BOWEL FUNCTION, DYSFUNCTIONS AND REHAB NURSE INTERVENTIONS

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BOWEL MANAGEMENT GOALS ARE BEST ACHIEVED THROUGH INTERDISCIPLINARY TEAM GOALS

- Keys Factors in Appropriate Mgmt. Strategies
  - Cognitive ability
  - Communication ability
  - Hand function
  - Level of independence in ADL
  - Transfers

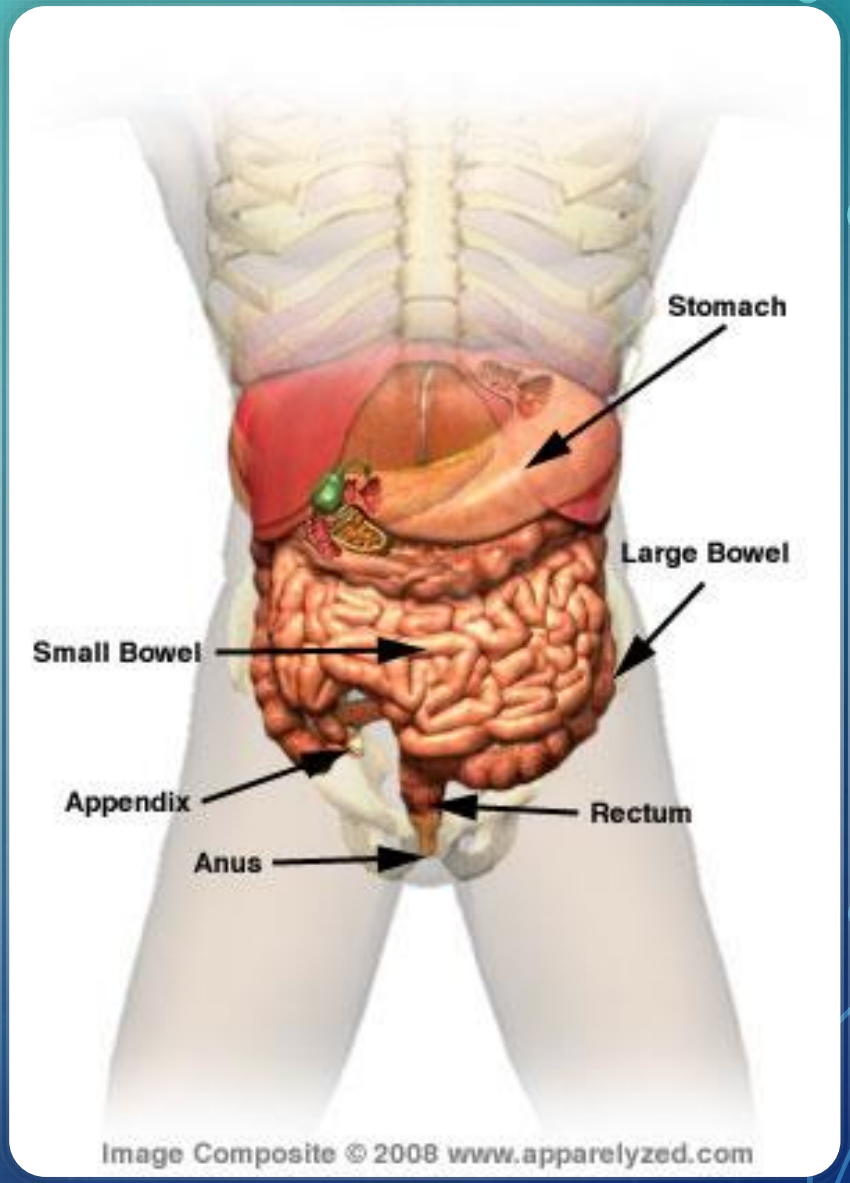
OBJECTIVES

- Participants will be able to:
- State pattern of defecation related to developmental levels
- Discuss the scope of the problem related to Fecal Incontinence
- Describe normal anatomy and physiology of the Large Bowel & Defecation
- Describe the Nursing Interventions Appropriate for Upper Motor Neuron and Lower Motor Neuron Bowel Problems
- Identify factors to assess regarding Fecal Incontinence

