Bowel and Bladder Management Following Transverse Myelitis

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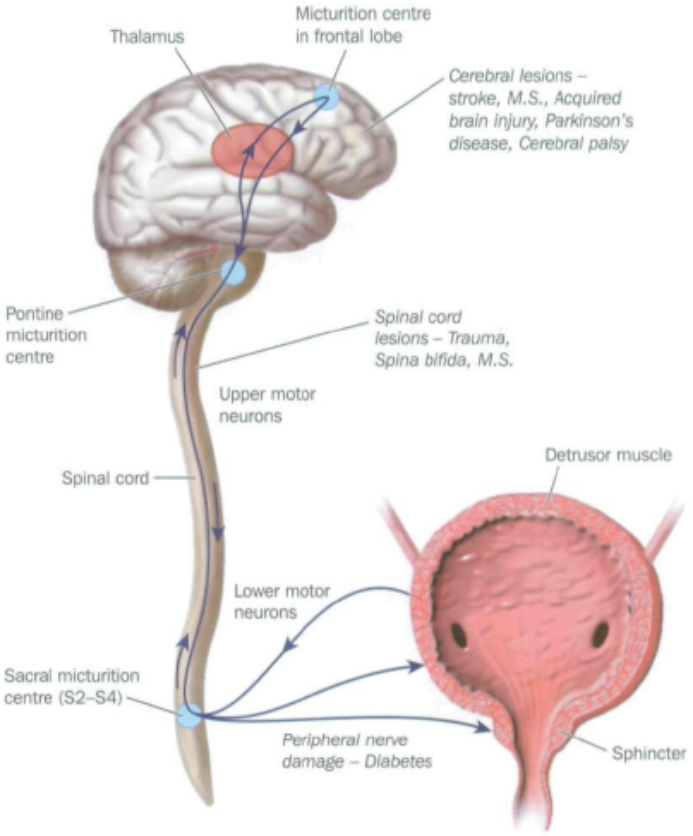
Bowel and Bladder

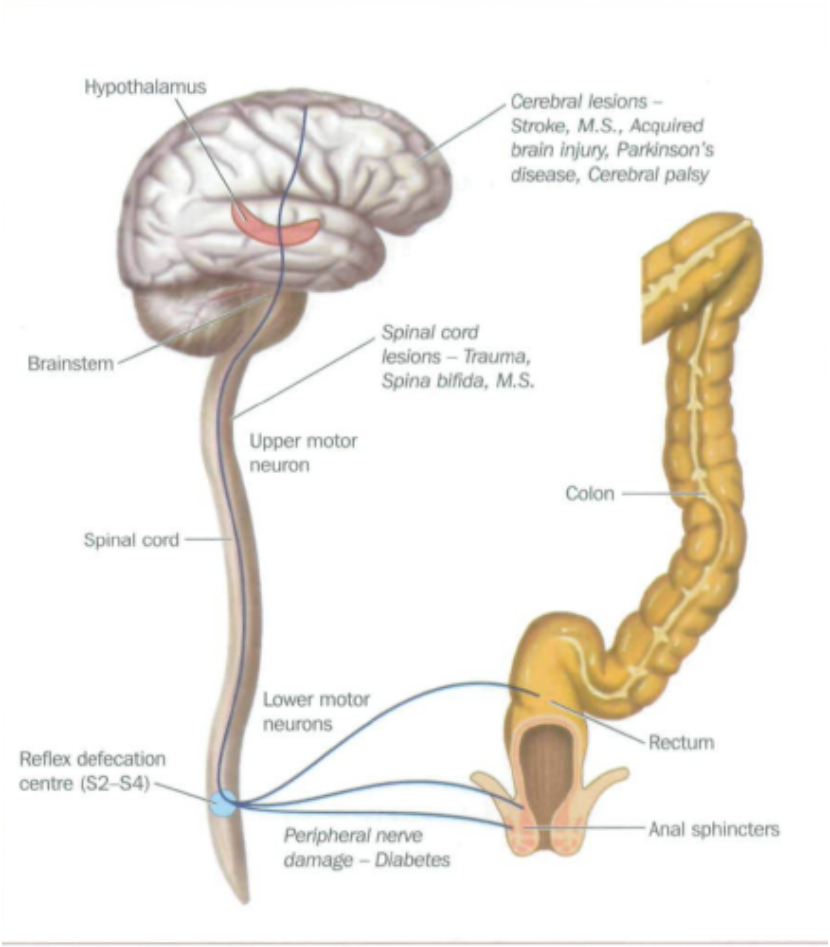
- Functions
  - Store waste
  - Release waste at the appropriate times
- Each system has
  - Muscular storage area
  - Outlet valve or sphincter
- Control
  - Voluntary
  - Involuntary

Bladder Function

- Storage area
  - Bladder or detrusor
- Outlet valve
  - External urinary sphincter
- Bladder distends
  - Nerves send signals to cord
    - Signals travel up to brain
      - Brain decides what to do
      - Sends signals down cord
        - » Store or release

