The Fatal Four

Dr. Tracy Aldridge, MD
Medical Director, DHS DD
Assistant Professor, Family and Community Medicine
SIU School of Medicine

Fatal Four

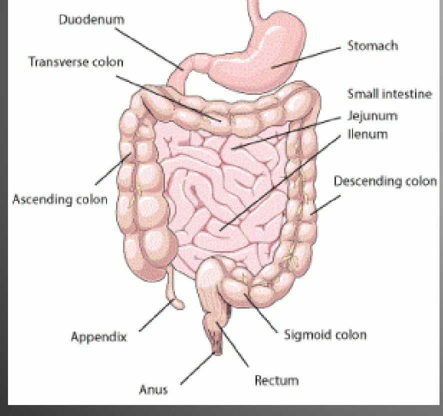
- Constipation (Bowel Disorders)
- Aspiration (Dysphagia)
- Dehydration
- Seizure Disorder

Constipation

Disorders of the Bowel

- Constipation
  - Occasional– episode of constipation which resolves easily from time to time. Everyone has occasional constipation.
  - Chronic– requiring treatment with medications to control symptoms and maintain regular bowel movements.
- Bowel Obstruction
  - Small Bowel Obstruction
  - Large Bowel Obstruction

Anatomy of the Bowel



- Small intestine
  - (also called the small bowel)
- Large intestine
  - (also called the large bowel, or colon)

Constipation

- Constipation is defined as having a bowel movement fewer than three times per week.
- Stools are usually hard, dry, small in size, and difficult to eliminate.
- Normal bowel function can range from three times a day or three times a week, depending on the person.

Individuals at Risk

- Developmental disabilities
  - Less active, poor dietary fiber, less fluid intake
- Neuromuscular disorders
  - Abnormal nerve and muscle response or coordination in the bowel
- Cerebral palsy
  - Poor nerve responses within the bowel causing motility problems
- Medication side effects
  - Slowing of the transit time or alteration of bowel consistency or fluid content

Constipation– Signs and Symptoms

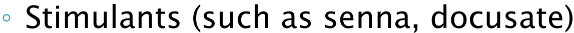
- Spending a lot of time on the toilet
- Straining and grunting while passing stool
- Hard, small, dry feces
- Bloating and complaints of stomach discomfort
- Engages in rectal digging

Treatments for Constipation

- Conservative and/or preventive measures
  - Increase fluid intake if able
  - Increase fiber intake
  - Increase physical activity

Treatments for Constipation

- Laxative medications
  - Stimulants (such as senna, docusate)
    - These help stimulate the intestine to move food and fluid through.
  - Stool softeners (colace)
    - Increase the liquid content of the stool to make it easier to pass
  - Lubricant laxatives (mineral oil)
  - Osmotic agents (such as Milk of Magnesia, Miralax)
    - These act like a sponge, drawing fluid into the bowel to help with elimination.

