Assessment of Gastrointestinal system

(A) Complete health history

Present Health History.

 Gather information from the patient about the history of the following problems related to GI functioning: Nausea and vomiting, abdominal pain, anorexia, abdominal distention, indigestion, dyspepsia, trouble swallowing, heartburn, jaundice and change in bowel habit

- Diarrhea: an abnormal increase in the frequency and liquidity of the stool.

- Constipation: a decrease in the frequency of stool, or stools that is hard and dry.

- Belching: the expulsion of gas from the stomach through the mouth.

- Flatulence: the expulsion of gas from the rectum.

- Hemorrhoids or rectal bleeding

- Hematemesis: Vomiting with blood, fresh or coffee-ground if retained.

- Melena: Stool with blood- a tarry-black color in case of upper GIT bleeding.

Past Health History.

- Ask the patient about a history or existence of diseases such as gastritis, hepatitis, colitis, gallstones, peptic ulcer, cancer, hernias.

- Question the patient about unexplained weight loss or gain within the past 6 to 12 months.

Medications.

- Ask about patient's past and current use of medications.

- Ask about over-the-counter medications, prescription drugs, herbal products, vitamins, and nutritional supplements.

Many drugs are potentially hepatotoxic and result in significant patient harm e.g. chronic high doses of nonsteroidal anti-inflammatory drugs (NSAIDs).

NSAIDs (including aspirin) may also predispose a patient to upper GI bleeding.

 Nutritional history

- Take a diet history and inquire about food preferences.

- Ask the patient about the use of caffeine.

- Document the amount and type of fluid and fiber intake.

- Note any changes in appetite, and weight.

 Anorexia and weight loss may indicate cancer or inflammation.

 Elimination Pattern

- Ask about patient ‘s bowel elimination pattern (ask about the frequency and time of day).

- Document the use of laxatives and enemas.

- Investigate any recent change in bowel patterns, because inadequate intake of fiber can be associated with constipation.

- Ask about stool characteristics (color, odor and consistency).

- Ask about intake of foods or medications that alter stool color.

 Family History

- Identify any history in the family of liver or gallbladder disease, hepatitis, inflammatory bowel disease, and cancer of the colon.

B) Physical Examination

The patient lies supine with knees flexed slightly for inspection, auscultation, palpation, and percussion of the abdomen.

Inspection

- Observe the mouth for abnormalities or lesions such as pallor, cracking, ulcers, or fissures.

- Note patient's ability to swallow, the tongue condition, and presence of any lesions.

- Assess the abdomen for skin changes (color, scars, dilated veins, rashes, and lesions), symmetry, contour (flat, rounded, distention), observable masses or hernias, distension of ascites and obesity

- Inspect perianal and anal areas for color, masses, rashes, scars, erythema, fissures, and external hemorrhoids.

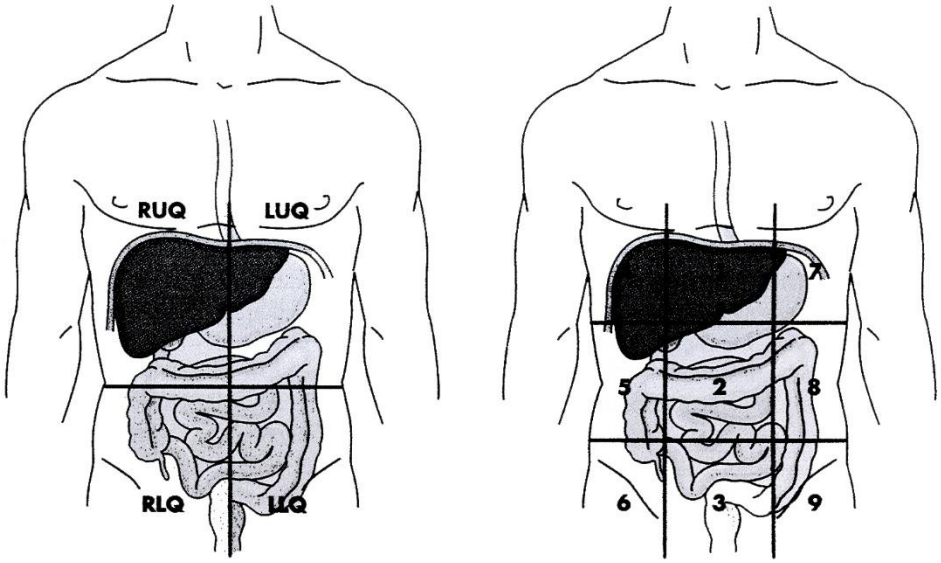
Auscultation:

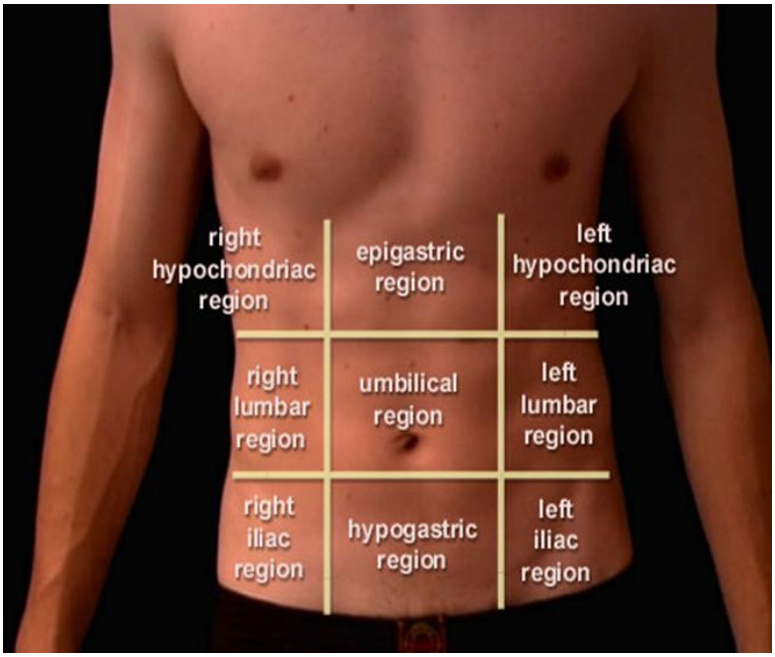
- auscultated bowel sounds by placing the diaphragm of the stethoscope lightly against the abdomen and listening to all quadrants systematically.

Abnormalities of bowel sound:

-absence of bowel sound in 5 minutes: due to peritonitis, paralytic ilieus or hypokalemia.

- high pitched bowel sounds (hyperactive): due to increased peristalsis caused by gastroenteritis, pyloric or intestinal obstruction or diarrhea.





The Surfaces of The Abdomen Can be divided anatomically in to either four or nine regions.

Percussion

percussion of the abdomen is used to confirm the size of various organs and to determine the presence of excessive amounts of fluid or air .

normally- percussion sound is tympanic

- dull percussion is found over the liver, spleen or bladder filled with urine.

-Abnormal percussion findings occur because of ascites or abnormal masses.

 Palpation

- Use smooth circular movements and palpate all quadrants lightly then deeply.

 Light palpation is used to detect tenderness, muscular resistance, masses, and swelling.

 Deep palpation is used to delineate abdominal organs (liver, spleen) and masses. Note the location, size, and shape of masses, as well as the presence of tenderness.

 Liver enlargement (Hepatomegaly) can be detected by palpation and can be caused by cirrhosis, hepatitis, right heart failure, cysts, and malignancy.

 Murphy's sign is positive in cholecystitis (pain is present on deep inspiration when an inflamed gallbladder is palpated by pressing the fingers under the rib cage.

- Check area of discomfort for rebound tenderness by pressing in slowly and firmly over the painful site. Then release fingers quickly.

 Pain of rebound tenderness indicates peritoneal inflammation.

- Insert a gloved, lubricated index finger into the rectum as far as possible, and palpate all surfaces. Assess any nodules, fistula opening, hemorrhoids, tenderness, or irregularities.

C) Diagnostic Studies of Gastrointestinal System

 Stool analysis: for fecal urobilinogen, fat, parasites, food residues, and other substances.

 Occult blood in stool: is one of the most commonly performed stool tests. It tests only for the presence of blood.

 Blood test:

- Hepatitis markers: to detect Hepatitis A, B, and C.

- Liver function test: ALT, AST

- Bilirubin- evaluates liver function, biliary obstruction, and hemolytic anemia.

- Albumin - influenced by nutritional state, and hepatic and renal function.

- Serum amylase - useful to diagnose pancreatitis.

- Serum lipase - assists in diagnosis of pancreatitis, but it is not specific and also may be elevated in biliary and hepatic disease, DM, and gastric malignancy.

 Abdominal ultrasonography

 Endoscopic ultrasonography (EUS) is a specialized enteroscopic procedure that aids in the diagnosis of gastrointestinal disorders by providing direct imaging of a target area.

 X-ray with barium swallow

 Computed tomography (CT) scans

 Magnetic resonance imaging (MRI)

 The upper endoscopy and lower gastrointestinal colonoscopy

 Capsule endoscopy