Gastrointestinal System NCLEX Review

Gastrointestinal System:

Common Diagnostic Studies

Stomach/esophagus endoscopy: Visualization of esophagus and stomach through flexible, fiberoptic ube introduced from the mouth to the stomach to determine the presence of tumors, ulcerations, tumors and obtain tissue samples

Preprocedure:

- NPO at least 8 hours prior
- Verify informed consent.
- Notify patient of procedure and that they may feel numbness in throat due to local aesthetic

Postprocedure:

- Maintain NPO status till gag reflex returned
- Observe for vomiting or bleeding
- Let client know they may experience a sore throat for a few days post procedure

Endoscopic retrograde cholangiopancreatography (ERCP): Examination of the hepatobiliary system using a flexible scope, multiple positions needed

Preprocedure

a. Client is NPO for 6 to 8 hours.
b. Inquire about previous exposure to contrast media and any sensitivities or allergies.
c. Moderate sedation is administered (IV and spray anesthesia: remove contact lenses and dentures, monitor closely for signs of respiratory and central nervous system depression, hypotension, oversedation, and vomiting.

Postprocedure
a. Monitor vital signs.
b. Monitor for the return of the gag reflex.
c. Monitor for signs of perforation or peritonitis

- Guarding of the abdomen
- Increased temperature and chills
- Pallor
- Progressive abdominal distention and abdominal pain
- Restlessness
- Tachycardia and tachypnea

Fiberoptic colonoscopy: Direct visual of the colon; biopsies and polypectomies can be

performed.

Preprocedure

- Adequate cleansing of the colon, as prescribed.
- Clear liquid diet on the day before the test. Red, orange, and purple (grape) liquids are to be avoided (maybe mistaken for bleeding)
- NPO for 4 to 6 hours prior to the test.
- Consult with the HCP regarding medications that must be withheld.
- Moderate IV sedation

Postprocedure

- Monitor vital signs.
- Provide bed rest until alert.
- Monitor for signs of bowel perforation and peritonitis or respiratory distress
- Passing flatus, abdominal fullness, and mild cramping are expected for several hours.
- Instruct the client to report any bleeding to the HCP.

Liver biopsy

Sampling of tissue by needle aspiration

Preprocedure

- NPO diet
- Administer vitamin K to decrease bleeding risk
- Administer sedative
- Teach patient they will hold breath for 5-10 seconds
- Position supine or left lateral position

Postprocedure

- Vital signs
- Assess site for bleeding
- Monitor for peritonitis
- Bedrest for several hours
- Position a **right side** with 2 pillows under the costal margin
- Avoid heavy lifting and exercise for 1 week

Paracentesis: transabdominal removal of fluid from the peritoneal cavity

PRIORITY ACTIONS

1. Ensure that the client understands the procedure and that informed consent has been obtained.
2. Obtain vital signs, including weight, abdominal girth, and assist the client to void.
3. Position the client upright.
4. Assist the health care provider (HCP), monitor vital signs, and provide comfort and support during the procedure.

5. Apply a dressing to the site of puncture.
6. Monitor vital signs, especially blood pressure and pulse; weigh the client post procedure, maintain bed rest.
7. Measure the amount of fluid removed.
8. Label and send the fluid for laboratory analysis.
9. Document the event, client's response, and appearance and amount of fluid removed.

- **Heart rate and blood pressure must be monitored closely:** rapid removal of fluid from the abdominal cavity >decreased abdominal pressure > vasodilation and resultant shock.

Upper gastrointestinal tract study (barium swallow):

- Barium is cheaper but contraindicated to bowel perforation, peritonitis, constipation, difficulty swallowing (aspiration risk).
- Gastrografin (water-based) is safer for pre and post op, and obstruction, except for pregnancy, diarrhea, exacerbated colitis, hyperthyroidsm.

