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Minimizing bowel care. Maximizing Lives

A Clinical, Quality, and Economic Perspective of Bowel Management in a time of COVID-19

Best Practices for Constipation, Fecal Incontinence and COVID-19 in Long Term Care

Cissi Wimberly Oloomi
APRN,CNS-BC,FNP,CNRN,CRRN
cissioloomi@hotmail.com

Objectives

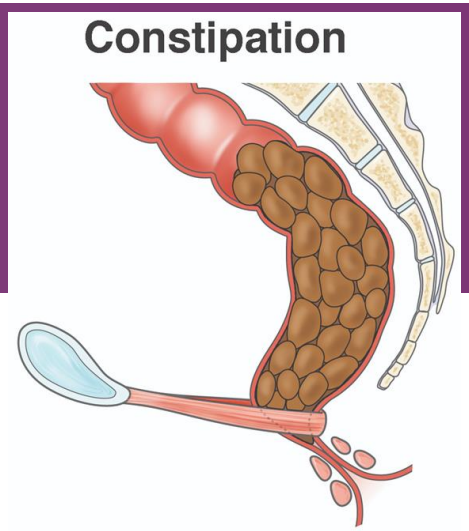
After this presentation, the LTC attendee will be able to:

1. Discuss the classification of constipation and appropriate nursing assessment, interventions, and medications to facilitate an effective bowel management program in a resident in the LTC setting.
2. Describe the Bristol Stool Scale and its' use in evaluation and planning with constipation and fecal incontinence.
3. Compare and contrast the causes, uses, mechanism of action and potential side effects of common modalities used in constipation and fecal incontinence.
4. Describe best practices for bowel management for coronavirus (COVID-19).

Constipation, Fecal Incontinence and Covid-19

Freedom of the bowels is the most precious, perhaps even the most essential, of all freedoms – one without which little can be accomplished.
– Émile Gautier, 1909

Definitions-Constipation



Constipation-the condition in which a person:

- has difficulty in comfortably passing a sufficient amount of stool;
- passes less than 3 bowel movements' a week; &/or
- has difficult bowel movements (straining).

- A condition in which there is difficulty in emptying the bowels, *usually* associated with hardened feces. Oxford Dictionaries · © Oxford University Press

Chronic constipation is:

The self report of 2 to 4 chronic symptoms (straining, hard or lumpy stools, incomplete evacuation, and infrequent stools). Choung et al. (2007)

Incidence Of Constipation

- Constipation is the most chronic digestive complaint in the US
- More than 2.5 million visits to HCP each year
- Spend more than $750 million each year on OTC laxatives
- In LTC facilities, laxatives are the most highly prescribed medications
- Incontinence is the second leading cause of admissions to long-term care facilities

Incidence/Prevalence of Constipation

- In the community, over the age of 65, prevalence is estimated at 50%
- In nursing homes, 74% using daily laxatives
- Elderly women 2-3 times more likely to report constipation than men.

Constipation-Classification

AGA criteria - symptoms, anorectal tests, and colonic transit

- Normal transit constipation
- Isolated slow transit constipation
- Defecatory disorders
  - Normal transit
  - Slow transit

Rome IV criteria - symptoms and anorectal tests

- Functional constipation (defined by symptoms)
- Constipation-predominant IBS (defined by symptoms)
- Defecatory disorders (defined by symptoms of functional constipation or IBS-C and objective features of impaired rectal evacuation)

Rome IV Chronic Constipation

- Chronic constipation must include 2 or more of the following

(During at least 25% of defecations)

- Straining
- Lumpy or hard stools
- Sensation of incomplete evacuation
- Sensation of Ano-rectal obstruction &blockage
- Manual maneuvers to facilitate defecations
- < 3 defecations per week

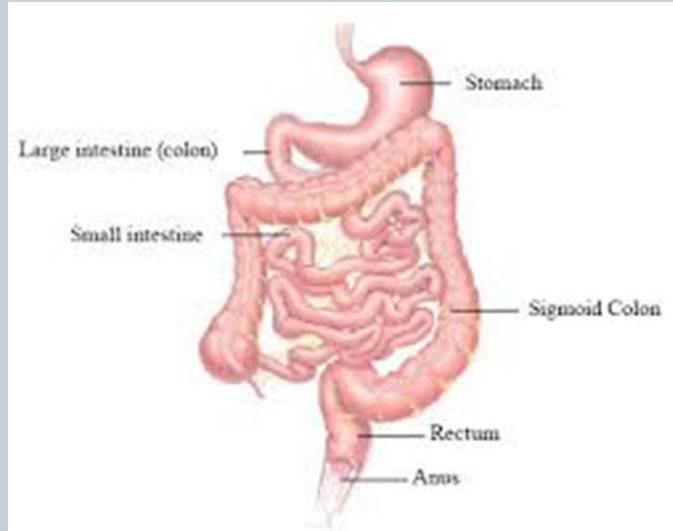
- Loose stools are rarely present without the use of laxatives
- Insufficient criteria for irritable bowel syndrome

*Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

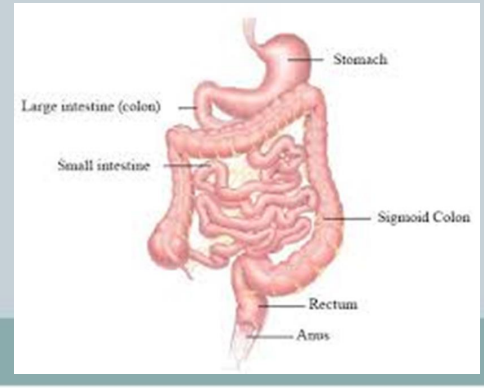
!Take home point: Ask these questions for assessment

Anatomy and Physiology

Colon – divided into ascending colon (from cecum to edge of liver border), goes across the abdomen under the stomach called the transverse colon and then descends down the left side of the abdomen (descending colon)and leads into the sigmoid colon and rectum



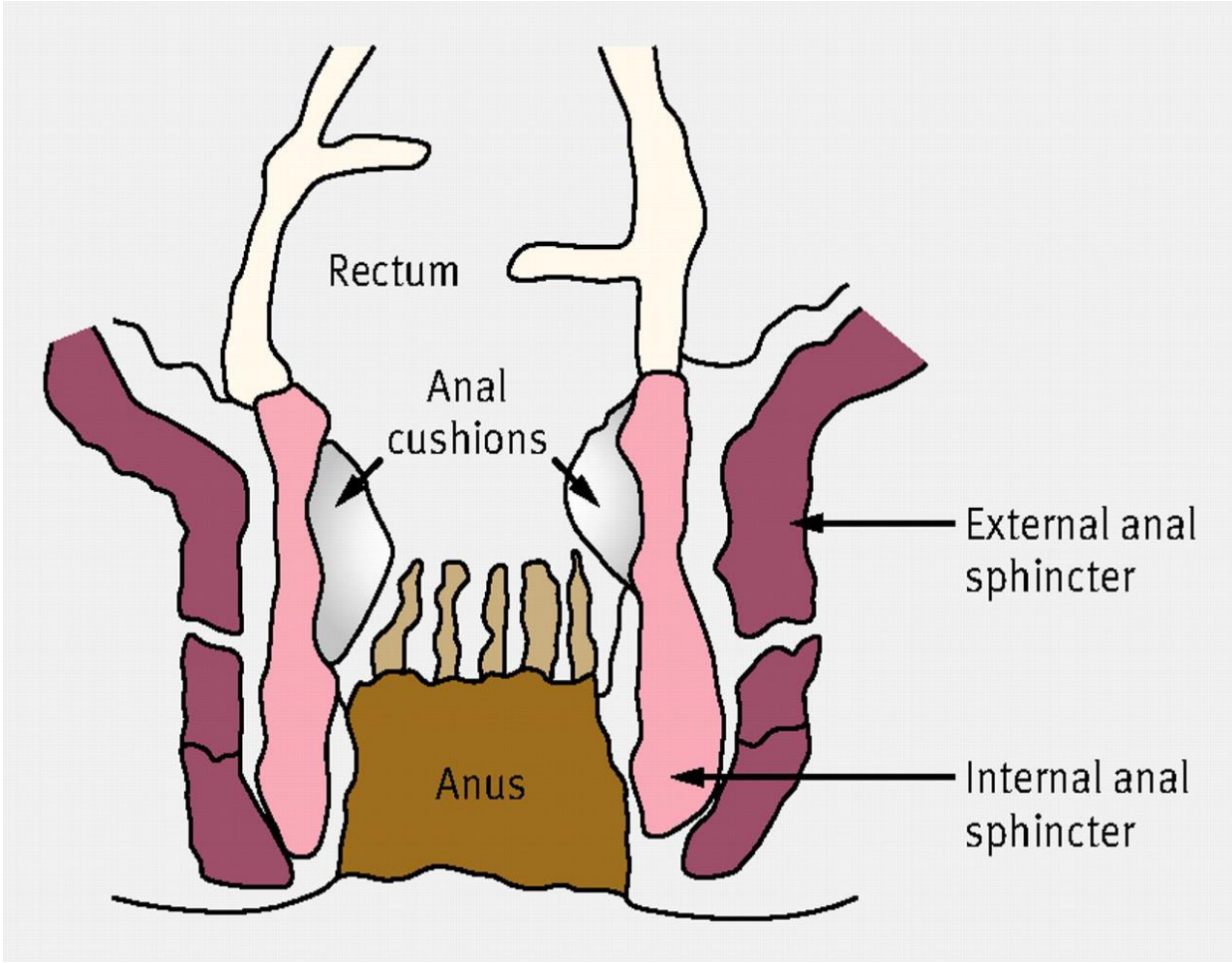
- Ascending and transverse colon absorb H2O and electrolytes
- Descending and sigmoid colon stores fecal matter until eliminated
- Smooth muscle of colon contracts and relaxes in response to distension and mixing movements occur
- Contents of colon enter the rectum usually q am
- Spinal reflex to defecate occurs and the anal sphincter relaxes or contracts with pelvic and abdominal muscle movement



