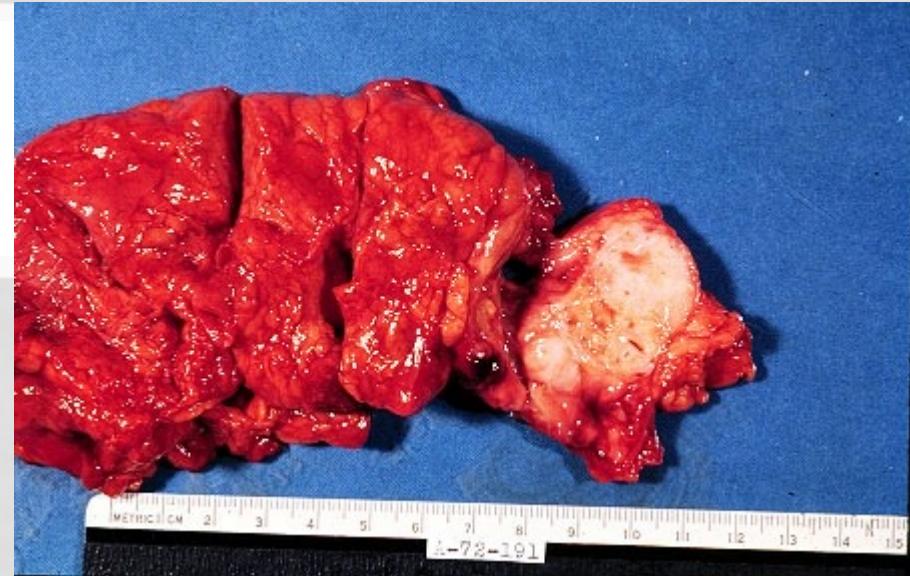
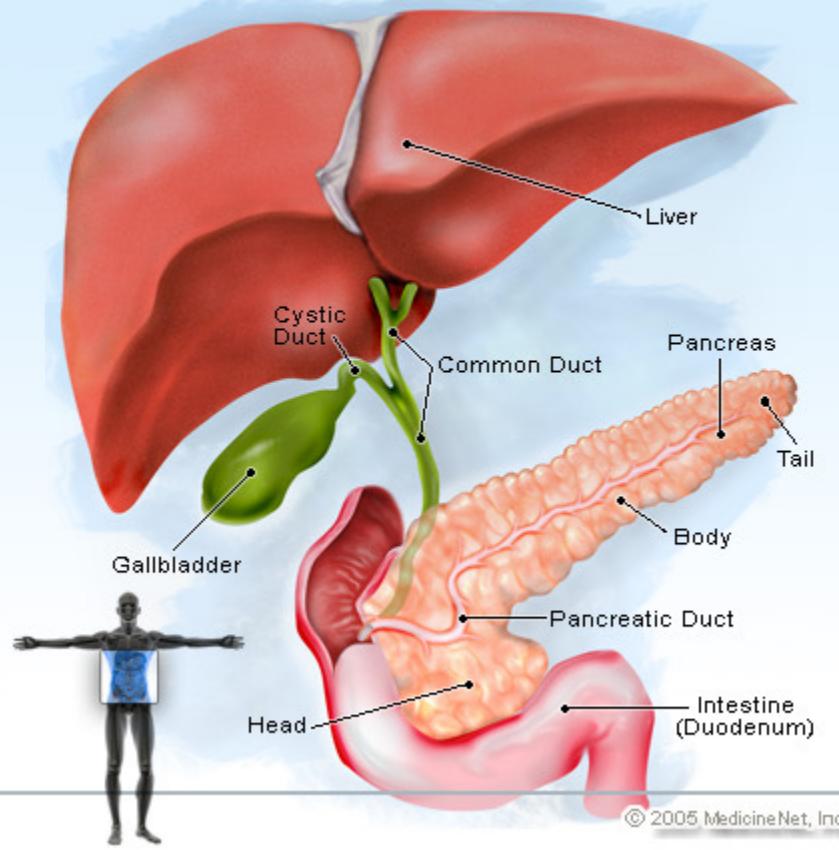


Stage III

PANCREATIC CANCER

- Description
 - Usually an adenocarcinoma that occurs most frequently in the head of the pancreas
 - 75% head, 25% tail
- Etiology
 - Cigarette smoking, ETOH, exposure to occupational chemicals, and a diet high in fats and protein are associated with an increased incidence of pancreatic cancer
- Signs / Symptoms
 - Abdominal pain that may radiate to the back, anorexia, jaundice, and weight loss, weakness, fatigue, diarrhea, nausea and vomiting, and low-back pain
- Diagnostic Procedures
 - CT
 - Percutaneous needle aspiration biopsy of the affected portion of the pancreas is used to confirm the diagnosis
- Treatment
 - Depends on the stage and location of the cancer, the person's age, and overall health, radiation therapy and multidrug chemotherapy may be administered but pancreatic carcinomas usually respond poorly
- Prognosis
 - Poor, 80-85% of individuals have advanced disease at first diagnosis
 - 2-5% 5-year survival rates
- Prevention
 - No known prevention other than avoiding known carcinogens, reducing the amount of fat in the diet, and participating in a regular exercise program

Anatomy of the Pancreas



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