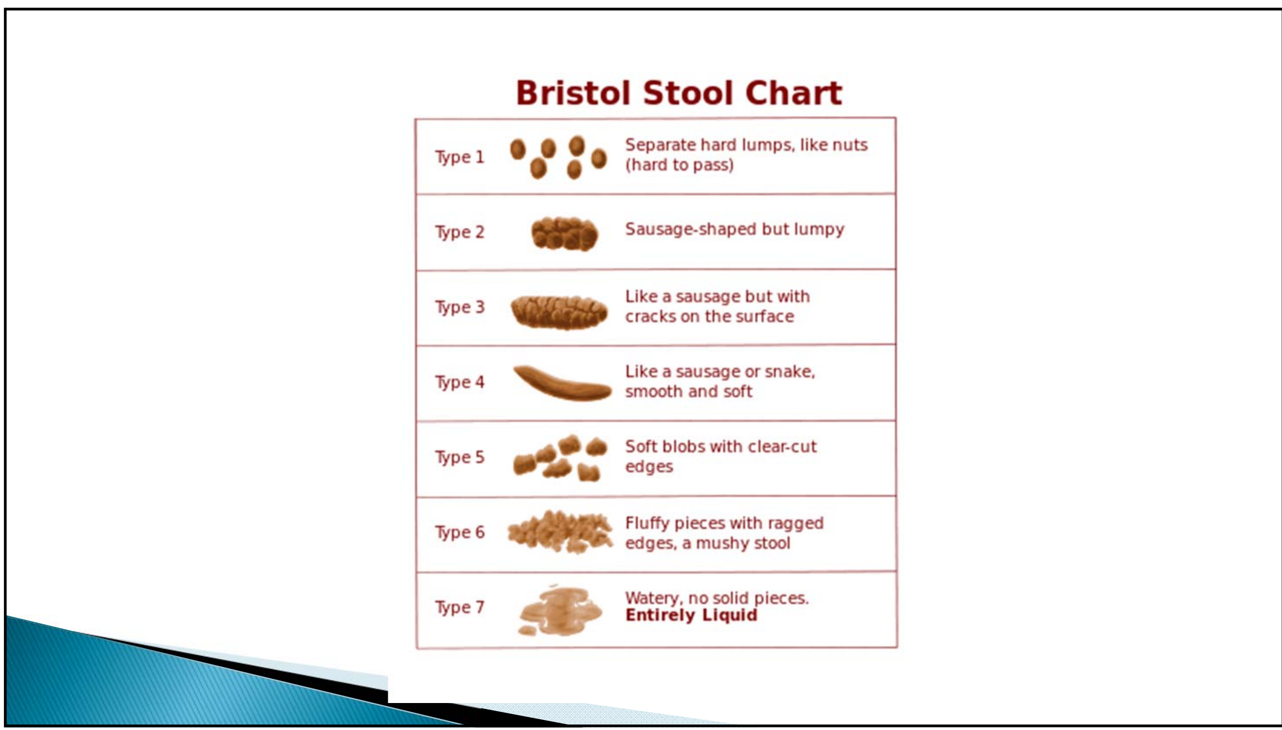


Treatments for Constipation

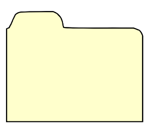
- Rectally administered treatments
- Should not be used regularly- but as needed for severe constipation. If using too frequently, re-evaluate the current regular treatment regimen
  - Glycerin suppository
  - Bisacoydal suppository
  - Enemas
    - Mineral oil, Fleet's, soap suds, etc.

Bowel Tracking

- Agencies should have a bowel tracking system for all individuals who receive bowel related treatments so that agency staff and nurses can recognize when problems are arising.
  - Bowel tracking system should include day/time of bowel movement, quantity of stool, and character of the stool.



Program Planning



- Every individual should have an area that addresses bowel elimination in the annual nursing assessment, with inclusion in the ISP when appropriate
- For individuals treated with any medication for constipation, the plan should reflect information from bowel tracking forms as well as how often a “prn” medication (ie. a suppository or enema) is used to treat the individual.
  - This type of review can often show trends that were perhaps not obvious at the time.

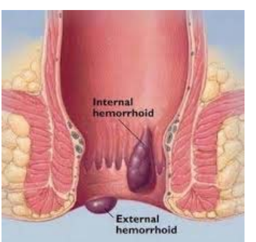
Bowel Complications

- Chronic constipation can lead to more serious bowel complications.
  - Hemorrhoids
  - Rectal prolapse
  - Fecal impaction
  - Bowel obstruction

Hemorrhoids

- Swollen or enlarged veins around the anal canal or just within the rectum are hemorrhoids .
- Caused by increased pressure, often from straining for bowel movements.

May treat topically for pain relief
Are often a cause of rectal bleeding
Resolving constipation is key



Rectal Prolapse

- This condition is caused by excessive straining during bowel movements over a long period of time. Rectal prolapse occurs when the rectal tissue extrudes from the anal sphincter.
- Treatment of the constipation to relieve the need to strain for bowel movements may reverse the condition.
- Severe prolapse may require surgical repair.

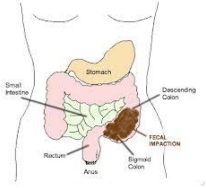
Rectal Prolapse

Prolapsed rectum

ADAM

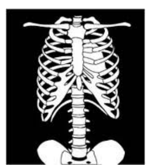
Fecal Impaction

- A fecal impaction is when hard stool becomes packed tightly within the rectum or colon such that the normal forces of the colon cannot dispel the stool.
- Treatment is usually in the form of enemas or manual disimpaction or a combination.
- Fecal impaction oftens occurs just prior to bowel obstruction.