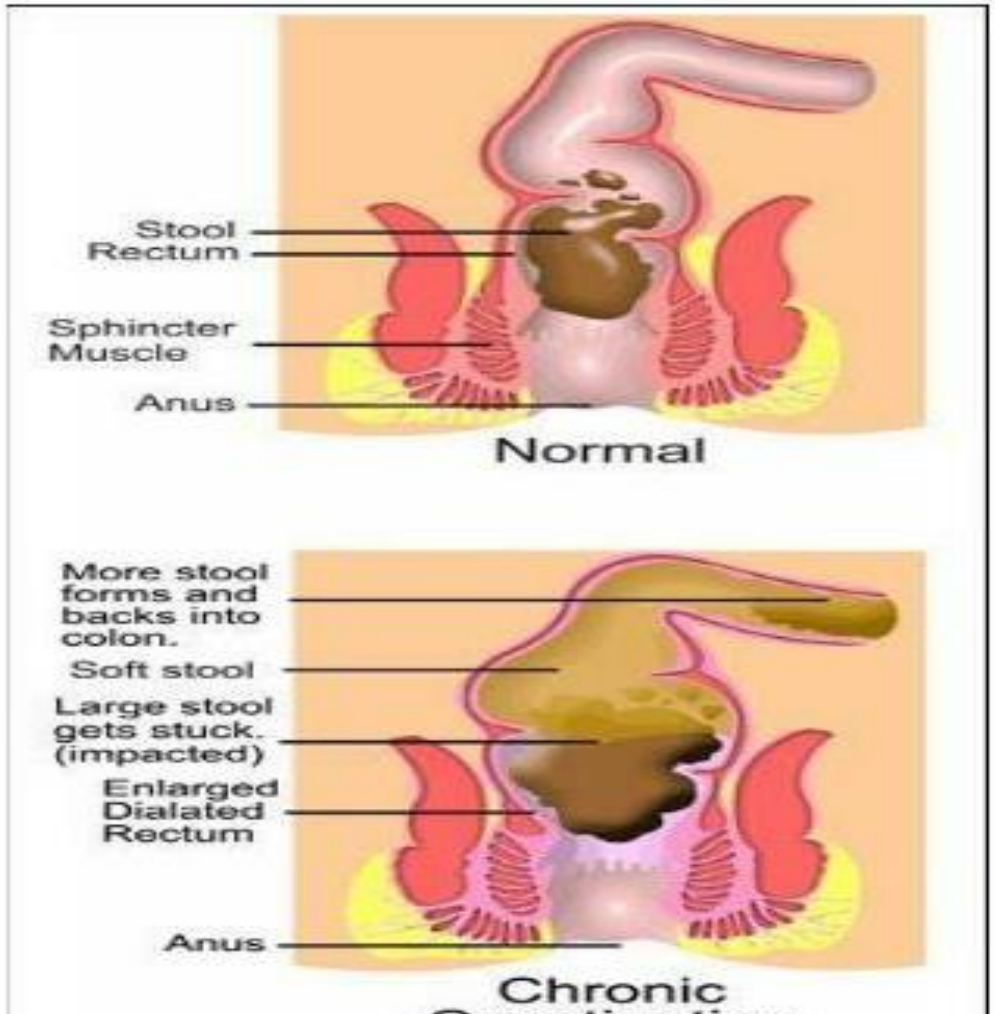
Constipation-Anatomy

-is approximately 1.2 m long (4 ft.) and is bounded by the ileocecal sphincter at its origin and by the anal sphincter at the perineum (Rothenberger & Orrom, 1991).

- colon wall has several layers: the inner mucosal lining, the submucosa, and an outer layer of muscle that has two divisions–the inner layer, which is a continuous sheath of circular smooth muscle, and the outer longitudinal layer (Rothenberger & Orrom, 1991).



Physio-pathology Chronic Constipation



Risk Factors-Constipation

- Female
- Dehydration/Low fluid intake/fluid restriction
- Low dietary fiber
- Low caloric intake/Low fiber intake
- Polypharmacy > 5 meds
- Impaired Immobility
- Depression
- Dementia
- Chronic/Acute renal failure/renal dialysis
- Lack of privacy comfort
- Poor toilet access

Common Causes of Constipation

- Neurologic Disorders (Neurogenic Bowel Dysfunction-NBG-Parkinson's Disease and medication for, Stroke, SCI)
- Myopathic Disorders

- Colon disorders-diverticulosis/diverticulitis, colon cancer,
- Damage to sacral nerve- trauma, childbirth

Medications Contributing to Constipation

- ***Opioids- (OIC)- binds with mu receptors in bowel- Movantek***
- ***NSAIDS*-ibuprofen, Motrin and naproxen (Aleve)**
- **Anticholinergic- bladder control i.e. Detrol, Alzheimer's meds**
- ***Antidepressants* including the selective serotonin reuptake inhibitors (SSRI's- fluoxetine/Prozac or tricyclics (amitriptyline/Elavil).**
- **Anticholinergics *(bladder control)***
- ***Antacids* containing calcium or aluminum such as Tums**
- ***Iron* pills**
- ***Allergy medicine* such as antihistamines (diphenhydramine**
- ***Certain blood pressure meds*, including Ca channel blockers (like verapamil /Calan SR, diltiazem (Cardizem),and nifedipine (Procardia) and beta blockers (Atenolol/Tenormin)- end in "olol"**
- ***Psychiatric medications* like clozapine and olanzapine/Zyprexa**

Constipation- Why do we care?

Regulations/Laws/Standard of Care

Regulations/Laws/Standards of Care for LTC/Aging
CFR/SOM F690 (2017)
The facility **must** ensure that a resident who is continent of bladder and bowel on admission receives services and assistance to maintain continence unless his or her clinical condition becomes such that continence is not possible to maintain.

Quality of Life

- Pain, discomfort, bloating
- Lack of appetite
- Nausea
- Fatigue
- Irritability
- Change in behaviour
- Haemorrhoids, prolapse
- Fecal impaction , diarrhea

Social isolation, depression

Constipation-Adverse Effects-Hemorrhoids (Piles)

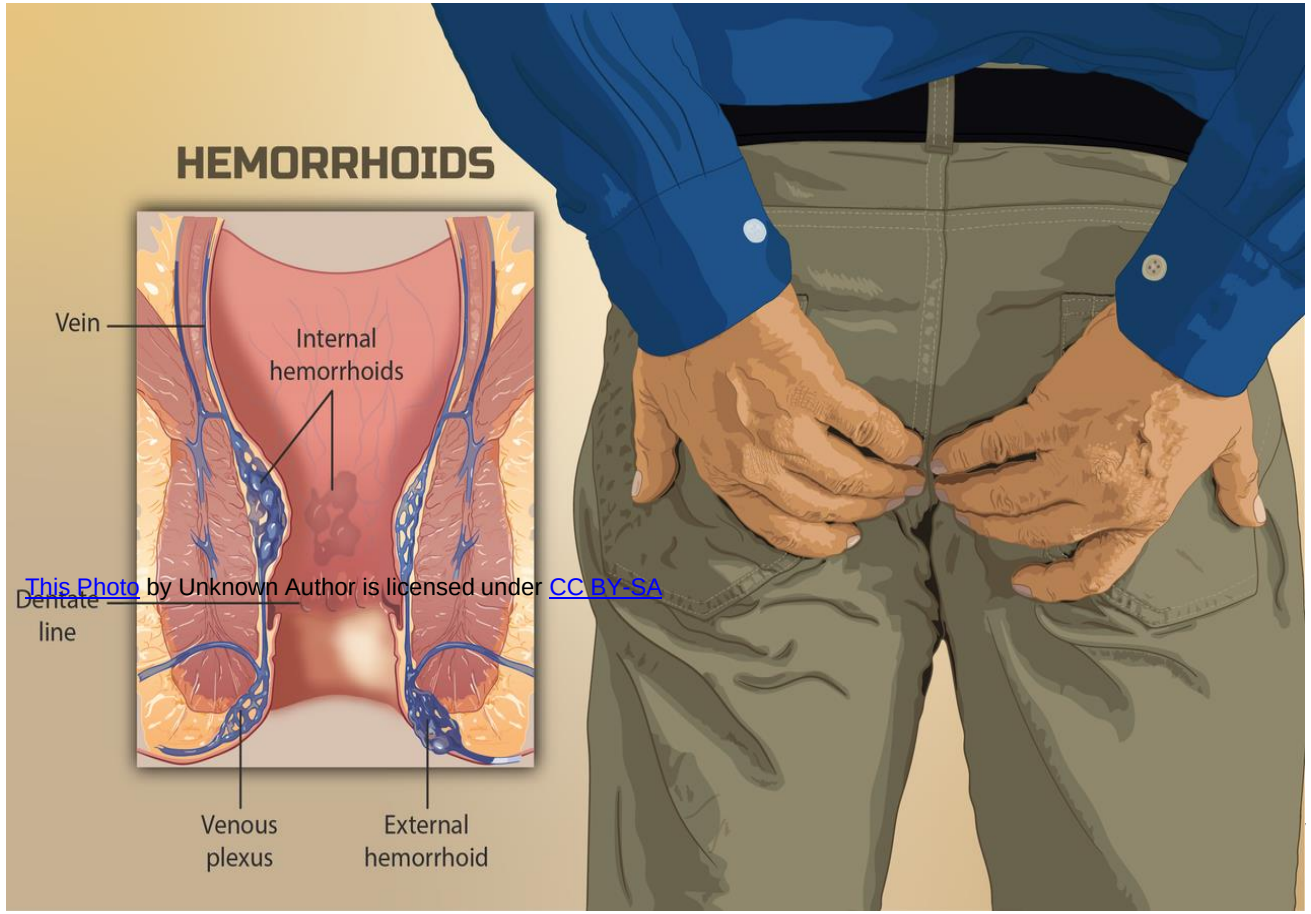


Table 1: Hemorrhoidal Disease Grade

Hemorrhoidal disease grade	
1st Degree	The hemorrhoids bulge slightly into the anal canal beyond the dental line. This happens during straining defecation.
2nd Degree	The hemorrhoids prolap through anus but they reduce spontaneously.
3rd Degree	The hemorrhoids prolapsed through anus but manual reduction is required to insert them into anal canal.
4th Degree	The hemorrhoids prolaps, cannot be reduces, there is bleeding and increased risk for strangulation.

Fecal Impaction-Potential Complications of Constipation

IMPACTION (CONSTIPATION)

- Constipation ↑ in older people > 60 y
- Regular use of laxatives
- Associated : anxiety, depression
  poor health perception
- Complication : fecal impaction (1)
  fecal incontinence (1)
  urinary retention (2)
  sigmoid volvulus (2)
- ↑ morbidity : intestinal obstruction,