DESIRED OUTCOMES RELATED TO BOWEL ELIMINATION

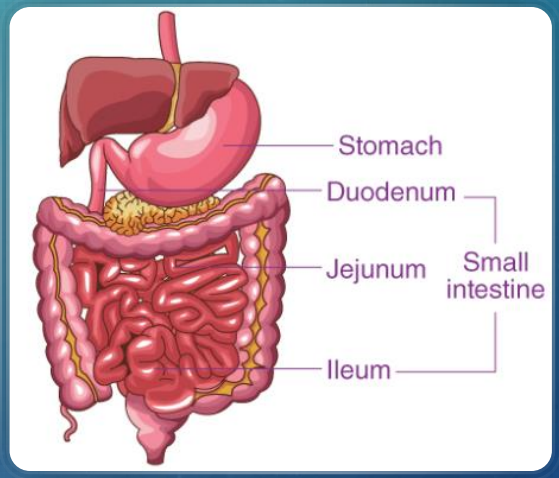
- Remain Continent
- Have a formed bowel movement on a regular schedule
- Prevent Diarrhea and Constipation
- Absence of complications
  - Hemorrhoids
  - Abdominal Distention
  - Autonomic Dysreflexia
  - Fecal Impaction

NORMAL BOWEL FUNCTION



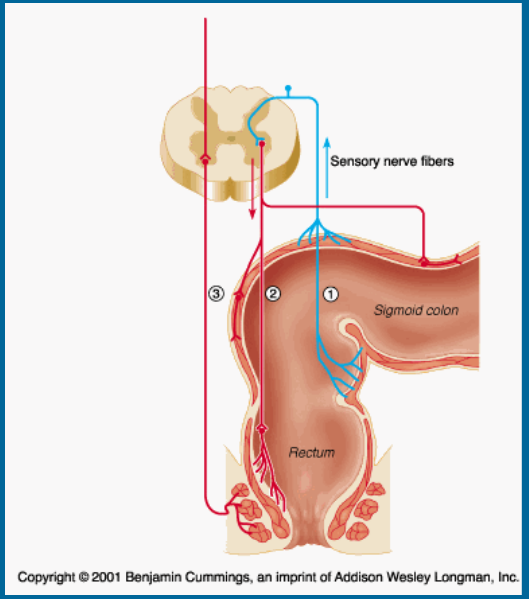
PHYSIOLOGY OF THE SMALL INTESTINE

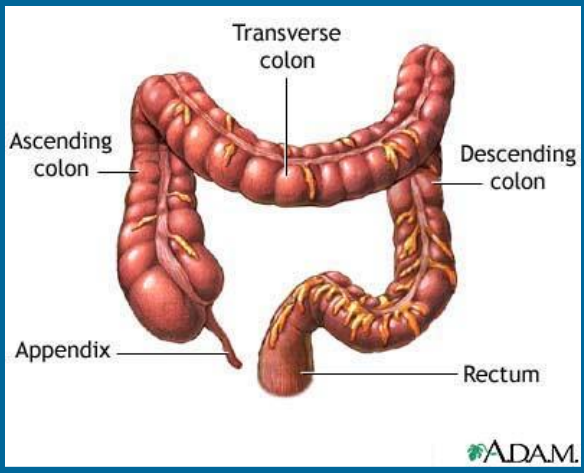
- Referred to as the small bowel
  - The longest portion of the digestive system (~ 20-25 ft in length)
- Break down and absorb ingested nutrients
- Made of three segments:
  - Duodenum
    - First segment
    - Key regulator of digestion and absorption
    - Digestive juices from the bile duct and pancreatic duct are emptied here
  - Jejunum
  - Ileum