Preprocedure:

- NPO post midnight **(6 to 8 hours before)**
- Delay feeding (infant)
- 30 mins duration
- Describe consistency (thick, chalk-like), and amount (12-14 oz)
- Remove radiopaque objects

Postprocedure:

- Laxative
- Increase OFI
- Monitor stool passage: **24 to 72 hours**

Lower gastrointestinal tract studies: Aka barium enema; done before upper GI study

Preprocedure:

- NPO post midnight, cleansing enema – morning
- Low fiber for 1 to 2 days
- Clear liquid and laxative – an evening before

Postprocedure:

- Increase OFI
- Mild laxative, monitor for stool passage
- Notify MD – if no BM after **2 days**

Endoscopic retrograde cholangiopancreatography (ERCP): Examination of the hepatobiliary system is performed via a flexible endoscope inserted into the esophagus to the descending duodenum. Multiple positions are required.

Preprocedure:
a. Client is NPO for 6 to 8 hours.
b. Inquire about previous exposure to contrast
media and any sensitivities or allergies.
c. Moderate sedation is administered (monitored closely for signs of respiratory and central nervous system depression, hypotension, oversedation, and vomiting)

Postprocedure:
a. Monitor vital signs.
b. Monitor for the return of the gag reflex.
c. Monitor for signs of perforation or peritonitis

III. Gastrointestinal Disorders of the Adult Client

GERD (gastroesophageal reflux disease): "acid reflux disease"

Complications:

- Inflammation of the esophagus (increased risk of cancer from the chronic inflammation)
- Narrowing of the esophagus: strictures
- Lung problems: asthma, pneumonia, voice changes, wheezing, fluid in the lungs
- Barrett's esophagus: lining of the esophagus is replaced with similar lining that makes up the intestinal lining

Signs and symptoms:

- Gastric pain (upper)
- Excess regurgitation of food
- Dry cough (worse at night)
- Nausea
- Dysphagia (feels like a lump is in the throat)
- Lung Infections

Treatment of GERD: lifestyle changes, medications, surgery such as: fundoplication which is where the fundus of the stomach is placed around the lower part of the esophagus (most severe cases)

Education for GERD

- Eat small meals rather than large ones (prevents overeating)
- Avoid foods that relax the LES: greasy, fatty, ETOH, soft drinks (increase pressure on the LES and cause regurgitation), and coffee, peppermint/spearmint
- Avoid eating right before bed (last meal should be 3 hours before bed)
- Sit up after eating for at least 1 hour
- Weight loss
- Smoking cessation
- Watch acidic foods: citrus and tomatoes

Gastritis: Inflammation of the stomach or gastric mucosa (acute or chronic)

Signs and Symptoms:

- Abdominal discomfort
- Anorexia, nausea, and vomiting
- Headache
- Hiccupping
- Reflux

Interventions

- Bland diet
- Antacids

Peptic Ulcer Disease: ulcer formation in the lining of the upper GI tract that affects mainly the mucosal lining of the stomach, duodenum or esophagus.

Types of Peptic Ulcers:

- Gastric Ulcers: located inside the stomach
- Duodenum Ulcer: located inside the duodenum which is the first part of the small intestine

Causes:

- Long term use of NSAIDS
- Smoking
- Alcohol
- Stress

Treatment of PUD

- Medications: proton pump inhibitors, antibiotics, Histamine receptor blockers, antacids, bismuth subsalicylates
- Diagnosis: upper GI series, endoscopy, CT scan
- Severe cases due to chronic ulcer formation:
    - **Gastrectomy:** removal of the diseased parts of the stomach. Watch for **dumping syndrome** post operatively (rapid passing of food from stomach causing diaphoresis, diarrhea and hypotension)
    - **Vagotomy:** cutting the vagus nerve

Signs and symptoms of PUD

Gastric Ulcers

- Food makes pain worst (pain 1-2 hours minutes after eating)
- Report of pain dull and aching
- Weight loss
- Severe: vomit blood more common

Duodenal Ulcers

- Pain happens when stomach empty
- Wake in middle of night with pain
- Report of pain gnawing
- Weight normal
- Severe: tarry, dark stool from GI bleeding