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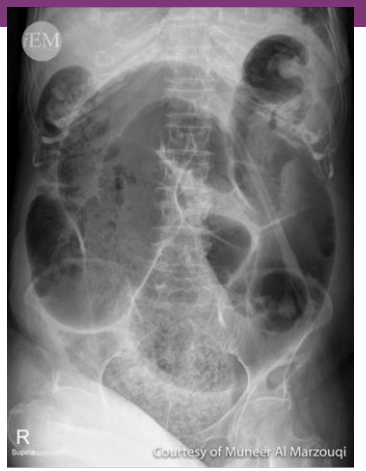
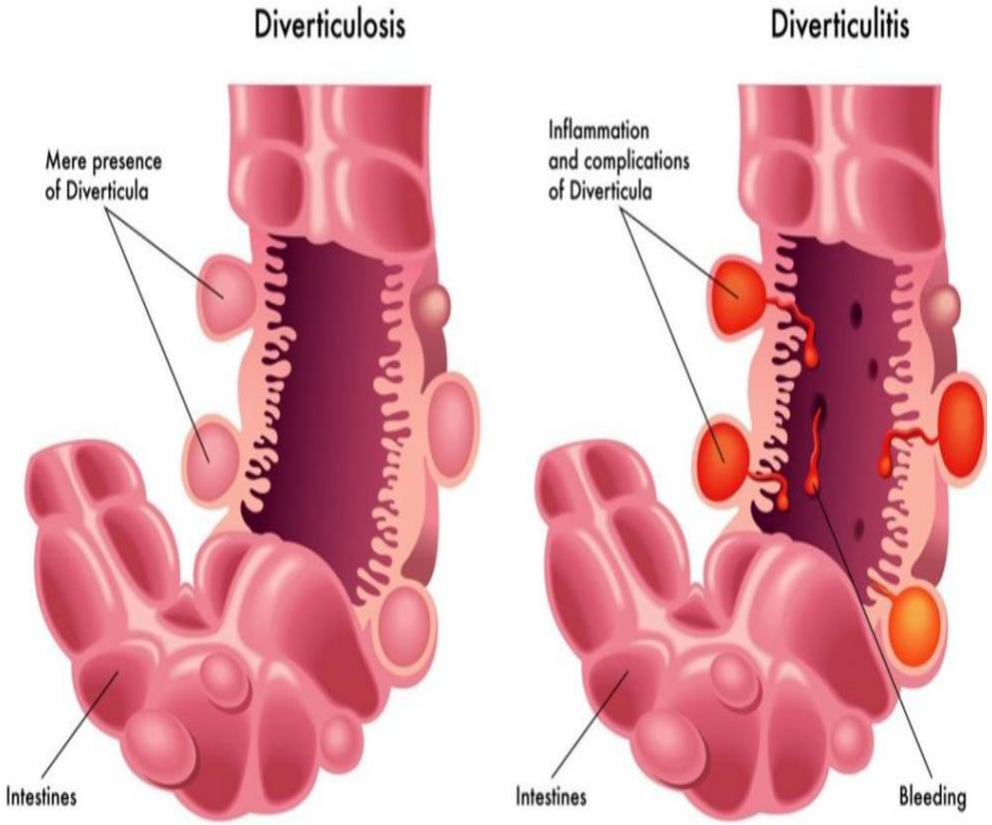
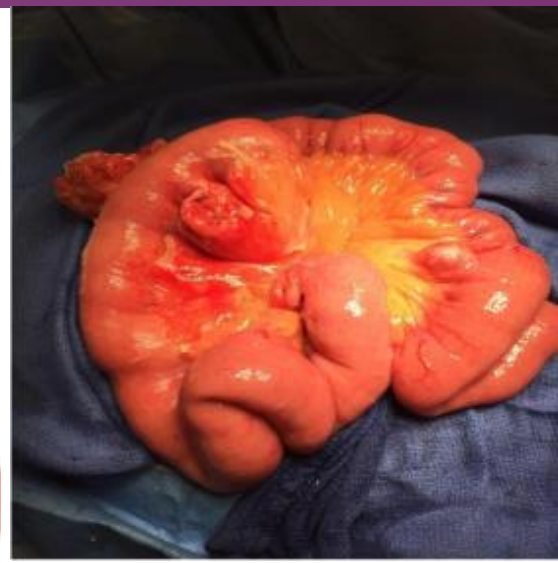
- Rare complications
  - Obstipation: obstruction with stool
  - Urinary and fecal incontinence
  - Stercoral ulceration: rectal "pressure" ulcers from impacted stool and obstipation
  - Megacolon: dilation of the colon that is not caused by obstruction (rectosigmoid diameter >6.5 cm)
  - Bowel perforation (new onset or from above etiologies)



Diverticular Disease (Diverticulosis/Diverticulitis/Perforation)

- A condition of the colon, often affecting the sigmoid
- Mostly found in the elderly
- Associated with a low fibre diet, dehydration, constipation and straining to defaecate
- The elderly often present with diverticulitis, inflammation and infection of the colon





Prevention constipation
Diverticulosis Diet

Rectal prolapse

Clinical Features

- Something coming out per rectum during defecation
  - May even on standing ,walking or coughing
- Red
- Fecal incontinence (75%)
- May reduce spontaneously or required digital reduction

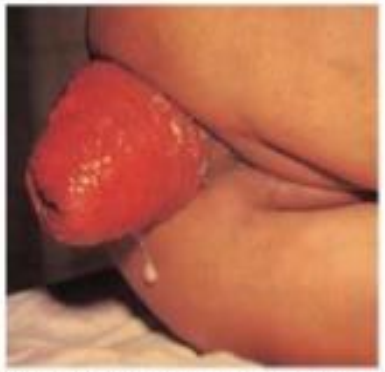


Figure 68.9 Full-thickness rectal prolapse (courtesy of G.D. Adhia, Bombay, India).

Complete Prolapse

- all layers of the rectal wall involved
- usually associated with a weak pelvic floor and is as much as 10-15 cm.
- Less common
- more common in elderly people.
- Common in female (6:1)
- Fecal incontinence (approx.50% of adults)

Fecal Incontinence and the Increased Risk for Pressure Ulcers & Incontinence Associated Dermatitis

Fecal Incontinence-Definition

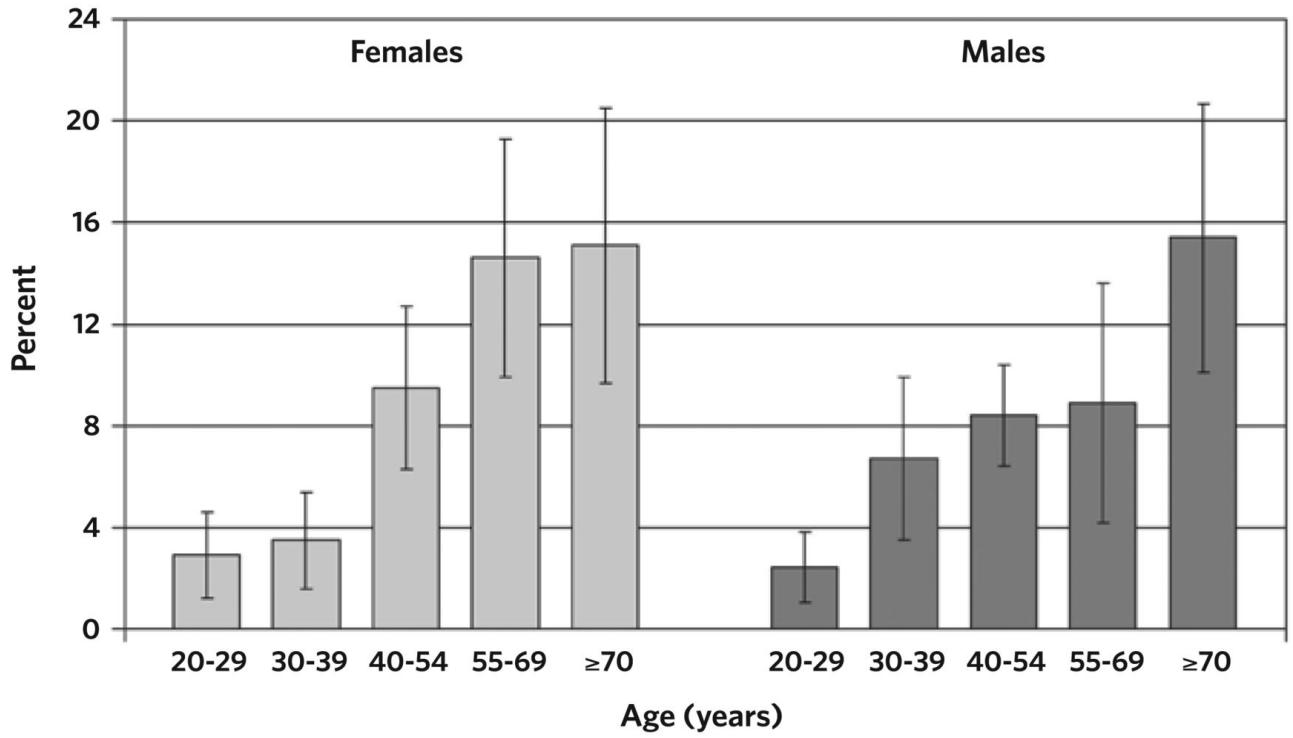
- **The unintentional loss of solid or liquid stool, some include flatus- passing gas.**
- Also called Bowel Incontinence
- Ranges from an occasional leakage of gas to complete loss of bowel control.
- True anal incontinence is the loss of anal sphincter control leading to the unwanted or untimely release of feces or gas.
- Stool seepage that produces soilage of undergarments= may result form hemorrhoids, enlarged skin tags, poor hygiene, fistula-in-anal, and rectal mucosal prolapse.

Epidemiology of FI

- Community-dwelling older adults (>65) with bowel or bladder incontinence:
  - 35% of women
  - 20-30% of men
- Assisted living environments
  - 30-50% of women
  - 30% of men
- Long-term care (nursing home)
  - > 50-78% of men and women

Prevalence Men vs. Women -FI

FIGURE 1.
Prevalence of Fecal Incontinence by Age Group in Female and Male Subjects



Note. Bars represent 95% confidence intervals.
Source: Reprinted with permission from Whitehead WE, et al [1].

Risk Factors for FI

-Age >65
-Female-complications of childbirth,
-Women who receive hormone replacement therapy
-Dementia- worsens – as stages worsen
-Physically disabled
-Nerve damage –long standing diabetes, not controlled HgA1c-<7.0

Effects of Fecal Incontinence

Bowel & Bladder incontinence has significant negative impact on both overall and health-related quality-of-life.

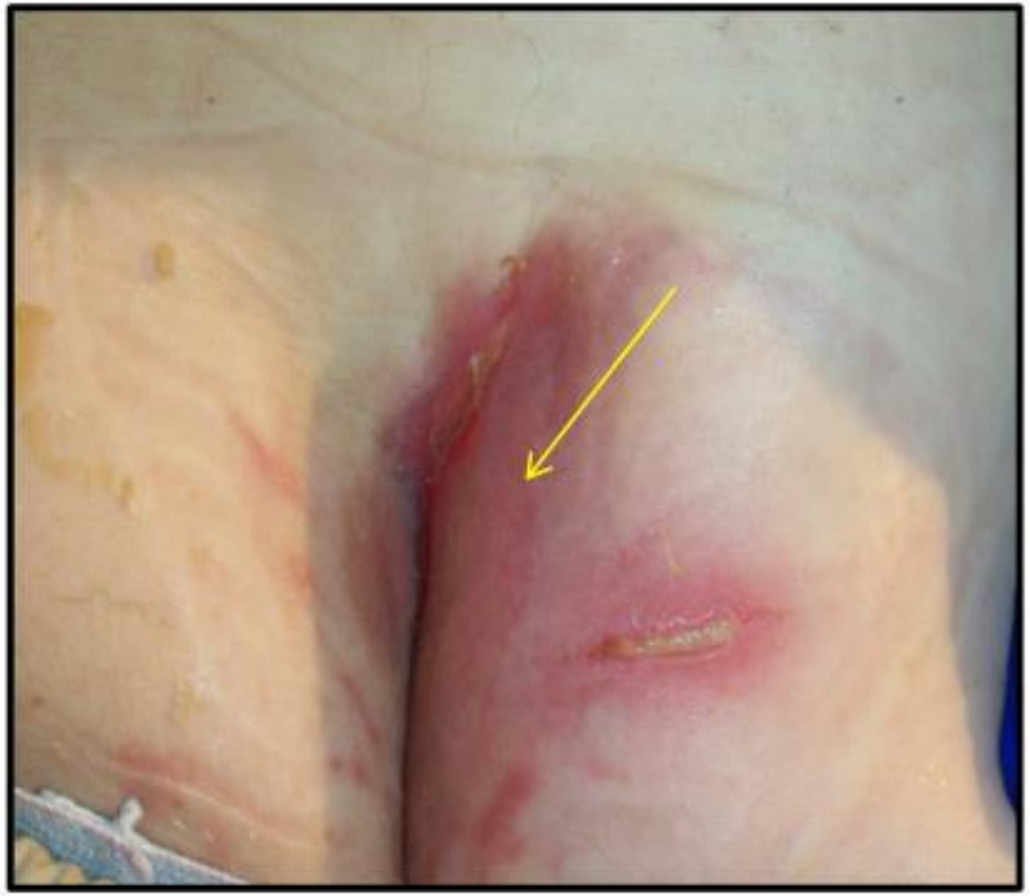
- Social isolation, Depression, Psychological distress
- Increased caregiver burden, Skin inflammation / breakdown
- Sleep disturbance, Increased risk urinary tract infection (UTI), Cost related to management of incontinence
- Increased risk of falls and fractures related to urgency / frequency, nocturia, impaired mobility and vision changes
- Increased risk of mortality associated with falls, fractures and skin breakdown

Fecal Incontinence Affects Skin Integrity

- The mean pH of skin ranges from 5.5 – 5.9.
- Normal feces is alkaline, with a typical pH of 7.0 to 7.5, contributing to an abnormal skin pH in incontinent patients.
- Exposure to stool changes the pH of the skin and impairs the integrity of the barrier formed by the skin cells, exposing the skin to harmful digestive enzymes.
- Overgrowth of microorganisms leads to skin irritation or infection, further weakening the skin's defense. Coupled with friction and pressure can lead to erosions and pressure ulcers, particularly in skin that is already compromised by prolonged exposure to stool and urine.