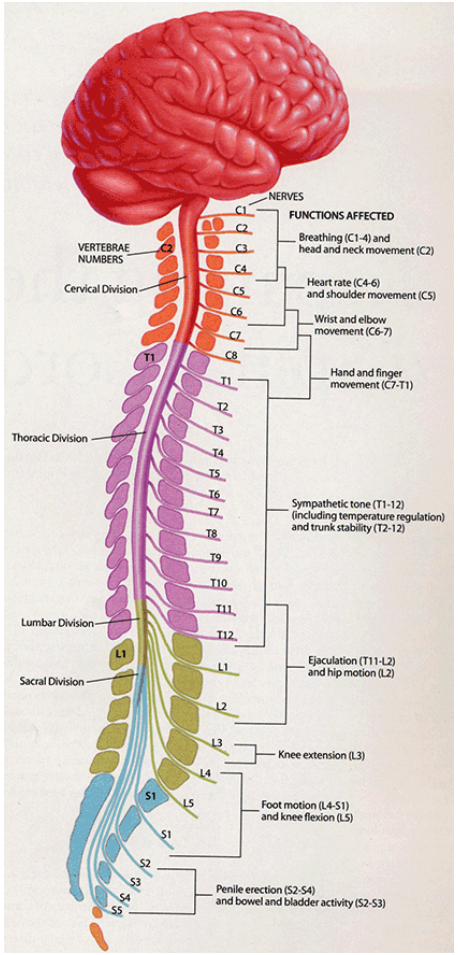


Bowel Function



- Storage area
  - Rectum
- Outlet valve
  - External anal sphincter
- Rectal distension
  - Triggers urge to defecate
  - Triggers holding reflex
    - Nerves send signals to Cord
      - Signals travel to the brain
      - Brain decides what to do
      - Sends signals down the cord
        - » Hold or release

Neurogenic Bowel and Bladder



- Transverse Myelitis
  - Changes in your bladder and bowel functioning
  - Disrupts sensation of having to urinate or have a bowel movement
  - Disrupt the coordination between the brain and the bowel or bladder
  - Voluntary control of sphincters is lost
  - Changes how you go to the bathroom

Neurogenic Bowel and Bladder

Higher level of Injury (T12 and above)
Spastic or reflexic neurogenic

Bladder

- Bladder is spastic and irritable
- Urinary sphincter is tight and does not relax voluntarily
  - Difficulty storing and releasing urine

- Bowel
  - Decreased GI motility
  - Rectum holds stool
  - Anal sphincter tight and does not relax voluntarily
    - Difficulty releasing stool

Lower Level of injury (T12 and below)
Flaccid or areflexic neurogenic

- Bladder
  - Bladder will not contract when it becomes full
  - Urinary sphincter is loose and fails to contract
    - Difficulty storing urine
- Bowel
  - Rectum holds stool
  - Anal sphincter fails to contract
    - Difficulty holding stool

Spastic – Reflexic

Spastic Bladder

- Problems
  - Bladder tries to distend
  - Bladder spasms
    - Urgency
    - Frequency
    - Incontinence
  - Bladder sphincter
    - Difficulty initiating and maintaining a stream of urine
    - Vesicoureteral

Spastic Bowel

- Problems
  - Rectal distension
  - Anal sphincter tightens
  - Unable to release stool
    -
    -

Flaccid-Areflexic

Flaccid Bladder

- Problems
  - Bladder very relaxed
  - Does not contract - overfills
  - Sphincter outlet fails
- Incontinence
  - Urine leaks out
    -
    -
    -

      abdominal muscles

Flaccid Bowel

- Problems
  - Rectum dilates
  - Outlet sphincter fails
- Incontinence
  - Stool leaks out
    - Cough
    - Sneeze
    - Activities that contract abdominal muscles

How do I know Which Type I have?

Bladder

- Urology evaluation
  - Urodynamic or Cystometric studies.
  - VCUG – voiding cystourethrogram
  - Renal Ultrasound

<u>Without Formal Evaluation</u>
Level of Injury
Lower extremity muscle tone

Bowel

- Rectal exam
  - Sensation
  - Voluntary contraction
  - Other GI exams are usually not necessary

How to Manage Bowel and Bladder

- Healthy Habits
  - Healthy diet
    - Drink, Drink, Drink spread fluids out over the day
    - Fiber – help with stool constituency
  - Activity
  - Good hygiene
  - Do it yourself
    - Assistive devices
    - Positing equipment
    - Direct own care
  - Establish a good routine

Bowel and Bladder Programs

- Goals
  - Prevent incontinence and accidents
  - Empty bowel and bladder at predictable times
  - Maintain health and prevent complications
    - Impaction
    - Constipation
    - Diarrhea
    - Thick inelastic bladder
    - Frequent urinary tract infections
    - Kidney damage

Bladder Management

Spastic

- Frequent and urgent urination
- Medications to relax the bladder
  - Oxybutinin
- Intermittent Catheterization
  - Every 4 hours (5x/day)

Flaccid

- Leaking of urine
- Medications not effective
- Intermittent catheterization
  - Every 3-4 hours
  - Prior to doing activities that cause valsalva