Nursing Interventions of PUD

Goals: assessing, monitor, educate, and administering meds per physician’s order

Assessing:

- Assess Bowel sounds
- Pain assessment
- Dietary modification
- Smoking cessation
- Reduce stress
- Avoid hypermotility in GI tract

Monitoring: for complications of peptic ulcer disease or surgery

- GI bleeding
- Perforation/Peritonitis
- Obstruction in pylorus
- **Dumping Syndrome**

Patient education:

- eat many small meals rather than 3 large ones
- lie down for 30 minutes after eating
- eat without drinking fluids
- wait 30 minutes after meals and then consume liquids
- avoid sugary food and drinks
- eat food high in protein, fiber, and low-carbs

DIET for Ulcers:

- Avoid spicy, acidic foods (tomato/citric juices/fruits), foods with caffeine, chocolate, soft drinks, fried foods, alcohol
- Consume a low-fiber diet that is bland and eat to digest, eat white rice, bananas etc.

Medications

- Proton-pump inhibitors
- Histamine-receptor blockers
- Bismuth Subsalicylates
- Mucosal healing
- Antacids
- Antibiotics

Hiatal Hernia: also known as esophageal or diaphragmatic hernia.

- Herniation results from weakening of the muscles of the diaphragm and is aggravated by factors that increase abdominal pressure such as pregnancy, ascites, obesity, tumors, and heavy lifting.

Assessment:

- Heartburn
- Regurgitation or vomiting
- Dysphagia
- Feeling of fullness

Interventions

- Provide small frequent meals and limit the amount of liquids taken with meals.
- Advise the client not to recline for 1 hour after eating.
- Avoid anticholinergics, which delay stomach emptying.

Cholecystitis: Inflammation of the gallbladder that may occur as an acute or chronic process

- **Acute inflammation** is associated with gallstones (cholelithiasis).
- **Chronic cholecystitis** results when inefficient bile emptying and gallbladder muscle wall disease cause a fibrotic and contracted gallbladder.
- **Acalculous cholecystitis** occurs in the absence of gallstones and is caused by bacterial invasion via the lymphatic or vascular system.

Assessment:

- Nausea and vomiting, Indigestion, Belching, Flatulence
- Epigastric pain that radiates to the right shoulder or scapula
- Pain localized in right upper quadrant and triggered by high-fat or high-volume meal
- Guarding, rigidity, and rebound tenderness
- Mass palpated in the right upper quadrant
- Murphy’s sign (cannot take a deep breath when the examiner’s fingers are passed below the hepatic margin because of pain)
- Elevated temperature
- Tachycardia
- Signs of dehydration

Biliary obstruction:

- Jaundice
- Dark orange and foamy urine
- Steatorrhea and clay-colored feces
- Pruritus

Interventions

- NPO status during nausea and vomiting episodes.
- Maintain NG decompression as prescribed for severe vomiting.
- Antiemetics as prescribed for nausea and vomiting.
- Administer analgesics as prescribed to relieve pain and reduce spasm.
- Administer antispasmodics (anticholinergics) as prescribed to relax smooth muscle.
- Instruct the client with chronic cholecystitis to eat small, low-fat meals.
- Instruct the client to avoid gas-forming foods.
- Prepare the client for nonsurgical and surgical procedures as prescribed.

Surgical Interventions

1. **Cholecystectomy** is the removal of the gallbladder.
2. **Choledocholithotomy** requires an incision into the common bile duct to remove the stone.
3. Surgical procedures may be performed by **laparoscopy.**

Postoperative Interventions

- Monitor for respiratory complications caused by pain at the incisional site.
- Encourage coughing and deep breathing.
- Encourage early ambulation.
- Instruct the client about splinting the abdomen to prevent discomfort during coughing.
- Administer antiemetics as prescribed for nausea and vomiting.
- Administer analgesics as prescribed for pain relief.
- Maintain NPO status and NG tube suction as prescribed.
- Advance diet from clear liquids to solids when prescribed and as tolerated by the client.
- Maintain and monitor drainage from the T-tube if present

Cirrhosis: It's a liver disease where liver cells become extremely damaged due to long term/severe damage. This leads to the damaged cells being replaced with fibrous tissue, hence, scarring of the liver.