Driver, D. (2007). Perineal dermatitis in critical care patients. *American Association of Critical Care Nurses, 27*, 42-46.

Incontinence Associated Dermatitis

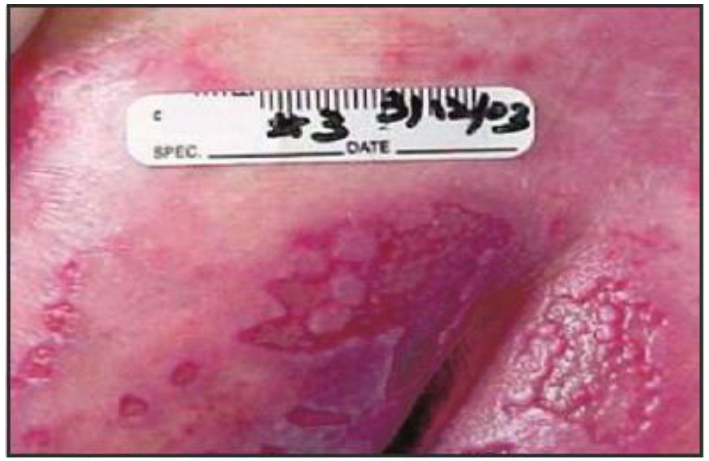


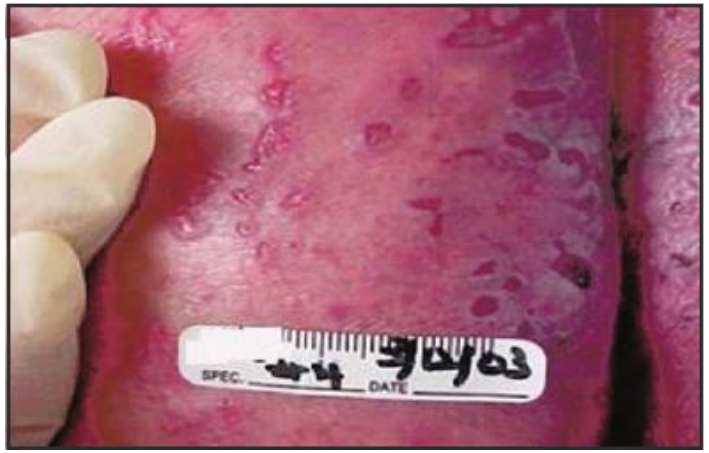
Skin condition commonly associated with incontinence. Skin irritation and inflammation related to exposure to urine and feces.

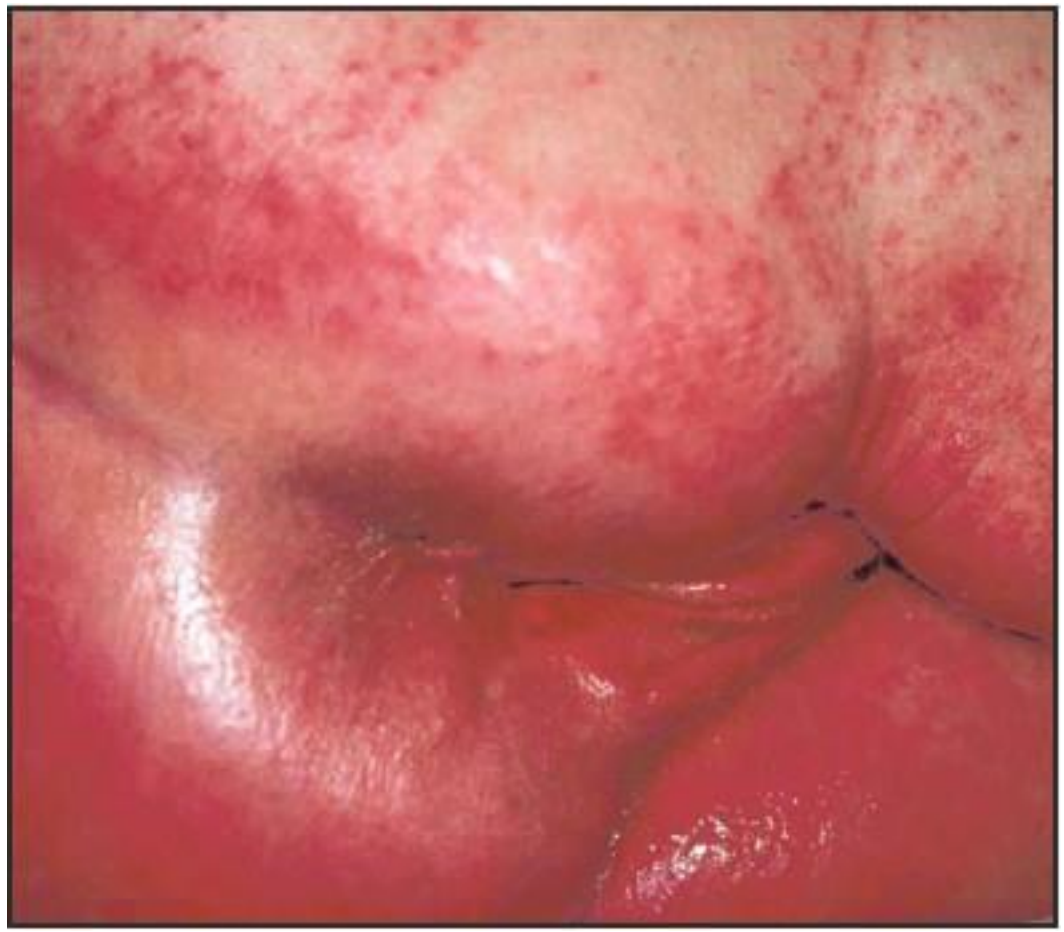
Additional risk factors:

- Diaper use
- Bed bound / immobility

Incontinence Associated Dermatitis (IAD)







Pressure Ulcer VS Inflammation Associated Dermatitis

PU VS. IAD

PRESSURE ULCER[1]

- Located over a bony prominence.
- Over coccyx (tailbone) or ischia (butt bones); they are usually round or oval shaped.
- Over sacrum, may be butterfly shaped or oval if mostly on one side.
- Well defined edges—no satellite lesions.

IAD DUE TO CONTACT WITH URINE OR FECES[1]

- Location is where the skin lays in or on urine or feces; not only over a bony prominence.
- Early injury is bright red, then bright red and weepy.
- Post-acute skin is purplish and very dry, peeling like a sunburn.
- No satellite lesions unless also has fungal.

Bottom Up

Pressure injury

Top Down

Fecal Incontinence and the Risk of Pressure Ulcers

- "...Patients with fecal incontinence were 22 times more likely to have pressure ulcers than patients without fecal incontinence." [1]
- "...The odds of having a pressure ulcer were 37.5 times greater in patients who had both impaired mobility and fecal incontinence than in patients who had neither."[1]
- Fecal incontinence in hospitalized patients increases the risk of nosocomial infections and the development of pressure ulcers, increases mortality, and morbidity. [2]

1. Maklebust J, Magnan MA, Adv Wound Care. Nov 1994;7(6):25, 27-8, 31-4 passim; 2. J. Wound Ostomy Continence Nurs. 2008; 35 (1): 104-110.

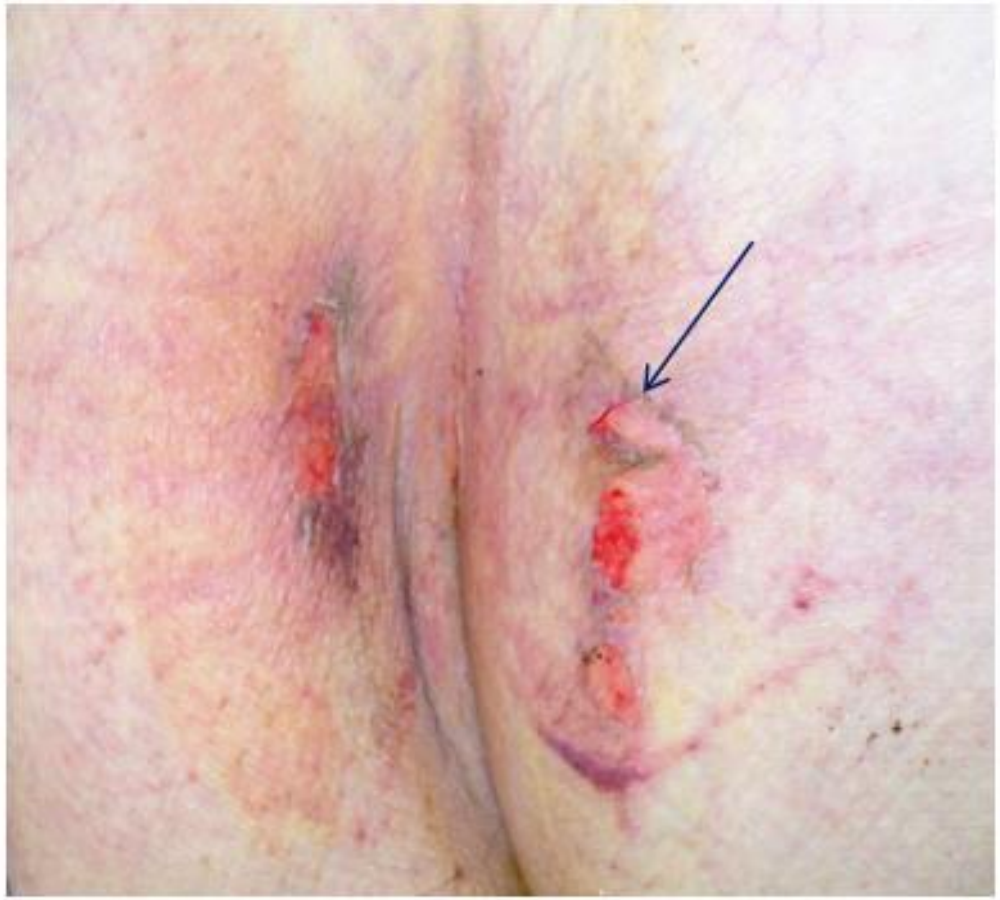
Regulations for LTC

- CFR/SOM(F Tag 686 requires that the nursing staff assess and take measures to adequately and completely assess risk factors and barriers to prevention and healing of PU/PI.
- Examples of these risk factors include, but are not limited to: *Exposure of skin to moisture including urinary and fecal incontinence*;

  Under nutrition, malnutrition, and hydration deficits;