PHYSIOLOGY OF THE LARGE INTESTINE

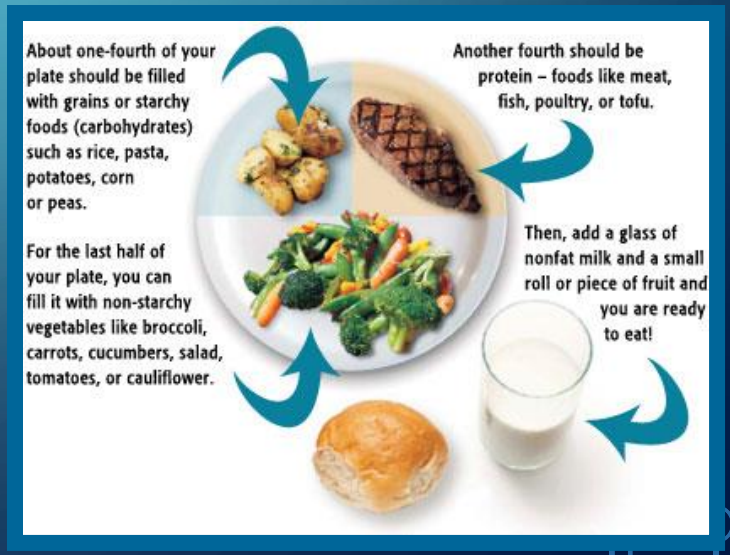
- Primary function
  - Reabsorb water and electrolytes
  - Formation and temporary storage of feces
- Absorption of water
  - Peristalsis
    - 2-3 per day
  - Sphincter Function
    - Adjust time related to capacity
  - Innervation
    - Sympathetic
    - Parasympathetic
  - Sensory Awareness
    - Dysfunctions will alter reflex activity





REQUIREMENTS FOR STOOL FORMATION AND NORMAL BOWEL FUNCTION

- Adequate fiber
- Adequate fluid
- Activity and mobility
- Upright posture



PATTERNS OF DEFECATION THROUGH THE LIFESPAN

• Infants	• Gut functions at reflex level
• Children	• Develops cortical control over the time and place of defecation
• Adults	• Intense activity and relative regularity, may vary with diet changes. The bowel responds to simple interventions
• Older Adults	• Changes occur in striated and smooth muscle • Activity decreases • Diet changes • Decreased water • Comorbidities

- Guidelines for bowel care for neurogenic bowel from consortium for Spinal cord medicine 1998 and Rehabilitation Nursing Foundation (2002)
- Pt history and prior bowel patterns
- Present bowel function and patterns
- Oozing or small bowel movements
- Medications that may affect bowel function
- Medical Problems

BOWEL DYSFUNCTION AND NURSING MANAGEMENT

- **Acute Constipation**
  - Recent onset (last less than 12 weeks)
- **Chronic constipation**
  - **Considered a functional bowel disorder**
  - Severe constipation-lasting longer than 3 months with 2 or more of the following:
    - Straining
    - Lumpy or hard stools
    - Sensation of incomplete evacuation
    - Manual maneuvers
    - Fewer than three spontaneous bowel movement per week
  - Enlarges descending colon
  - Dependency
    - Laxatives
    - Cathartics
    - Enemas

BOWEL DYSFUNCTION AND NURSING MANAGEMENT

Management of Constipation

- Acute constipation
  - Evaluation of perineum
  - Assess for hemorrhoids
  - Administer laxatives
- Chronic constipation
  - Increase the amount of fiber in the diet
  - Increase fluid intake
  - Educate to avoid constipating foods

BOWEL DYSFUNCTION AND NURSING MANAGEMENT

- Unmanaged Constipation
  - Obstruction
    - Medical Emergency
  - Bowel sounds
    - High pitched or absent
- Obtain Abdominal X rays to r/o obstruction
- Transfer patient off unit to a higher level of care

PREVENTION OF CONSTIPATION

- Good toileting habits
- Upright Position (left-side lying if upright impossible)
- Use toilet
- 20-35 grams of fiber per day
- 2 liters of fluids per day
- Exercise program
- Pharmacologic treatment, short-term

RNAO 2005 guideline LOE 4

TYPES OF IMPAIRED BOWEL FUNCTION

- Diarrhea
  - Causes
    - Caffeine
    - Infection
    - Irritability of gut
    - Food poisoning
    - Medical conditions
- Management
  - Proper use of supplemental fiber
  - Careful meal planning
  - Followed by a registered dietitian
  - Followed by a gastroenterologist

TYPES OF IMPAIRED BOWEL FUNCTION

- Acute Diarrhea
  - A pattern of at least 3 loose or liquid stools in a 24-hour period
  - Viral or bacterial infections
  - Originating from small intestine
    - Watery stools and hyperactive bowel sounds
  - Originating from large intestine
    - Indicates bacterial infection with abdominal pain and fever
- Management
  - Replace fluid loss
  - Obtain stool sample
  - Administer Loperamide or Bismuth Subsalicylate
  - Administer probiotics