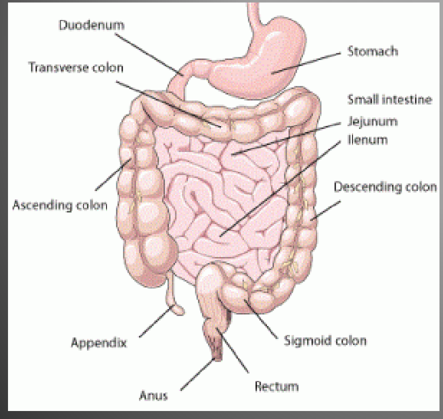


Bowel Obstruction

- Bowel obstruction refers to the partial or complete blockage of the small or large intestine.
- This blockage can be “mechanical”
  - Such as a tumor or foreign object blocking the bowel
- Or “non-mechanical”
  - When the bowel just won’t move contents through



Anatomy of the Bowel



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Bowel Obstruction

- Small bowel obstruction (SBO)-
  - When the small bowel becomes obstructed
  - Mechanical causes include adhesions, hernias, tumors, scarring or twisting of the small bowel.
- Large bowel obstruction (LBO)-
  - When the large bowel becomes obstructed
  - Mechanical causes include impacted feces (from severe constipation), tumors, scarring of the colon.

Bowel Obstruction

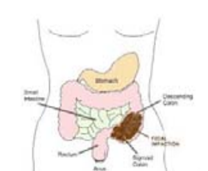
- Individuals with pica have a risk of bowel obstruction. Depending on the amount and size of ingested foreign material, this can cause a blockage within the bowel.

Non-mechanical Bowel Obstruction

- This type of obstruction is also called a "pseudobstruction". This is caused when the normal ability to move fluid and food through the bowel is lost
- This is usually due to a problem with the nerves and/or muscles. There is nothing physically blocking the bowel in this type of obstruction.

Bowel Obstruction- Signs and Symptoms

- Abdominal pain- often crampy and in waves
- Nausea
- Vomiting (occurs earlier with SBO)
- Abdominal distention
- No passing of stool OR gas
- Leakage of small amounts of loose stool around a mechanical obstruction
- SEEK MEDICAL CARE



Advanced Signs and Symptoms…

- Tachycardia
- Low blood pressure
- Fever
- Altered consciousness
- THIS IS A MEDICAL EMERGENCY

Responding to Suspected Bowel Obstruction

- A suspected bowel obstruction is a medical emergency. This condition can be FATAL.
- Individuals who exhibit symptoms of a bowel obstruction should be promptly evaluated by medical personnel. *Especially if they have a history of constipation, or pica*
- Constipation is a risk factor for developing a large bowel obstruction.

Recognizing Emergencies

- Bowel obstructions can progress quickly. Initial symptoms are often similar to a viral gastroenteritis (or "stomach flu")
- Treat all cases of abdominal pain, nausea, and vomiting as a potential serious illness
- Notify nursing personnel early
- Prompt physician evaluation is key

Recognizing Emergencies

- Abdominal pain- often crampy and in waves
- Nausea
- Vomiting (occurs earlier with SBO)
- Abdominal distention
- No passing of stool OR gas
- May have leakage of loose stool around an obstruction
- Tachycardia
- Low blood pressure
- Fever
- Altered consciousness

Bottom Line

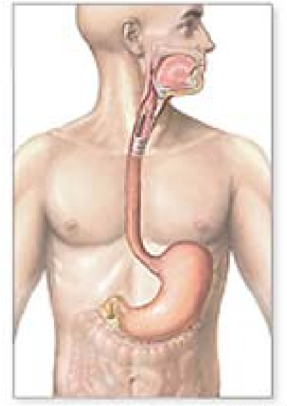
- Individuals with developmental disabilities are inherently at risk for constipation
- Recognition and adequate treatment of constipation will prevent serious medical complications
- Recognition of the signs and symptoms of bowel obstruction will allow for prompt medical intervention in the case of complications from constipation

Aspiration

Oral Motor Dysfunction

- Defined
  - A dysfunction of the normal mechanism of chewing and swallowing. Can involve abnormal functioning of the mouth, throat, or esophagus.

Anatomy of mouth, throat, esophagus, and stomach



Dysphagia

- Difficulty in swallowing or inability to swallow.
  - Dysphagia can originate in 2 different areas
    - Oral/pharyngeal (mouth/throat)
    - Esophageal (“food tube” to stomach)

Aspiration

- The entrance of fluid or foreign matter into the air passages of the lungs
  - Often happens due to dysphagia (a difficulty with swallowing)
  - Can happen at any time
    - aspiration of oral secretions
  - Can happen unexpectedly (choking)
    - Food stuffing behavior
    - Vomiting

Who is at risk?

- Dysphagia is due to problems with the normal function of the muscles and nerves involved in one or more of the following phases of swallowing
  - Chewing
  - Propelling food to the back of the throat
  - Action of swallowing
  - Esophagus moving food to stomach

Who is at risk?