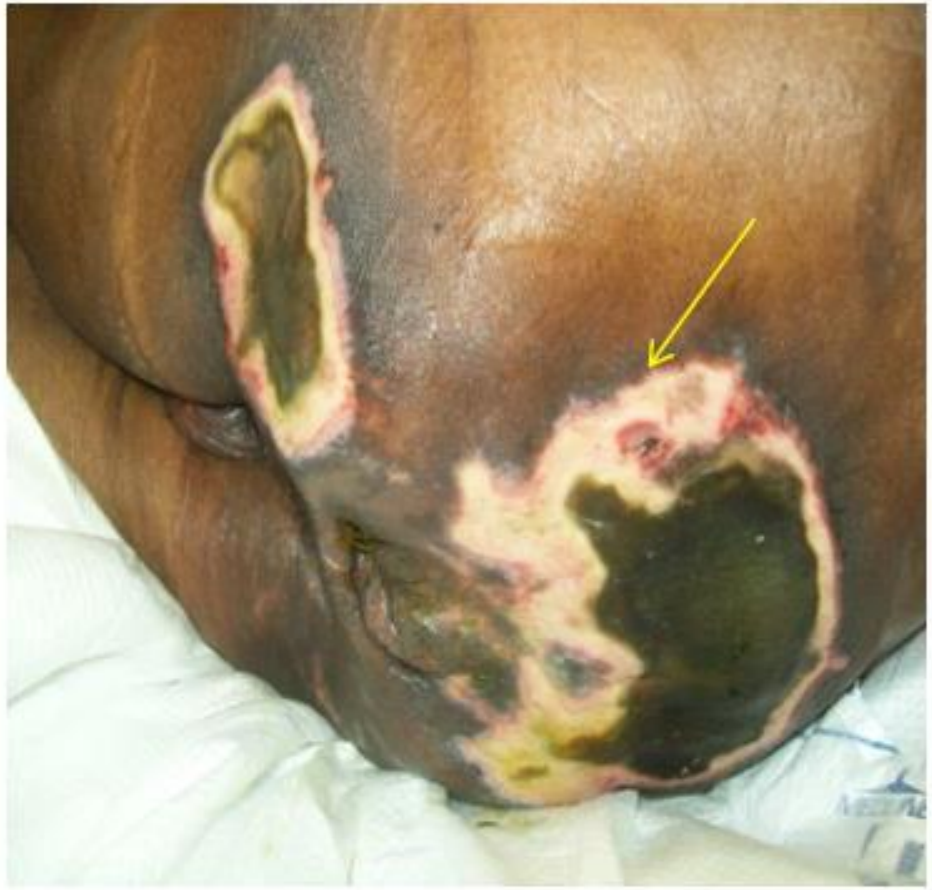
- **UNAVOIDABLE**

Shear & Friction



Erosion of the skin occurs frequently and probably attributable to friction created by moving moist or saturated pads or clothing over irritated skin; or to damage from digestive enzymes present in liquid or solid stool.

Unstageable Pressure Ulcer



Incontinence, immobility, increased moisture, pressure and malnutrition causes serious skin conditions/wounds.

3 M Advanced skin protectant.- elastomeric polymer- 3 day, enables attachment to wet, weepy skin, repels irritants, can stay on 3 days- about $13.0

3M Cavilon Advanced Skin...

$13.51

Nursing- the more EFFECTIVE the bowel program- the better it is for Nursing!

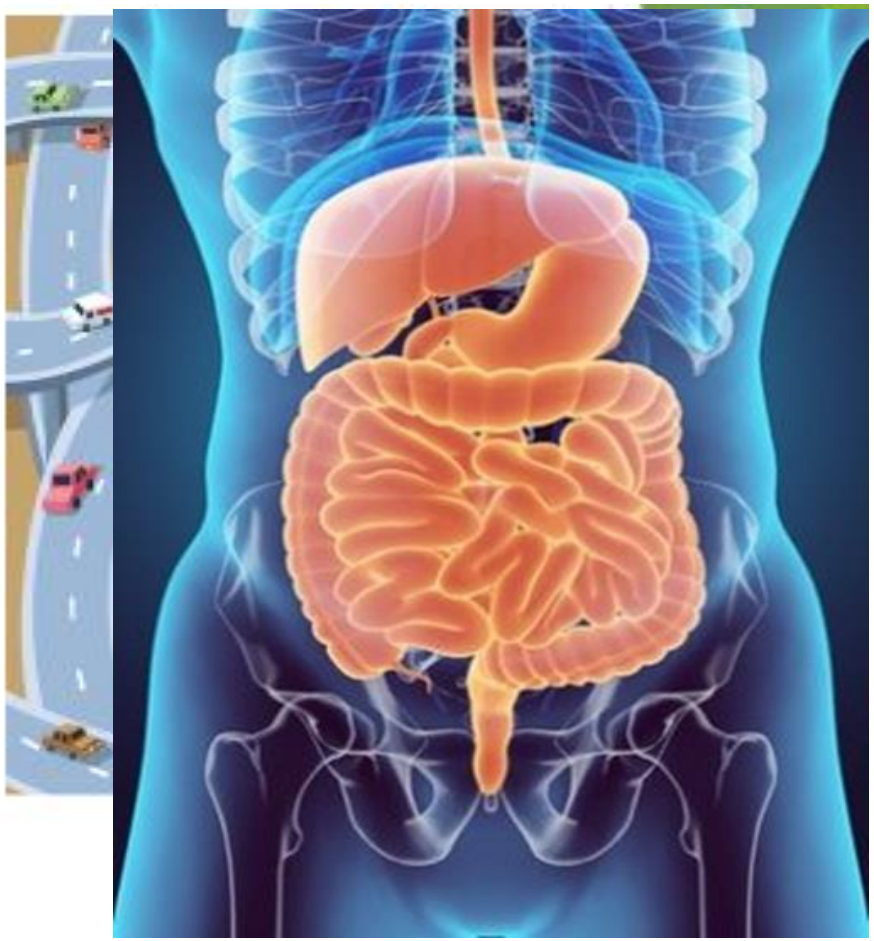
Nursing

- How much staff does it take for how many hours?
- FIM scoring- IRF/PAI? Same score but with less staff in less time- save Money!!!
- Retention of staff?

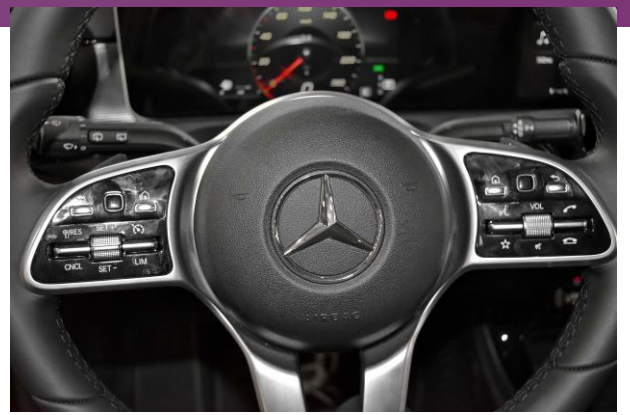
Resident/Patient Assessments

Goal: An effective bowel management program that prevents constipation and fecal incontinence

Navigating and Effective Bowel Management Plan



“Consistency “of Stool Drives Management/Interventions



- **How often?“moderate amount, formed”**
- **Look at each stool!**
- **Document on diary/ADLS or bowel record,**
- **amount, consistency**
- **Revise bowel management plan/individualize based on results**
- **Facility protocol to drive but needs to be individualized**

Bristol Stool Chart

Oloomi-**Type 0-** Hard, big ball, trunk

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. **Entirely Liquid**

Oloomi-Type 8 Watery, clear

VEGETABLE WONTON SOUP

Egg drop soup

SLOW TRANSIT

RAPID TRANSIT

Hard

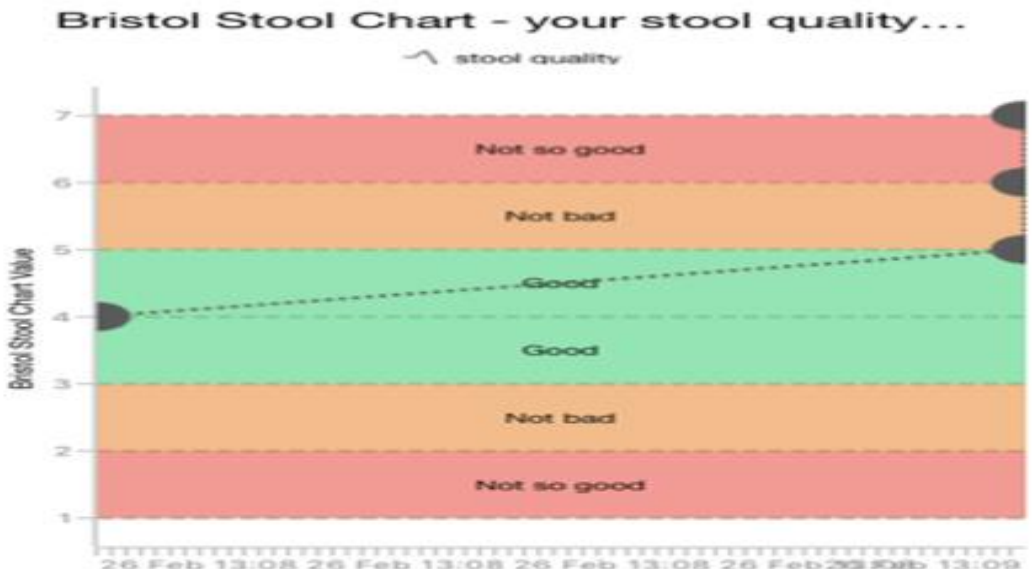
Soft

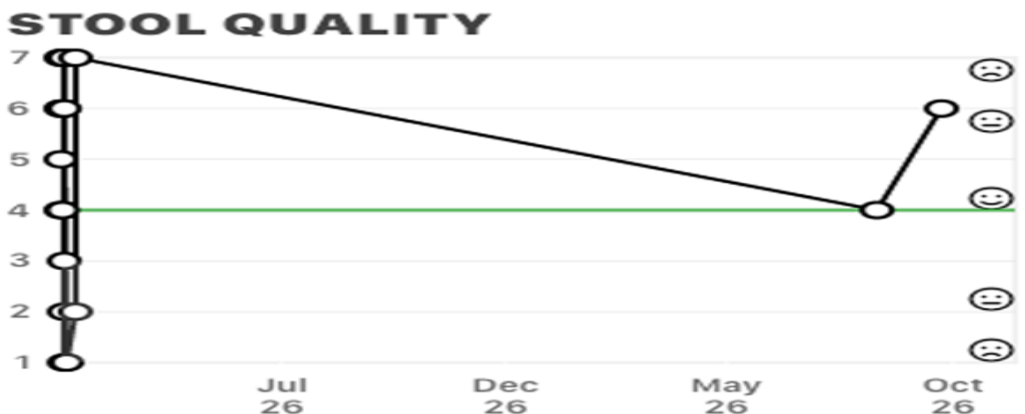
Getting information-Documentation☹Old fashioned way!!!!!!

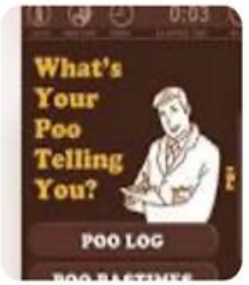
Date	Time of Evacuation	Total Time for Bowel Care	Fluid in ML	Fiber in Grams	Stool Consistency Bristol Stool Chart Type 1-7	# of Incontinence Episodes	Time Spent on Digital Stimulation	Bowel Medication(s) Used

If there isn't an app for it- it must not be important! Internet Resources:free

- BSC-www.bristolstoolchart.net- mobile device! Track your stool quality over time with the Bristol stool chart mobile app!