What causes Cirrhosis?

- Viral Infection: Hepatitis C*, B
- Alcohol Consumption
- Too much fat collecting in the liver (nonalcoholic): obese, hyperlipidemia, diabetics
- Problems with bile duct (carries bile from liver to small intestine)
- Autoimmune

Complications of Cirrhosis

1. Portal Hypertension: the portal vein becomes narrowed due to scar tissue in the liver. This restricts the flow of blood to the liver and increases pressure in the portal vein.

2. Enlarged spleen: splenomegaly

3. Esophageal Varices: due to the increased pressure via the portal vein. This increased pressure causes the veins to become weak, and can cause rupture

4. Fluid overload in legs and abdomen: Ascites

5. Jaundice: yellowing of the sclera of the eyes, mucous membranes, and skin.

6. Hepatic Encephalopathy: the liver is unable to detoxify. Ammonia builds up along with other toxins that collect in the brain. (altered mental status)

7. Renal Failure: In severe cases known as Hepatorenal Syndrome.

Signs and symptoms of Cirrhosis

Remember the mnemonic: **“The Liver is Scarred”**

Tremors of hands

Hepatic foetor or “fetor hepaticus”: very late in the disease and is a pungent, sweet, musty smell.

Eye and skin yellowing (jaundice)

Loss of appetite

Increased Bilirubin and ammonia

Varices (esophagus and gastric)

Edema in legs (low albumin and congestion of hepatic veins)

Reduced platelets and WBCs (bleeding and infection risk)

Itchy skin (toxins the blood)

Spider angiomas (chest) (increased estrogen in the blood)

Splenomegaly (low platelets and WBCs), stool clay colored (no bilirubin in the stool…should be there not in the urine or blood)

Confusion or coma (high toxin and ammonia level)

Ascites (low albumin and venous congestion)

Redness on the palms of the hands (increased estrogen in the blood)

Renal failure (hepatorenal syndrome)

Enlarged breast in men (decrease metabolism of estrogen so there is more in the blood)

Deficient on vitamins (B12, A, C, D, E, K and iron) (no longer able to store and have bile to help absorb these fat-soluble vitamins)

Diagnosed:

- Liver biopsy
- Labs: liver enzymes (albumin), platelet levels, PT/INR, hepatitis B or C, bilirubin levels

Nursing Interventions:

- Monitor for bleeding (PT and INR)- limit invasive procedures and hold pressure at injection sites for 5 minutes or more, soft tooth brushes, safety, assessing stools, urine, petechiae
- Monitor Esophageal varices- Monitor very closely for bleeding, darky tarry stools, vomiting blood, (bleeding is an emergency)
- Watch for activities that can increase rupture: coughing, vomiting, drinking ETOH, constipation
- Check reflexes, mental status very closely (mental status change, irritability, confusion), hepatic encephalopathy, and for flapping of the hands “asterixis”
- Diet: If neuro system is compromised: low protein diet: protein breaks down into ammonia. If neuro system NOT compromised: high lean protein (fish, poultry) NO ETOH, fluid restriction, needs vitamins (administer PO vitamins per MD order)
- Monitor blood glucose levels (hyperglycemia and hypoglycemia)
- Assessing sclera and skin color for Jaundice along with urine color: very dark
- Monitor I’s and O’s very closely, daily weight, and measuring abdominal girth (monitor ascites) and swelling in extremities
- Activity intolerance, difficulty breathing (no supine), at risk for skin breakdown (turning every 2 hours), elevating feet
- Administering Lactulose per MD order: decreases ammonia levels

Treatment:

- Liver transplant
- Shunting surgery (helps alleviate the ascites)
- Diuretics
- beta blockers slows the heart rate and decreases force of contraction and helps with the treatment of esophageal varices to treat portal hypertension
- Administer blood products and vitamin K to help with clotting
- Lactulose (to decrease ammonia level)
- Paracentesis (to remove fluid from abdomen)

Esophageal Varices:

- Dilated and tortuous veins in the submucosa of the esophagus.
- Cause: portal hypertension, associated with liver cirrhosis; risk for rupture - high portal pressure
- Bleeding varices are an emergency.
- The goal of treatment is to control bleeding, prevent complications.

