# Bowel Elimination

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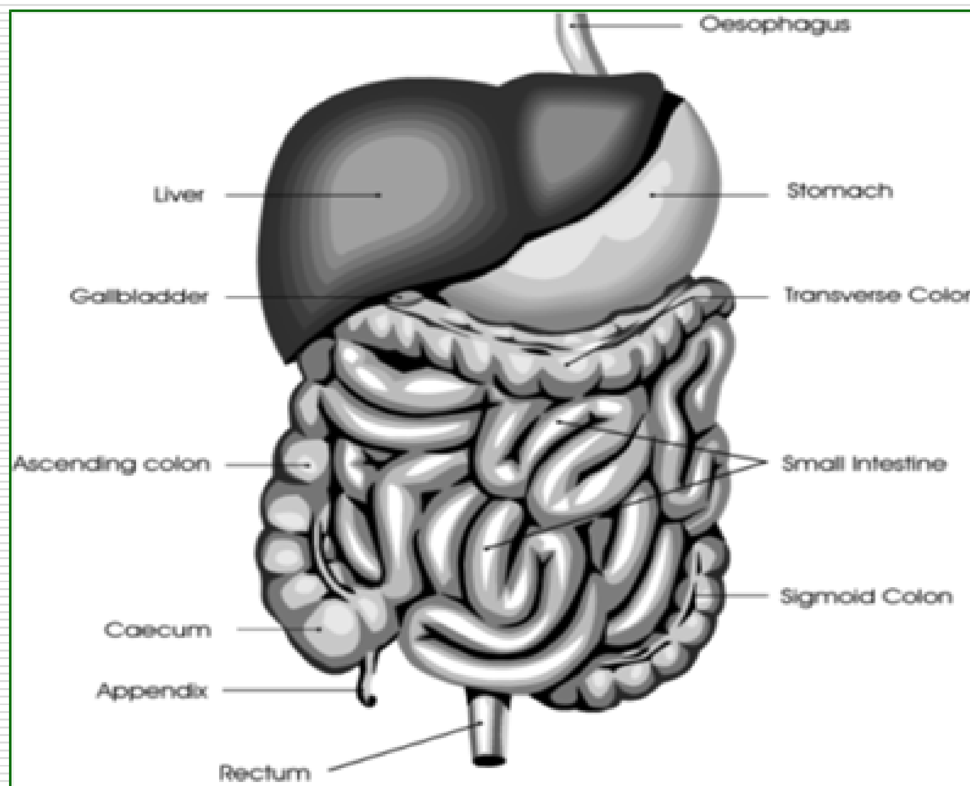
# The Large Intestine

- Primary organ of bowel elimination
- Extends from the ileocecal valve to the anus
- Functions
- Completion of absorption of H2O, Nutrients (chyme from sm. intest. - 1-1.5 L)
- Manufacture of some vitamins
- Formation of feces
- Expulsion of feces from the body


Oesophagus
Liver
Stomach
Gallbladder
Transverse Colon
Ascending colon
Small Intestine
Sigmoid Colon
Caecum
Appendix
Rectum

# The Small and Large Intestines Process of Peristalsis

- Peristalsis is under control of nervous system
- Contractions occur every 3 to 12 minutes
- Mass peristalsis sweeps occur 1 to 4 times each 24-hour period
- One-third to one-half of food waste is excreted in stool within 24 hours

**Peristalic Movements in the Intestine –** Colonic peristalsis is slow. Mass peristalsis is strong, few waves per day, stimulated by food in small intestine.

## Variables Influencing Bowel Elimination

- Developmental considerations
- Daily patterns
- Food and fluid (need to drink 2L per day fluid)
- Activity and muscle tone
- Lifestyle, psychological variables
- Pathologic conditions
- Medications ie. pain meds relax muscles. black stool: blood or iron present
- Diagnostic studies - barium
- Surgery and anesthesia

# Developmental Considerations

- Infants—characteristics of stool and frequency depend on formula or breast feedings
- Toddler physiologic maturity is first priority for bowel training (1 ½ – 2 yrs)
- Child, adolescent, adult—defecation patterns vary in quantity, frequency, and rhythmicity
- Older adult—constipation is often a chronic problem

# Foods Affecting Bowel Elimination

- Constipating foods cheese, lean meat, eggs, & pasta
- Foods with laxative effect—fruits and vegetables, bran, chocolate, alcohol, coffee
- Gas-producing foods—onions, cabbage, beans, cauliflower

# Effect of Medications on Stool

- Aspirin, anticoagulants pink, red, or black stool
- Iron salts—black stool
- Antacids white discoloration or speckling in stool
- Antibiotics—green-gray color

# Physical Assessment of the Abdomen

- Inspection—observe contour, any masses, scars, or distension
- Auscultation—listen for bowel sounds in all quadrants
- Note frequency and character, audible clicks, and flatus
- Describe bowel sounds as audible, hyperactive, hypoactive, or inaudible