- Individuals who have problems with nerves and muscles will be at risk
  - Developmental disabilities
  - Neuromuscular conditions
  - Cerebral palsy
  - GERD (reflux)

How can I recognize aspiration or dysphagia?

- Review of health history specific risks
- Recognition of mealtime behaviors that may indicate a problem
- Recognition of signs and symptoms that may indicate an individual has an increased risk

Aspiration Risks- Health History

- Any past diagnosis of aspiration or aspiration pneumonia
- Individual with a diagnosis of cerebral palsy, muscular dystrophy, epilepsy, GERD, dysphagia, or hiatal hernia
- Any individual with unexplained weight loss or chronic dehydration

Aspiration Risks- Health History

- Individuals who take medications that may decrease alertness or alter muscle tone
- People with chronic chest congestion, frequent pneumonia, persistent cough, or chronic use of respiratory medications

Aspiration Risks- Mealtime Behaviors

- Eating slowly
- Coughing, gagging, or choking during meals
- Eating in unusual position or posture
- Unsafe eating/drinking practices (eating/drinking rapidly or food stuffing behavior)
- Needing to be fed by others

Aspiration Risks- Other signs and symptoms

- Irregular breathing or rapid breathing during or after meals
- Intermittent fevers
- Food or fluid falling out of the mouth during meals
- Vomiting after meals
- Change in voice during or after meals

Consequences of Dysphagia and Aspiration

- Chronic recurrent aspiration will lead to pneumonia-also known as “Aspiration Pneumonia”
- The chronic exposure of the lungs to foreign material, as well as recurrent infection, will lead to scarring of lung tissue
- THIS DAMAGE IS IRREVERSIBLE
- Over time, this will cause chronic lung disease and eventually death.

Consequences of Dysphagia and Aspiration

- CHOKING
  - Can be either from food stuffing behaviors or from dysphagia
  - This is serious and can be fatal!
  - All staff should be trained in emergency procedures for any choking episode.

Consequences of Dysphagia and Aspiration

- The key to preventing these complications from dysphagia and aspiration is RECOGNITION of the problem and active maganement of the risk.

Risk Assessment for Aspiration and Dysphagia

- There are several risk assessment tools that can be utilized to help identify individuals who may be at risk for aspiration and dysphagia.
- Being proactive by identifying those at risk will allow for interventions to be put in place to decrease the chances of complications.
- Adding a yearly aspiration risk assessment to be completed for all individuals is a helpful tool to identify and manage those at risk.

Evaluation and Diagnosis

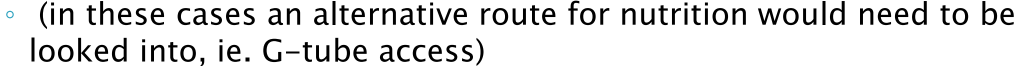
- Individuals thought to have signs of dysphagia or aspiration should be evaluated by a healthcare provider.
- A clear history of the signs observed and the concerns for dysphagia should be presented to the healthcare provider.
- Swallowing mechanism can only be evaluated by specialized testing.

Evaluation and Diagnosis

- Video Oral Swallow Study (VOSS) is the most common test ordered to evaluate the swallow mechanism.
  - It is generally conducted by a speech language pathologist in conjunction with a radiologist
  - It is a "real time" x-ray of the swallow mechanism
  - Individual is tested with various food and liquid textures
  - Dietary recommendations or restrictions will be given in the final report if there is concern noted on the testing.

Diet Modifications for Aspiration and Dysphagia

- Individuals who are diagnosed with aspiration or dysphagia should have dietary recommendations from the swallow specialist for alterations to their diet consistency.
- Soft food
- Pureed food
- Thickened liquids
- Severe cases may not be safe to take nutrition by mouth
  - (in these cases an alternative route for nutrition would need to be looked into, ie. G-tube access)



Diet Modifications for Aspiration and Dysphagia

- BE AWARE that some medications cannot be mixed with food as they will cause a choking hazard.
- For Example: Bulk forming laxative powders such as Metamucil, Fibercon, and Genfiber **must only be mixed with water or juice.**
- When mixed with food, they quickly harden and create a choking hazard for individuals

Program Planning for Dysphagia

- Individuals identified as having dysphagia or aspiration should have an individual program plan to address this issue.