- 1) Poop Log. POOP LOG Source: iPhone (app store) ...
- 2) Places I've Pooped. PLACES I'VE POOPED Source: iPhone (app store) ...
- 3) Poo Keeper. CREDIT GETTY IMAGES. ...
- 4) **Bowel Mover Pro. BOWEL MOVER PRO** Source: iPhone (app store) ...
- 5) Poo Diary. POO DIARY Source: Google Play Store.

Jun 22, 2015

Metro › uk › News

Best 5 apps for 'logging' your poos every day | Metro News

Bowel (Constipation and Incontinence History)

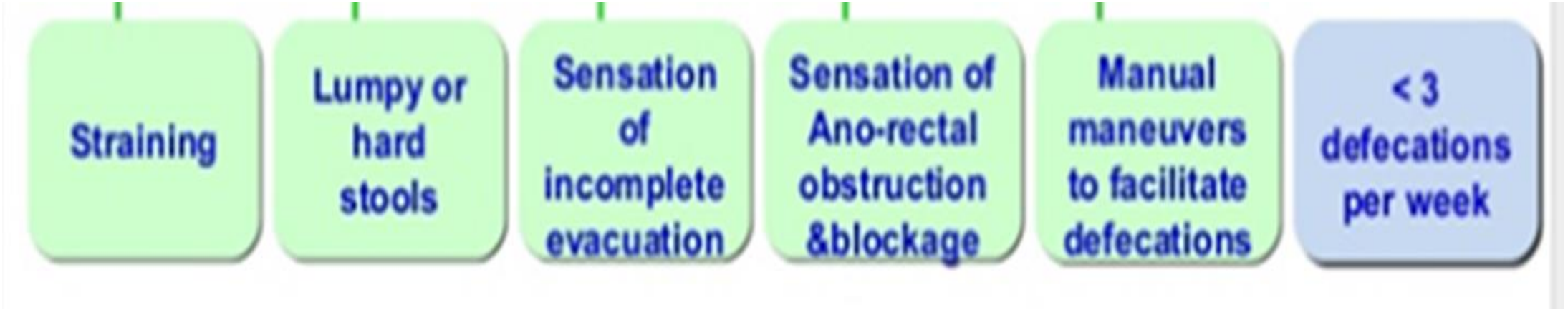
- **Medical History?**
- **Frequency?**
- **Sensations?**
- **Medications?**
- **Amount?**

Bowel Assessment

The most essential step is determining the etiology or cause

- Usual bowel pattern and measures currently used
- Hx of problem
- Ability to sense urge to defecate
- Daily fluid and fibre intake
- Relevant medical/surgical hx
- Functional abilities
- 7 day bowel record
- Physical assessment

6 questions to ask? Chronic Constipation- how long?



Bowel Care Patient Assessment Form

Page 1

Note:

- This form is offered as a sample only and criteria for assessment should be determined by staff members at your facility. A listing of assessment areas is offered.
- It is important to determine that diarrhea is not overflow due to constipation.
- A three day food and fluid intake history should be a practical approach for assessment.

A. Description of bowel patterns

B. Cognitive and functional ability
- **Orientation in time**
- **Orientation in space**
- **Functional ability**

C. Altered ability to defecate

A. Description of bowel patterns:
Exact time of daily evacuation:
Number of incontinent stools daily:
Number of mucosal discharge episodes daily:
Stool Consistency:
☐ Type 1: Separate hard lumps, like nuts (hard to pass)
☐ Type 2: Sausage-shaped but lumpy
☐ Type 3: Like a sausage but with cracks on its surface
☐ Type 4: Like a sausage or snake, smooth and soft
☐ Type 5: Soft blobs with clear-cut edges (passed easily)
☐ Type 6: Fluffy pieces with ragged edges, a mushy stool
☐ Type 7: Watery, no solid pieces. **Entirely Liquid**
B. Cognitive and functional ability:
The following general assessment is to be performed on patients that present with a good degree of cognitive ability. A more complete assessment may be required for those patients that present with some forms of brain injury or disease states.
ORIENTATION IN TIME:
• What is the year?
• What is the season?
• What is the month?
• What is the day?
• What is the day of the month?
ORIENTATION IN SPACE:
• In which state are we in?
• In which city are we in?
• What is this building we are in?
• Which floor are we on?
FUNCTIONAL ABILITY:
• Change in activity in the last two weeks? Yes or No
• Change in privacy or accessibility to the toilet? Yes or No
Explain:
C. Altered ability to defecate:
☐ Neuromuscular
☐ Hirschsprung's Disease
☐ Autonomic Neuropathy
☐ Chagas Disease
☐ Intestinal Pseudo Obstruction
☐ Cerebral Tumors
☐ Meningoceles
☐ Tabes Dorsalis
☐ Shy-Dragar Syndrome
☐ Dermotomyositis
☐ Progressive Systemic Sclerosis
☐ Diabetic Neuropathy
☐ Parkinson's Disease
☐ Spinal Cord Injury
☐ CVA
☐ Multiple Sclerosis

Bowel Care Patient Assessment Form

Page 2

Note:

- This form is offered as a sample only and criteria for assessment should be determined by staff members at your facility. A listing of assessment areas is offered.
- It is important to determine that diarrhea is not overflow due to constipation.
- A three day food and fluid intake history should be a practical approach for assessment.

D. Constipation Assessment Scale

- **Identify if there is no problem, some problem or severe problem.**

E. Diet and Fluid

- **Number of Fluid Ounces per day**
- **Daily Fiber intake**

F. Medications the patient is taking

- ☐ Traumatic Brain Injury
- ☐ Dementia
- ☐ Sedation
- ☐ Autonomic Failure
- ☐ Hypothyroidism
- ☐ Opioid Use
- ☐ Post-Operative Complications
- ☐ Coma
- ☐ Vegetative State
- ☐ Other

Additional Comments:

D. Constipation Assessment Scale	No Problem	Some Problem	Severe Problem
1. Abdominal distention or bloating			
2. Change in amount of gas passed rectally			
3. Less frequent bowel movements			
4. Oozing liquid stool			
5. Rectal fullness or pressure			
6. Rectal pain with bowel movement			
7. Small volume of stool			
8. Unable to pass stool			

Scoring: Add symptom score for a total score that ranges between 0 and 16.
Results: 2-6 = mild to moderate constipation
7-10 = moderately severe constipation
11+ = severe constipation
Source: McMillan SC, Williams FA. Validity and reliability of the Constipation Assessment scale. Cancer Nurs. 1989;12:183-188.

E. Diet and Fluid:

Fluid per day in ounces:

Fiber intake in grams:

F. Medications:

- ☐ Opioids
- ☐ Drugs with anticholinergic action:
  - ☐ Anticholinergics
  - ☐ Antidepressants
  - ☐ Phenothiazines
  - ☐ Haloperidol
  - ☐ Antacids
  - ☐ Antispasmodics
- ☐ Antiemetics-5HT3 Antagonists
- ☐ Diuretics
- ☐ Anticonvulsants
- ☐ Iron
- ☐ Antihypertensives
- ☐ Chemotherapy Agents – Vinca Alkaloids, 5-Flouruoracil, Mitomycin
- ☐ Antibiotics
- ☐ NSAIDs – Diclofenac, Indomethacin
- ☐ Iron Preparations
- ☐ Disaccharide Containing Elixirs

Bowel Care Patient Assessment Form

Page 3

Note:

- This form is offered as a sample only and criteria for assessment should be determined by staff members at your facility. A listing of assessment areas is offered.
- It is important to determine that diarrhea is NOT overflow due to constipation.
- A three day food and fluid intake history should be a practical approach for assessment.

G. Physical Issues

H. Abdominal examination

I. Rectal examination

G. Physical Issues:
☐ Advanced age
☐ Immobility
☐ New spinal cord injury
☐ Lack of exercise
☐ Poor dietary and fluid intake
☐ Changes in life routine
☐ Ignoring the urge to defecate
☐ Dementia
☐ Abnormal toileting position
☐ Inconsistent and insufficient toileting time
☐ Lack of privacy
H. Abdominal:
☐ Distention
☐ Visible peristalsis
☐ Bowel sounds
☐ Masses
☐ Rigidity
☐ Tenderness
I. Rectal: *Perform on patients in the left lateral position
Perform anal test, appearances of:
☐ Fissures
☐ Hemorrhoids
☐ Masses
☐ Stool
☐ Prostate size
☐ Perianal ulceration
☐ Anal sphincter tone
☐ Anterior mucosal prolapsed
☐ Anal stenosis
Suggested Testing: (*patients with ongoing constipation issues)
• **Laboratory:** Fecal occult blood testing (FOBT); thyroid function studies; serum electrolytes; serum glucose; and complete blood count (CBC).
• **Radiographic diagnostic testing:** Such testing of the kidney, ureter, and bladder (KUB) may be indicated to rule out an organic cause of constipation. (Constipation may present with clumps of rounded masses with entrapped gas and varying degrees of dilated bowel)
• Additional evaluation is indicated if there is a positive occult blood test, weight loss, anemia, and an onset of constipation that cannot be attributed to lifestyle changes. Appropriate tests include a barium enema, a colonoscopy, and sigmoidoscopy.
• Cognitive Testing (Patient presenting with some degree of impaired cognitive ability.) The provided links are for reference only: http://www.alz.org/professionals_and_researchers_14306.asp http://www.mybraintest.org/2011/04/cognitive-assessment-and-rehabilitation-for-traumatic-brain-injury-tbi/

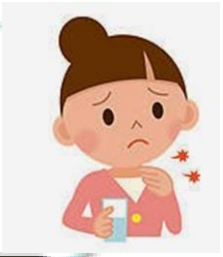
Clinical comparisons of Common Medications used for Bowel Care

Sip and go

Swallowing problems?
Dry mouth?
Speech therapist consult? Dysphagia eval?
Any symptoms- coughing, wet voice, silent?

Liquids- are all liquids good?

keeping in mind the most natural form of elimination is the best long term approach. Consideration of maintaining healthy rectal mucosa is paramount to patient quality control measures when using rectal stimulant remedies i.e. bisacodyl.



Daily

Daily: Encourage Exercise-Fluid-Fiber-Toileting Regimen (Same time each day, morning recommended)

- 64-96 ounces of Fluid daily as tolerated (water, prune juice, juices etc.)
- 20-35 grams of Fiber
- Hot beverage prior to scheduled toileting regimen

Neurogenic Bowel: Incorporate daily for regimented bowel program

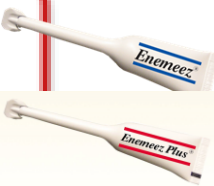
Note: Certain antineoplastics or specific chemotherapy agents can cause either constipation or diarrhea. If individuals experience diarrhea, hold the laxatives temporarily until diarrhea subsides.

Day 1-2

Stool Softeners: If patient exhibits hard stools, inadequate amount of stool or no bowel movement. Docusate sodium(DSS) can be taken orally or rectally. For these drugs to be most effective, it is essential that a person consumes at least 1 to 2 liters of fluid per day.

- Docusate sodium oral 100-400mg Daily
- Enemeez® (Docusate Sodium mini-enema 283mg) rectal, if no BM in 30 minutes X1, X2, X3 QD

Neurogenic Bowel: Incorporate daily for regimented bowel program



Note: Always remember to check the bowel routine with the patient. Ask if this pattern is unusual, or is it normal for them to have a bowel movement once every 3 days.