## Physical Assessment of the Abdomen (cont.)

- Percussion—expect resonant sound or tympany
- Areas of increased dullness may be caused by fluid, a mass, or tumor
- Palpation—note any muscular resistance, tenderness, enlargement of organs, masses

# Stool Collection

- Medical aseptic technique is imperative
- Wear disposable gloves
- Wash hands before and after glove use
- Do not contaminate outside of container with stool
- Obtain stool and package, label, and transport according to agency policy

# Patient Guidelines for Stool Collection

- Void first so urine is not in stool sample
- Defecate into the container rather than toilet bowl
- Do not place toilet tissue in bedpan or specimen container
- Notify nurse when specimen is available
- get to lab quickly (30 min) if anything viable in sample ie. parasites, C-diff. etc

# Types of Direct Visualization Studies

- Esophagogastroduodenoscopy (EGD)
- Colonoscopy
- Sigmoidoscopy
- Wireless capsule endoscopy

# Indirect Visualization Studies

- Upper gastrointestinal (UGI)
- Small bowel series
- Barium enema
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# Scheduling Diagnostic Tests

1 — fecal occult blood test

2 — barium studies (should precede UGI) make sure ALL barium is removed*

3 — endoscopic examinations

- Noninvasive procedures take precedence over invasive procedures

# Patient Outcomes for Normal Bowel Elimination

- Patient has a soft-formed bowel movement every 1-3 days without discomfort
- The relationship between bowel elimination and diet, fluid, and exercise is explained
- Patient should seek medical evaluation if changes in stool color or consistency persist

## Promoting Regular Bowel Habits

- Timing -attend to urges promptly
- Positioning – have pt. sit up, gravity aids in BM
- Privacy – close door & pull curtain
- Nutrition
- Exercise – abdominal muscles & thighs
- Abdominal settings
- Thigh strengthening

# Individuals at High Risk for Constipation

- Patients on bed rest taking constipating medications
- Patients with reduced fluids or bulk in their diet
- Patients who are depressed
- Patients with central nervous system disease or local lesions that cause pain

***Valsalva maneuver (straining & holding breath) ↑intrathoracic / intracranial pressure – possible brain injury**

# Nursing Measures for the Patient With Diarrhea

- Answer call lights immediately
- Remove the cause of diarrhea whenever possible (e.g., medication)
- If there is impaction, obtain physician order for rectal examination
- Give special care to the region around the anus
- After diarrhea stops, suggest the intake of fermented dairy products
- Fecal seepage may indicate impaction

# Preventing Food Poisoning

- Never buy food with damaged packaging
- Never use raw eggs in any form
- Do not eat ground meat uncooked
- Never cut meat on a wooden surface
- Do not eat seafood that is raw or has unpleasant odor
- Clean all vegetables and fruits before eating
- Refrigerate leftovers within 2 hours of eating them
- Give only pasteurized fruit juices to small children

# Methods of Emptying the Colon of Feces

- Enemas
- Rectal suppositories
- Rectal catheters
- Digital removal of stool

## Types of Enemas

- Cleansing – high volume
- Retention - oil
- Return-flow – bag of solution taken in (100-300 ml fluid) for pt with gas

## Retention Enemas

- Oil-retention—lubricate the stool and intestinal mucosa easing defecation
- Carminative—help expel flatus from rectum
- Medicated—provide medications absorbed through rectal mucosa
- Anthelmintic—destroy intestinal parasites
- Nutritive—administer fluids and nutrition rectally

# Bowel Training Programs

- Manipulate factors within the patient's control
- Food and fluid intake, exercise, time for defecation
- Eliminate a soft, formed stool at regular intervals without laxatives
- When achieved, discontinue use of suppository if one was used

## **Types of Colostomies –** each has different stool consistency

- Sigmoid colostomy
- Descending colostomy
- Transverse colostomy
- Ascending colostomy
- Ileostomy

- **Location of (A) a Sigmoid Colostomy and (B) a Descending Colostomy**
- **Location of (C) a Transverse Colostomy and (D) an Ascending Colostomy**
- **Location of an Ileostomy**

# Colostomy Care

- Keep patient as free of odors as possible; empty appliance frequently
- Inspect the patient's stoma regularly
- Note the size, which should stabilize within 6 to 8 weeks
- Keep the skin around the stoma site clean and dry
- Measure the patient's fluid intake & output
- Explain each aspect of care to the patient and self-care role
- Encourage patient to care for and look at ostomy

# Normal-Appearing Stoma Patient Teaching for Colostomies

- Community resources are available for assistance
- Initially encourage patients to avoid foods high in fiber
- Avoid foods that cause diarrhea or flatus
- Drink two quarts of water daily
- Teach about medications
- Teach about odor control (intake of dark green vegetables helps control odor)
- Resume normal activity including work and sexual relations

# Comfort Measures

- Encourage recommended diet and exercise
- Use medications only as needed
- Apply ointments or astringent (witch hazel)
- Use suppositories that contain anesthetics

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