Program Planning for Dysphagia

- The program plan should address:
  - Assistance level needed (including verbal or physical cues needed)
  - Correct positioning for oral intake
  - Adaptive feeding equipment
  - Where meals should take place
  - Common signs of aspiration, what to do, where to document, and who to notify if these occur

Program Planning for Dysphagia

- For Staff
  - Ensure only trained staff assist the individual at mealtime
  - Stop assisting with meal if person coughs, chokes or gags. Notify appropriate professional staff before resuming
  - Avoid having individual lie down after meals for 30 to 60 minutes

Program Planning for Dysphagia

- Staff should be trained on all aspects of the individual's mealtime protocol.
- Staff should be trained on emergency response to an aspiration or choking event.
- Appropriate emergency equipment should be in the room the individual receives meals (face mask for CPR, gloves, etc)

Program Planning for Dysphagia

- Individuals with dysphagia should be re-evaluated annually as the level of dysfunction often progresses, requiring modification of the individuals plan.

Roles and Responsibilities

- Agency
  - Must ensure all individuals are assessed for aspiration and dysphagia risk
  - Develop a policy for ensuring staff receive appropriate training in mealtime procedure for individuals known to have aspiration or dysphagia
  - Provide staff with appropriate emergency response training to incidents of choking and aspiration

Roles and Responsibilities

- House Managers/QIDP
  - Recognition of relevant health history or patterns of illness that may suggest aspiration or dysphagia
  - Ensure individual plans are appropriate to each person who needs a mealtime plan due to risk or presence of aspiration or dysphagia.
  - Advocate for individual during healthcare visits if there is concern for aspiration or dysphagia, so that it is addressed appropriately by the healthcare provider.

Roles and Responsibilities

- Staff
  - Report observation of any signs or symptoms of aspiration or dysphagia to supervisor
  - Adhere to prescribed mealtime plans developed for all individuals with a risk for or presence of aspiration or dysphagia
  - Encourage safe eating habits for all individuals

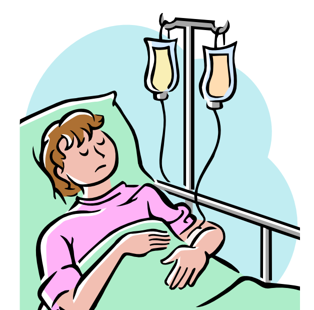
Dehydration

Dehydration

- Lack of appropriate intake of free water needed by the body for essential functions

Signs of Dehydration

- Dry mucous membranes
- Extreme thirst
- Skin tenting
- Sunken eyes
- Lethargy
- Decreased urine output
- Concentrated urine
- Tachycardia



Prevention

Adequate intake of fluids!

*caffeine is not your friend

Are there factors working against you?

*medication

*fever

*environment

Prevention

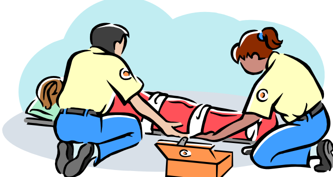
- Individuals who rely on others for their fluid intake are the most at risk for dehydration
- Tracking of fluid intake in those individuals is essential
- Most people need 2-3 liters of fluid intake daily

Recognition

- Initial signs
  - Decreased urine output
  - Concentrated urine
  - Thirst
  - Dry mucous membranes

Recognition

- Later signs
  - Skin tenting
  - Sunken eyes
  - Lethargy
  - Altered consciousness



Complications

- Acute kidney failure
- Heart arrhythmias
- Hypovolemic shock
- Infections

Treatment

- Restoring body's fluid balance
  - Generally done with IV fluids
  - If early on can be done with oral rehydration

Responsibilities

- Agencies should make sure staff understand the important role fluid plays in our health
- Be especially cognizant of those individuals who cannot access a drink when they are thirsty, or ask for a drink.

Seizure Disorder

Seizure Disorder

- Common in individuals with ID/DD
  - Links to the neurodevelopmental issues
  - Many types of seizures
    - Tonic-clonic
    - Partial/ partial complex
    - Absence

Seizure Disorder

- There is an increase incidence of sudden death for individuals who are diagnosed with a seizure disorder.
  - Sudden Unexpected Death in Epilepsy (SUDEP)
  - Mortality rate anywhere from 2-9 times higher
    - Medical complications of seizures
    - Accidents due to seizures

Control of Seizures

- Medications
  - Prophylactic (daily)
  - Abortive
    - During seizure (diastat, others)
- Devices
  - Vagal verve stimulators, others

Responsibilities

- Maintaining accurate seizure log for physician review

- Ensuring staff are aware of appropriate care during a seizure and when to call 911
  - Positioning to maintain airway
  - Use of abortive medication/device
  - When a seizure has been "too long"

Summary

- Accurate information and training for staff regarding these four common diagnosis is key to recognition and prevention of complications.