TYPES OF IMPAIRED BOWEL FUNCTION

- Chronic Diarrhea
  - Diarrhea that lasts > 30 days
  - Irritable Bowel Syndrome (common cause)
    - Presents with either constipation or diarrhea
  - Symptoms include L lower quadrant pain
    - stools tend to occur in the early morning
    - Urgently after foods are eaten
    - Feeling of incomplete bowel evacuation
- Management
  - Assess diet for irritating foods that should be omitted
  - Omit wheat and grain products, lactose, fructose, and artificial or natural sweeteners
  - Administer medications to stabilize gut and slow gut motility

UPPER MOTOR NEURON: REFLEX NEUROGENIC BOWEL

- Assessment
  - Upper Motor Neuron Injury (Tetraplegia or paraplegia T12-L1)
  - Impaired Awareness of Urge
  - Sphincter Intact
    - Bulbocavernosus Reflex intact
    - or hyper reflexic
  - Intermittent Incontinence

UPPER MOTOR NEURON: REFLEX NEUROGENIC BOWEL

- Plan
  - Gastrocolic Response
  - Immediately after a meal OR warm drink
    - Digital Stimulation to stimulate bowel and remove feces in rectal vault
    - Administer suppository
    - Continue to remove feces from rectal vault until no feces noted, mucus discharge noted and bowel care is completed
    - If no results repeat supp in 30-60 min (rec at home)
    - Bowel Program over Commode
  - Potential for Autonomic Dysreflexia
    - 1 % Xylocaine lubricant
    - Nupercainal (hemorrhoid cream)
  - Plan for Accidents

LOWER MOTOR NEURON (AREFLEXIC BOWEL)

- SCI damage below T 12-S1
- No cortical control
- Lack of tone at internal and external sphincters
  - Higher risk of bowel accidents
- Damage to sacral reflex arc at S2-4
- Associated with constipation and increased risk of incontinence

LOWER MOTOR NEURON (AREFLEXIC BOWEL)

- Plan
  - High-fiber Diet (to bulk stool)
  - Fluid Intake 1800-2200 ml /day
  - Stool Softener every day or BID
  - Suppository immediately after meal
    - If no results repeat supp. In 30-60 min
    - Use commode
    - After pattern established
      - Decrease frequency to every other day
      - Attempt bowel program with digital stimulation only (delete suppository)
  - Plan for accidents
  - Keep rectal vault clear

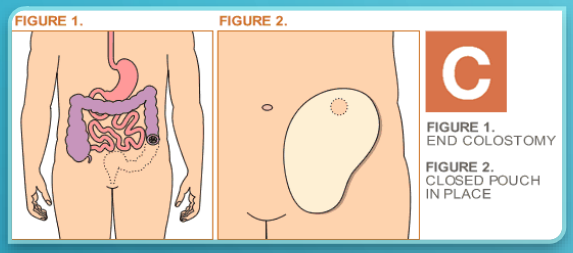
PRINCIPLES OF BOWEL TRAINING (BTP)

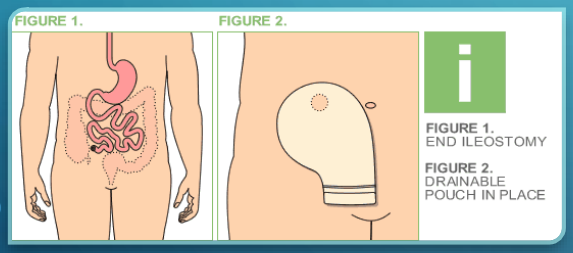
- Incontinent, scheduled BTP
- Scheduled medications
- Push fluids
- Simplicity is key!