Day 2-3

Stimulants: Titrate Sennosides tablets, 2–4 tabs bid up to qid, and Docusate tid up to qid to achieve regular bowel movement.

- Senna 0.5 to 2 grams QD or BID

Note: Administer oral stimulant laxatives, Enemeez® (docusate sodium mini-enema) on Day 3, if ineffective, give suppository, enema whenever a person does not have a bowel movement for 3 days.

Day 3-4

Suppository / Enema: * Enemas that consist of 150 ml of Sodium Phosphate. It may be safely used in short, intermittent courses. Prolonged use of a phosphate preparation can result in hypocalcemia and rectal irritation.

- Glycerin suppository 1 rectal PRN
- Bisacodyl 5-10mg suppository-1 rectally PRN
- Sodium / Potassium phosphate enema-133ml instill rectally PRN

(Fleets enema-phosphate- FDA Blackbox warning)

Note: Be sure to assess for bowel obstruction BEFORE initiating aggressive laxative and large volume enema administration. Such therapies are contraindicated in the presence of bowel obstruction, except if obstruction is due to constipated stool.

**Note: Docusate sodium (DSS) can be taken orally or rectally. For these drugs to be most effective, it is essential that a person consumes at least 1 to 2 liters of fluid per day. Glycerin has minimal side effects and is one of the few laxatives that has been recommended as being safe for periodic use with children and infants.*

Enemeez
Relief in 2-15 Minutes
Setting the Standard for Bowel Care.

Mini Enemas

Mechanism of the action:

- Functions as a hyperosmotic as well as a stool softening laxative by drawing water into the bowel from surrounding body tissues. Helps soften and loosen the stool.

Administration:

- Rectally, upright on a commode chair/restroom or left side lying.

Therapeutic uses:

- Used with spinal cord injury, stroke, TBI, MS, spina bifida and general constipation, IBS-C, , chronic constipation

Benefits:

- Provides an evacuation in typically 15-20 minutes
- Does not produce a mucous discharge
- Safe for daily and long-term use
- Reduces episodes of incontinence in half versus bisacodyl suppositories.
- Enemeez® Plus with benzocaine for patients with autonomic dysreflexia or painful movements

Bisacodyl Case Study: Saunders, D.R., Haggitt, R.C., Kimmey, F.E., & Silverstein, F.E. (1990). Morphological consequences of bisacodyl on normal human rectal mucosa: effect of a prostaglandin e1 analog on mucosal injury. Gastrointestinal Endoscopy, 36(2), 101-104.

Bowel Product Comparison

Saunders, et.al studied the effects of bisacodyl on normal human rectal mucosa.

- Results showed that bisacodyl (meds/supp) causes acute injury to the human rectal mucosa.
- For up to 30 hours after bisacodyl, inflammation persisted as evidenced by neutrophils present in the superficial epithelium and lamina propria.
- These changes mimic a mild, acute colitis.
- Mucosal discharge persisted for up to 3 days after the use of bisacodyl. (described as mucous, butt snot)
- Chronic use of stimulant laxatives may damage the mesenteric plexus and result in colonic dysmotility.

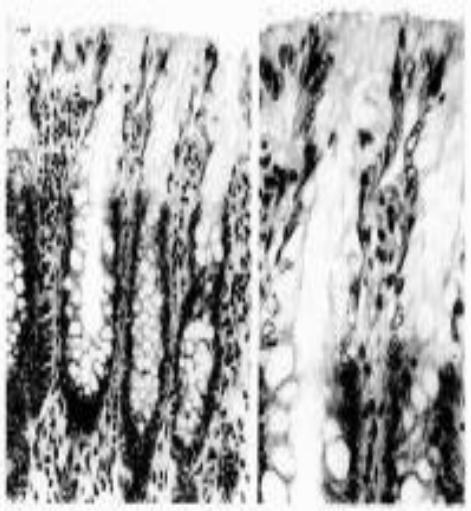


Figure 2. Rectal biopsy 30 min after bisacodyl enema. The cytoplasm and some of the nuclei in the surface epithelium and upper one-third to one-half of the crypt epithelium have a pale, vacuolated appearance in striking contrast to the appearance of control mucosa. The crypt architecture remains normal, and there is no neutrophilic infiltration or increase in cells within the lamina propria (H&E; left panel, original magnification ×96; right panel, original magnification ×192).

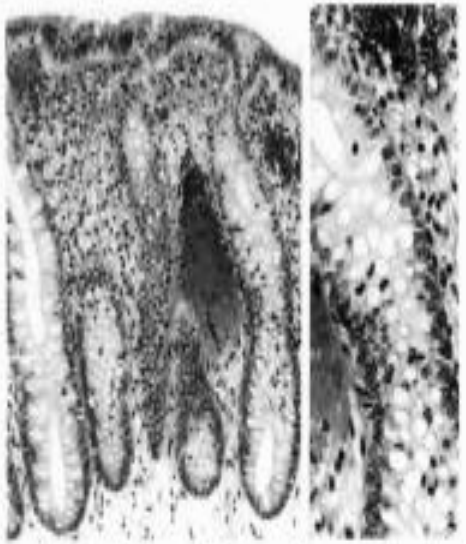


Figure 5. Rectal biopsy 30 hours after administration of bisacodyl enema. The crypt architecture, lamina propria cellularity, and surface epithelium are all within normal limits. The crypt to the far left panel is shown at higher magnification in the right panel to illustrate the increased mitotic activity located within the upper and middle part of the crypt. At least four mitotic figures are visible (H&E; left panel, original magnification ×96; right panel, original magnification ×192).

Enemeez® will: A bowel program should provide predictable and effective elimination and reduce evacuation problems and gastrointestinal complaints." "

- Maximize your patients' Quality of Life and the time spent with the Rehabilitation Team
- Assist in preventative care of major complications prone to patients on a bowel program including:
  - UTI's
  - Depression
  - Pressure ulcers
  - Obesity
  - Healthcare cost savings

Enemeez® has been proven to:

- Reduce episodes of incontinence.
- Eliminate mucosal discharge and irritation.
- Significantly reduce total bowel care time.

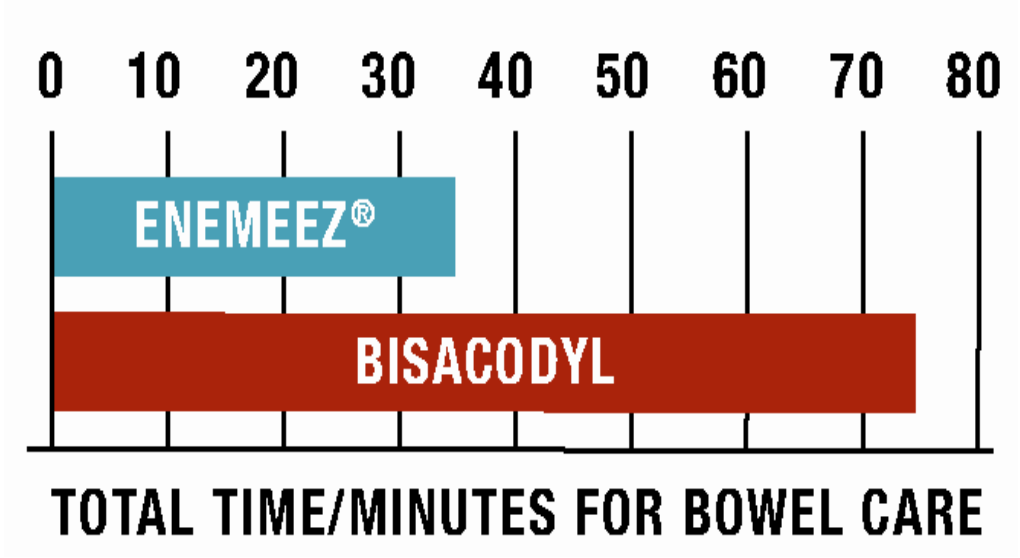
Provide greater *Quality of Life* for your patients.

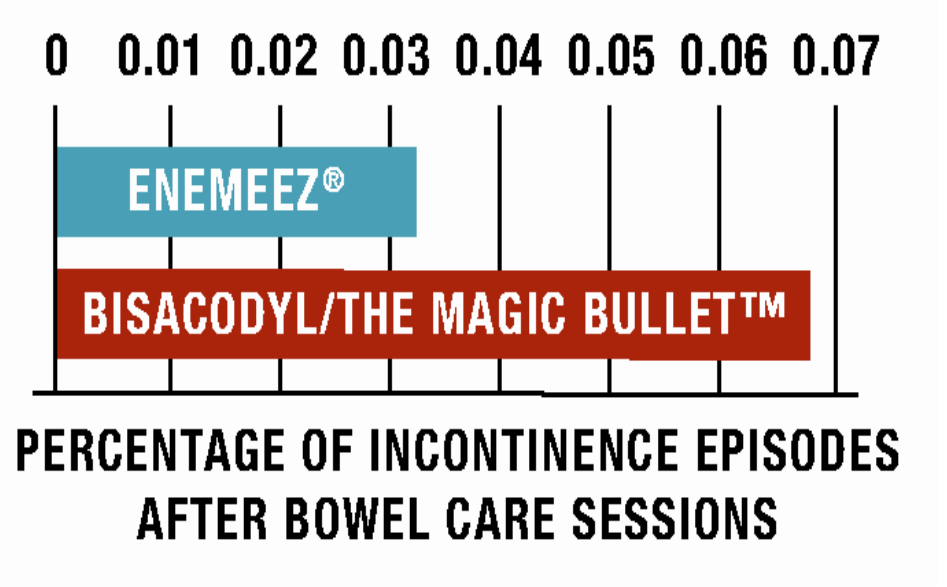
Enemeez vs. Bisacodyl Case Study: *Glen House, J, & Stiens, S. (1997). Pharmacologically initiated defecation for persons with spinal cord injury: effectiveness of three agents. Arch Phys Med Rehabil, 78, 1062-106*

Bowel Product Comparison

Comparison Charts: *Enemeez*® formulation versus Bisacodyl products.

- Episodes of Incontinence
- Total Time for Bowel Care in Minutes.



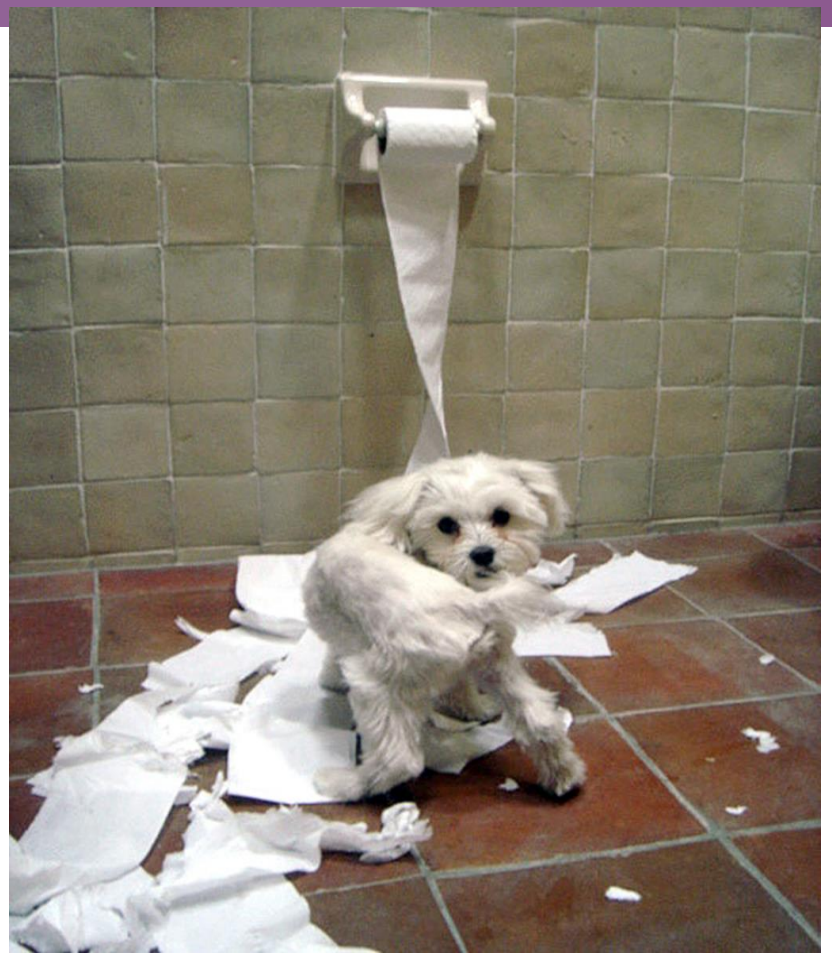


*Alliance in-house research. Customer survey April 27, 2011, 177 Enemeez® users.