Assessment:

- Hematemesis
- Melena

- Ascites
- Jaundice
- Hepatomegaly and splenomegaly
- Dilated abdominal veins

- **Rupture and resultant hemorrhage is a medical emergency**

Nursing Interventions:

- Monitor vital signs.
- Elevate the head of the bed.
- Monitor for orthostatic hypotension.
- Monitor lung sounds and for the presence of respiratory distress.
- Administer oxygen as prescribed to prevent tissue hypoxia.
- Monitor level of consciousness.
- Maintain NPO status.
- IV fluids as prescribed to restore fluid volume and electrolyte imbalances; monitor I&O
- Monitor HGB, HCT, coagulation factors.
- BT or clotting factors.
- NG tube or a balloon tamponade as prescribed
- Medications to induce vasoconstriction and reduce bleeding.
- Avoid activities that will initiate vasovagal responses.
- Prep for endoscopic procedures or surgical procedures as prescribed.

Endoscopic and surgical procedures:

a. Endoscopic injection (sclerotherapy)

- Injection of a sclerosing agent into and around bleeding varices. Injection of a sclerosing agent into and around bleeding varices.
- Complications: chest pain, pleural effusion, aspiration pneumonia, esophageal stricture, and perforation of the esophagus.

b. Endoscopic variceal ligation

- Ligation of the varices with an elastic rubber band.
- Sloughing, followed by superficial ulceration - area of ligation within 3 to 7 days.

Hepatitis: Inflammation of the liver caused by a virus, bacteria, or exposure to medications or hepatotoxins.

- Infectious hepatitis (formerly)
- At risk: crowded condition, poor sanitation

Hepatitis A

- Infectious hepatitis (formerly)
- At risk: crowded condition, poor sanitation

Transmission:

- Fecal-oral
- Person – person contact
- Contaminated food and water
- Poorly washed utensils
- Parenteral

Test: + Anti-HAV, Elevated IgM, IgG

Incubation and Infectious period:

- Incubation: 2 to 6 weeks
- Infectious: 2 to 3 weeks before and 1 week post Jaundice

Prevention:

- Serological screening
- Hep A vaccine: 2 doses, 6 mos. apart (full protection)
- Immune globulin: for exposed but not vaccinated (given within 2 weeks of incubation)
- Hep A Vaccine + IG: household members and sexual contact
- IG prophylaxis: traveling countries with poor sanitation/uncertain conditions

Hepatitis B

- Nonseasonal
- At risk: IV drug user, long-term hemodialysis, healthcare personnel

Transmission: Blood and body fluids

Testing:

- + Anti-HAB,
- + HBsAg (marker for diagnosis)
- Anti-HBs – indicates recovery
- + HBeAg – 1 week post HBsAg

Incubation: 6-24 weeks

Prevention:

- Hand washing
- Screen blood donors
- Testing all pregnant women
- Needle precaution
- Vaccine
- Hep IG: exposed individuals and not vaccinated

Hepatitis C

- Year around
- At risk: **An age**, **IV drug user** – post-transfusion hep.

Transmission: Same as HVB, primarily blood

Complications:

- Chronic liver disease
- Cirrhosis
- Primary hepatocellular carcinoma

Prevention

- Hand washing
- Screen blood donors
- Needle precaution

Hepatitis D

- Common: Mediterranean, and Middle Eastern areas
- Occurs with HBV
- At risk: Drug users, receiving hemodialysis, frequent BT

Incubation: 7-8 weeks

Transmission: Same as HBV

Testing: Serological HDV determination is madeby detection of the hepatitis D antigen (HDAg) early in the course of the infection and by detection of anti-HDV antibody in the later disease stages.