PARALYTIC BOWEL

- Paralysis of bowels
  - Peristalsis slows down or completely stops (Ileus)
  - Can cause obstruction and blockage of the intestinal content
- Diabetes or Tabes Dorsalis
- Rarely produces incontinence
- Constipation
- Management
  - Monitor patient for s/s of Ileus
  - Provide rest to the intestine
  - Keep patient NPO
  - Administer nutrition per dietitian recommendations

COLOSTOMIES AND ILEOSTOMIES





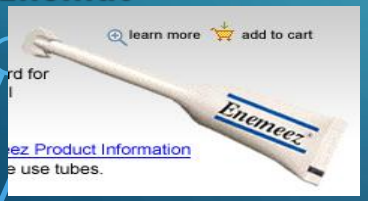
Artificial openings on abdominal wall

- Malignant tumors
- Ulcerative colitis
- Abdominal resection
- Neurogenic bowel

COMMON MEDICATIONS USED FOR BOWEL MANAGEMENT

Oral Laxatives	Medications	Purpose
Stimulants	Bisacodyl, Cascara, Castor Oil, Senna	Increase peristalsis, move feces through faster and keep it soft
Osmotic Laxatives	Lactulose, Magnesium Citrate Go -lytely	Increase stool bulk by pulling water into colon. Increase water intake
Bulk Forming Laxatives	Hydrophilic Muciloid, Methylcellulose, Psyllium	Adds bulk, Fiber to stool. Increase water intake
Stool Softners	Docusate Sodium, Mineral Oil	Help stool retain fluid and soft
Prokinetic Agents	Metoclopramide (Reglan)	Stimulate bowel peristalsis

COMMON MEDICATIONS USED FOR BOWEL MANAGEMENT

Rectal Stimulants	Medications	Purpose
Suppositories 	▪Bisacodyl (Magic Bullet) ▪CO2 ▪Glycerin	▪Increases colon activity by stimulating (irritating) the nerves in the lining of the colon ▪Produces Carbon Dioxide gas , the gas inflates the colon and stimulates peristalsis ▪Stimulates peristalsis in the colon and lubricates the rectum
Enemas 	▪Mineral oil ▪Mini-enema (Enemeez)	▪Lubricates the intestine ▪Stimulates the rectal lining and softens stool

UNINHIBITED NEUROGENIC BOWEL

- Assessment
  - Awareness of urge may be impaired
  - Sphincter intact
  - Bulbocavernosus Reflex intact or hyper reflexic
  - Sudden Urge incontinence
  - Spontaneous evacuation without urge (or warning)

UNINHIBITED BOWEL

- Plan
  - Maintain oral fluids
  - Timed Bowel Program
  - Suppository every day after meal
  - Use Commode
  - Plan for accidents

BRISTOL STOOL CHART

	Type 1	Separate hard lumps	**SEVERE CONSTIPATION**
	Type 2	Lumpy and sausage like	**MILD CONSTIPATION**
	Type 3	A sausage shape with cracks in the surface	**NORMAL**
	Type 4	Like a smooth, soft sausage or snake	**NORMAL**
	Type 5	Soft blobs with clear-cut edges	**LACKING FIBRE**
	Type 6	Mushy consistency with ragged edges	**MILD DIARRHEA**
	Type 7	Liquid consistency with no solid pieces	**SEVERE DIARRHEA**

CONCLUSION

- Incontinence can profoundly affect the client's Quality of Life
- Nursing interventions can make a significant difference in quality of life and lifestyle.

PRACTICE QUESTIONS

- Which bowel program is most appropriate for a patient who has had a spinal cord injury at C5-6:
  - a. a. Enemas given daily in the morning to prevent incontinence during the day
  - b. b. Consistent time of day associated with the gastrocolic reflex, triggering of reflex emptying with suppositories or digital stimulation
  - c. c. Administration of laxatives and suppositories every evening timed within 6 hours of laxative administration
  - d. d. Bulk fiber products used to form stool with toileting time at a consistent time of the day associate with gastro-colic reflex

ANSWER: B

PRACTICE QUESTION

- Patient with an autonomous neurogenic bowel may experience incontinence during transfers because:
  a. Anal sphincters are flaccid and do not retain stool under abdominal pressures
  b. The rectum will reflexively empty when stool enters it
  c. This problem is associated with stress incontinence
  d. Sensation is impaired which limits reflex contraction of the external sphincter

ANSWER: A

PRACTICE QUESTION

- Primary factors for establishment of a bowel program include all of the following EXCEPT:
  a. Establishing a consistent emptying time
  b. Maintaining appropriate levels of hydration
  c. Regular and frequent schedule of cathartic stimulants
  d. Diet high in bulk and fiber

ANSWER: C

PRACTICE QUESTION

- The most common bowel elimination problem is:
  a. Diarrhea
  b. Constipation
  c. Incontinence
  d. Urgency

ANSWER: B


Any
Questions