Summary

- Focus is on prevention
- Resident specific interventions
- Staff communication (7 day bowel record and ongoing monitoring)
- In house bowel protocol
- Pharmacological interventions

COVID-19, AKA Coronavirus



Researchers in China published a study suggesting that flushing a toilet can create a plume of coronavirus-laden particles, which are flung into the air by the watery vortex inside a toilet bowl.

COVID-19 June 16, 2020 in the journal *Physics of Fluids*.

Recommendations for COVID-19 bowel care best practices

- **Any GI symptom(s) should trigger suspicion of COVID-19, and testing should include PCR, fecal/stool specimens and if PCR negative, antibody test for COVID-19.**
- **ALL Screenings and Assessments should include GI symptoms per CDC screening criteria updated on 4/27/20.**
- **Patients/caregivers should be educated on the *possible* spread of COVID-19 by oral-fecal route (saliva and feces/stool). Gastroenterologists are recommending best precautions and best practices including:**
- **No sharing of utensils for eating/drinking. Wash utensils in hot soapy water and scrub for 20 seconds and/or use high temperature dishwasher.**
- **No reusing toothbrushes without soaking in ¼ – ½ strength hydrogen peroxide then rinsing before brushing teeth.**
- **Provide private bathroom/toilet for patients with GI symptoms and/or + for COVID-19. Wear mask during any bowel care.**
- **Close toilet lid before flushing to prevent flume**
- **Disinfect toilet/sink with chlorine-based solutions, if possible, after each bowel movement.**
- **Use mask/gloves and closure of toilet lid when flushing toilet to prevent aerosolization of viral particles.**
- **Continue quarantine/precautions for 12-14 days after 2 negative nasopharyngeal swabs until 2 negative feces/stool tests.**
- **If a clinician is *suspicious* for COVID-19, the CDC recommends immediately contacting the CDC's 24 hr. via the Emergency Operations Center at 740-488-7100 and report MIS-C suspected cases to their state, local, or territorial health departments even if the patient also fulfills all or part of the criteria for Kawasaki disease; AND**
- **Clinicians who suspect MIS-C should consult promptly with appropriate specialist and test PCR, feces/stool test and antigen/antibody test.**

Cissi Wimberly Oloomi MSN, RN, CNS, FNP, CNRN, CRRN has over 40 years in various settings of the specialty of neuroscience and rehabilitation nursing, including acute & chronic care of the SCI patient

COVID-19

- https://www.health.state.mn.us/diseases/coronavirus/hcp/ltctoolkit.pdf 6/5/20
- www.cdc.gov/coronavirus= PPE postersf

About Alliance Labs

Driven by a passion to find the right solution for each unique patient challenge

Alliance Labs, LLC, is focused on medicines that change lives, pursues integrity and humanity, and strives to build a team that passionately pursues excellence.

Alliance Labs provides knowledgeable expertise to those facing life-altering illness or injury to reclaim their lives by providing access to the best medical bowel care products available today. In addition, Alliance Labs provides an extensive network of information to assist healthcare providers in their pursuit to provide superior care for their patients and loved ones, as well as aide our patients in their journey to building a more independent life.

Alliance Labs, LLC, is the exclusive distributor of the *Enemeez*® and *DocuSol*® products.

THANK YOU

Questions

Future Webinars

Conferences

More on Management of Constipation

Ongoing Constipation

First line

- Treat underlying cause
- Diet/lifestyle measures
- Bulk laxative (metamucil/psyllium) or prunes, and/or stool softener Enemeez mini enema

Second line

- Diet/lifestyle measures
- Osmotic laxative (lactulose, mg containing laxatives)

Laxatives

- Caution with bulk forming laxatives in elderly , may cause obstruction
- Stool softeners are not to be used alone for constipation. Little value for chronic constipation. Help with pain and straining with defecating

Third line

- Diet/lifestyle measures
- Osmotic laxative (lactulose, glycerin, PEG or mg containing products – MOM, citromag fleet)
- Stimulant laxative (senna, castor oil or dulcolax) if no BM x 3 days

Pharmacologic Considerations

- Meds do have a place in the treatment of constipation
- Short term, time limited
- Choose laxatives based on resident symptoms and hx
- Use homes bowel protocol

Bulking Agents
Stool Softeners
Osmotic Agents

Stool Softeners

- Help to keep stools soft for passage
  - *Facilitates addition of fat & water to soften stool*
  - *Add moisture to the stool*
- Can take up to 48 hours to work
- Not a stimulant
- Avoidance of straining

Example

Colace, Docusate sodium

Bulking Agents

- Keeps water in the stool to mechanically distend the colon & promote evacuation
- Prolonged onset of action – Produces an effect in 12 to 72 hours
- Also used in treatment of fi/diarrhea, absorbs free fecal water

Adverse effects:

- Esophageal obstruction
- Intestinal obstruction or impaction

Examples

Psyllium & Methylcellulose

Osmotic Agents

- Increasing the amount of water in the intestines
- Poorly absorbed salts whose osmotic action draws water into the intestinal lumen
- Mechanical cleansing
- May decrease the absorption of oral medications
- Produces an effect in 1-3 days

Adverse effects:

- Substantial loss of water

Examples

Polyehtyleneglycol (PEG) 3350, Miralax

Hyperosmolar Agents

Short Term Treatment of Constipation

Examples

- Lactulose
- Sodium phosphate (enema)- Fleets- FDA, caution;
- Purgative and laxative
- Bowel cleansing
- Contraindicated with impaction & electrolyte imbalance
- Caution with CHF. kidney failure

Colonic Stimulants

- **Promotes peristalsis**
- **Stimulates motility and increases water & electrolytes within the intestinal lumen**

Senna

- Neuroperistaltic stimulation
- Vegetable derivative
- Lowers effects of anticoagulants
- Electrolyte imbalance with excessive use

Bisacodyl

- Direct stimulation with produces peristalsis
- Lowers effects of warfarin and antacids
- Ex: Bisacodyl, exlax,mag citrate , senna

Long Term Use of Large Volume Enemas and Stimulant Laxatives

- **Stimulant laxatives** such as bisacodyl, Exlax, cascara, senna, and magnesium citrate are not recommended for use as a regular part of a bowel program and negatively affect the nerves of the colon. [1]
  - May cause severe diarrhea with resulting dehydration, and loss of electrolytes.
  - Likely to cause intestinal cramping.
  - Chronic use may damage the colon and worsen constipation.

- Large volume enemas are only meant for occasional use. Frequent use of enemas can cause disturbances of the fluids and electrolytes in the body. [2]

- Any full-size enema and stimulant laxatives and suppositories are too irritating to the bowel and can cause autonomic dysreflexia. [2]

1. Northwest Regional SCI System, Department of Rehabilitation Medicine. 2. http://www.medicinenet.com/constipation/page4.htm. Accessed June 15, 2010.

CLEANOUTS

- Milk of Magnesia
- Large dose over a short period of time
- Works in 48 hours or less
- May cause cramping
- Difficult to deliver

MiraLAX

Miralax -Mechanism of Action

Being Iso-osmotic in nature, prevents the excess absorption of the water from the colon

↓

Maintains the required amount of hydration in the colon.

↓

Retained water is taken up by the fecal matter.

↓

Feces becomes soft and bulky.

↓

Fecal bulk stretches the bowel wall and triggers the defecation reflex.

PEG/MiraLAX

Miralax

Polyethylene Glycol

$HO\text{-}CH_2\text{-}(CH_2\text{-}O\text{-}CH_2\text{-})_n\text{-}CH_2\text{-}OH$

PEG are the polymers of ethylene oxide with a molecular mass between 300 to 20,000 Dalton

PEG 3350 and 4000 are the mainly used as laxatives. Most of the marketed preparations world wide have PEG 3350

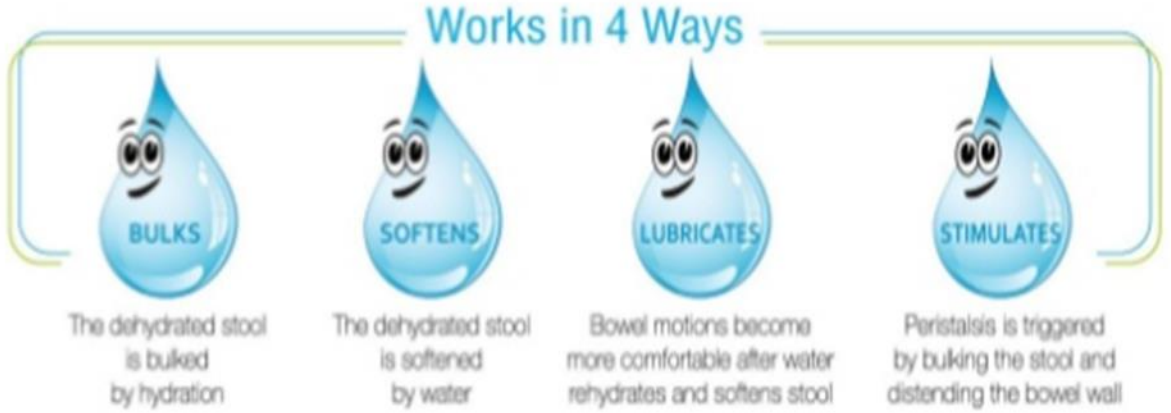
Biological Properties of PEG +E

- ✓ High water binding capacity (dose-dependent)
- ✓ Allows a controlled water transport into the colon
- ✓ No fermentation or relevant absorption in the colon (inert macromolecule)

Other Benefits

- ✓ Iso-osmotic by nature
- ✓ Negligible net gain/loss of electrolytes

Works in harmony with the body's own processes to increase stool volume and assist with comfortable, healthy bowel movements[1,2]



Novel Targets-Emerging

Novel Targets-Emerging

Drug	Mode of action
Prucalopride	Highly selective 5-HT4 receptor agonist with minimal activity on 5-HT3 and hERG receptors
Renzapride	5-HT4 agonist and 5-HT3 antagonist
Methylnaltrexone & Alvimopan	Opioid (Mu receptor)antagonist
Lubiprostone & Linocotide	Chloride channel activator

peristeen

Shriners Hospitals for Children™

ACE PROCEDURE

- A tube like structure is created from the appendix
- The tube goes from the ascending colon to the right lower abdominal wall
- Enemas every three days empty the colon completely