Complications:

- Chronic liver disease
- Fulminant hepatitis

Prevention: Because hepatitis D must coexist with hepatitis B, the precautions that help to prevent hepatitis B are also useful in preventing delta hepatitis.

Hepatitis E

- Waterborne virus
- Risk for infection: same as HAV
- High mortality: women in 3rd trimester
- At risk: travelers to India, Burma (Myanmar), Afghanistan, Algeria, and Mexico

Transmission: same as HAV

Incubation: 2-9 weeks

Testing: Specific serological tests for HEV include detection of IgM and IgG antibodies to hepatitis E (anti-HEV).

Complications

- High mortality rate in pregnant women
  Fetal demise

Prevention:

- Strict hand washing
- Treatment of water supplies, sanitation measures

Pancreatitis

Inflammation of the pancreas that can lead to digestion of the pancreas by its own enzymes and/or irreversible structural damage to the organ.

Assessment:

- Blood sugar issues
- Ascites
- Malabsorption (weight loss problems)
- GI issues (diarrhea, pain, oily stools)
- Shock (multi-organ failure)
- Internal Bleeding or hemorrhage
- Structure changes of the pancreas: fibrosis, cysts (filled with infection, rupture, hemorrhage), abscesses, duct changes

Two types of Pancreatitis: Acute and Chronic

Acute Pancreatitis:

Sudden inflammation of the pancreas due to something that has triggered the digestive enzymes to become activated inside the organ (there will be a high amylase and lipase level in the blood). The pancreas starts to digest itself and swell. As the pancreas digests itself, the tissue dies and cysts or abscesses can form out of the dead tissue (which can rupture or hemorrhage).

Most common causes are gallstones and high amount of alcohol consumption.

Chronic Pancreatitis:

Chronic inflammation of the pancreas (can be from repeated episodes of acute pancreatitis but most commonly due to *years of alcohol abuse*) that has led *to irreversible damage* to the structure of pancreas which may lead to:

How is pancreatitis diagnosed?

- Blood tests: amylase, lipase, electrolytes elevated
- CT or ultrasound: imaging of the pancreas
- ERCP (Endoscopic Retrograde Cholangio-Pancreatography): use to diagnose and sometimes treat the cause of pancreatitis. It assesses the pancreas, bile ducts, and gallbladder with a small scope. In addition, it can be used to help remove gallstones, dilate the blocked ducts with a stent or balloon, drain cysts etc.

Signs and symptoms:

Acute Pancreatitis:

- Sudden Abdominal Pain
- Pain worst when lying flat
- May report the pain started after consuming greasy/high fat meal or alcohol.
- Fever, increased HR, decreased BP
- Nausea and vomiting
- Hyperglycemia
- Increased amylase and lipase
- Cullen's and Grey-Turner's Sign (seen with SEVERE cases of acute pancreatitis)
    - What causes Cullen's and Grey-Turner's Sign? They represent retroperitoneal bleeding from the leakage of digestive enzymes into the surrounding tissues which is causing bleeding and it is leaking down into the flanks and umbilicus.
        - Cullen's Sign: bluish discoloration around the belly button.
        - Grey-Turner's Sign: bluish discoloration on the flanks

Chronic Pancreatitis

- Abdominal pain: Chronic epigastric pain that is persistent (can have no pain because the pancreas is not producing enzymes because of the extent of the damage)
- Pain becomes worst after drinking alcohol or eating a greasy/fatty meal
- May have a mass and swelling in abdomen due to pseudocyst formation on the pancreas
- Diarrhea with stool that is called Steatorrhea: oily/fatty stools due to the lack of pancreatic enzymes to help digest fats
- Weight loss: because no enzymes to help digest the food
- Signs and symptoms of Jaundice: yellowing of skin and eyes
- Dark urine: due to the excessive bile in the body
- Signs and symptoms of DM

Nursing Interventions:

Goal: rest the pancreas (prevent it from being stimulated to produce digestive enzymes), control pain, monitor for complications, administer medications per MD order (pancreatic enzymes, antibiotics and stomach acid blockers), diet education

- Maintain NPO status to allow for pancreas to rest
- Maintain IV hydration (TPN may be ordered)
- Insert NG tube and maintain per MD order (used to remove stomach contents and gas)
- Monitor blood sugars
- Monitor stools

- Monitor intake and output
- Pain management
- Nonpharmacological methods for pain: leaning forward or sitting up (no supine positioning)
- Administering PPIs, H2 blockers, antacids per MD order
- Education on diet
    - AVOID alcohol or greasy/fatty food
    - Low fat, bland small meals rather than large, high protein, stay hydrated
    - Limit sugar and avoid refined carbs (high fructose corn syrups, breads) but concentrate on complex carbs like fruits, vegetables, grain

Ulcerative Colitis: Inflammation and ulcers in the inner lining of the colon and rectum.

Key points:

- No cure
- Happens over time or suddenly
- Starts in the rectum, move to the large intestine (uniform)
- periods of “flare-ups” and remission
- Unknown, autoimmune

Severe cases: **rupture of bowel, hemorrhage, toxic megacolon**

Signs and symptoms: "ULCERS"

- **U**rgent/frequent need to have bowel movements
- **L**oss of weight due to constant diarrhea, **l**ow red blood cells (anemia)
- **C**ramps in abdomen (very painful)
- **E**lectrolyte imbalances, **e**levated temperature
- **R**ectal bleeding
- **S**evere diarrhea (pus, blood, mucous)

Nursing Interventions

- High-protein, high-calorie, low-fat and low-fiber diet
- May require PN for bowel rest
- Administer analgesics, corticosteroids, antidiarrheals, antiperistalsis
- Maintain fluid and electrolyte imbalance
- Promote rest
- Ileostomy care

Appendicitis

Causes:

- **OBSTRUCTION** of some form:
    - most common fecalith (hard stool that blocks the appendix)
    - parasites (worms)
    - foreign body that may have been ingested
- **TRAUMA/Injury**

Signs and symptoms: “**Appendix**”

Abdominal pain (right lower quadrant)

Point of McBurney’s will have the most pain (found one-third distance between the belly button and anterior superior iliac spine)

Poor appetite

Elevated temperature

Nausea/vomiting

Desire to be in the fetal position to relieve pain (side lying with knees bent)

Increased WBC, **i**nability to pass gas or have a bowel movement

e**X**periences rebound tenderness

Nursing implementation:

- No heating pads, enemas or bowel prep
- NPO status with IV fluids
- Ice bag to abdomen to alleviate pain
- Observe for signs and symptoms related to peritonitis: sudden cessation of pain is a medical emergency
- Appendectomy
- Position in fowlers to relieve abdominal pain and ease breathing
- Antibiotic therapy

B12 Deficiency

Pernicious anemia; deficiency of **intrinsic factor**: necessary for intestinal absorption of vitamin B12.

Assessment:

- Severe pallor
- Fatigue
- Weight loss
- Smooth, beefy red tongue (classic sign)
- Slight jaundice
- Paresthesia of the hands and feet
- Disturbances with gait and balance

Interventions:

- Increase vitamin dietary intake
- B12 injections

Diverticulosis and Diverticulitis

Diverticulosis refers to the condition of having sacs or pouches in the intestinal wall. Diverticulitis refers to diverticula that have become inflamed, infected, or obstructed.

Typical signs and symptoms

- Left lower quadrant pain relieved by passage of stool or flatus
- Fever
- Constipation alternating with diarrhea
- Fiber deficiency

Nursing implementation for uncomplicated:

- Administer antispasmodics and anticholinergics
- Bulk laxatives
- High fiber fluids
- Adequate fluid intake

Acute diverticulitis:

- Bedrest
- NPO
- IV hydration
- NG tube placement and management
- Administer antibiotics
- Surgical resection or abscess drainage if needed