Other Options for Bladder Management

- Men - Condom catheter
  - overflow
- Indwelling Foley catheter
  - Not recommended
- Suprapubic tube
  - Reversible minor surgery
  - Increased UTI and bladder bancer
- Catheterizable stoma placed in belly button
  - Permanent, major surgery
  - less UTI and less bladder Cancer

Bowel Management

Spastic

- Urgency and frequency
- May get to the toilet but have difficulty releasing stool
- Valsalva or contraction of the abdominal muscles pushing against an closed sphincter

Flaccid

- Rectal sphincter will not hold stool
- Frequent leaking of small amounts of stool
- Activities that cause valsalva will cause leaking of stool

Bowel Management

- Bowel Program
- Takes planning and routine
- Best done every day to every other day
  - Adults in AM Kids in PM
  - Should take 15 minutes to 1 hour
  - Same time (after meal or snack is ideal)
- Generally a combination
  - Medications
  - Manual disimpaction
  - Digital stimulation
- Work with you health professionals
  - Guidelines and advice
  - Customize what works for you

Bowel Management

- Manage stool consistency
  - Diet
    - Fiber (or supplement)
    - Fluid
  - Medications to soften stool
    - Docusate Sodium
    - PEG (lower doses)
- Promote GI motility
    - Senna
    - PEG (higher doses)

Bowel Management

- Positioning
  - Sit up on the toilet or bedside commode
  - Lay on left side if you can not sit up
- Children
  - Be sure feet are supported on a foot stool and they are comfortable

Bowel Management

- Manual disimpaction
  - Using a gloved, well lubricated finger inserted into the rectum to break up and gently remove stool
    - Remove stool that will be in the way
- Digital stimulation
  - Inserting a gloved, well lubricated finger into the anal sphincter and gently rotating the finger around the anal sphincter in a circular direction
    - Trigger reflex evacuation
- Rectal Medication
  - Bisacodyl suppository, Magic Bullet suppository. Enemeez mini enema
    - Trigger reflex evacuation

Bowel Program

Spastic

- Routine Bowel Program
  - Every 1-3 days
  - Soft formed stool
  - Trigger reflex evacuation
    - Digital stimulation
    - Suppository

Flaccid

- Routine Bowel Program
  - 1-2 x/day
  - Firm formed stool
    - Easy to remove but does not leak
  - Suppositories generally do not work
  - Manual disimpaction
    - 1-2 times per day
    - prior to activities that cause valsalva

Bowel Program

Spastic Bowel

- Manually remove stool from rectum
- Insert suppository
- Digital Stimulation after 5-15 minutes
- Continue digital stimulation every 5-10 minutes 3-4 times

Flaccid Bowel

- Manually remove stool from rectum.
- Can try digital stimulation
- Valsalva or bearing down push ups, abdominal massage
  - Use caution can cause hemorrhoids

How do I Know Program is Complete?

Spastic

- No stool in rectal vault after 2 digital stimulations 10” apart
- Mucus and no stool
- Rectal sphincter becomes tight

Flaccid

- Rectal vault is empty

Other Options for Bowel Management

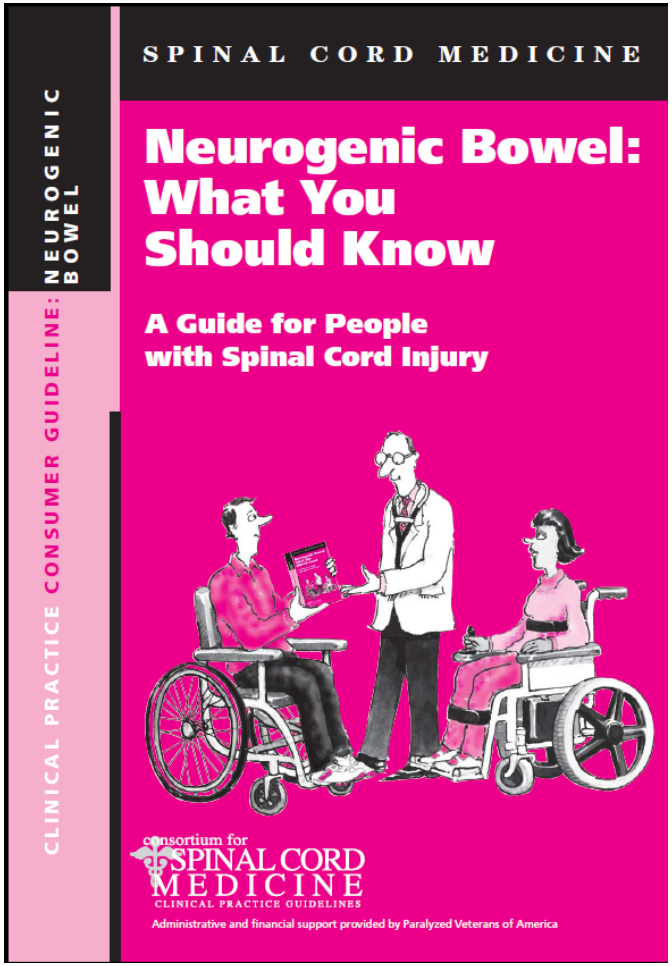
Flaccid Bowel

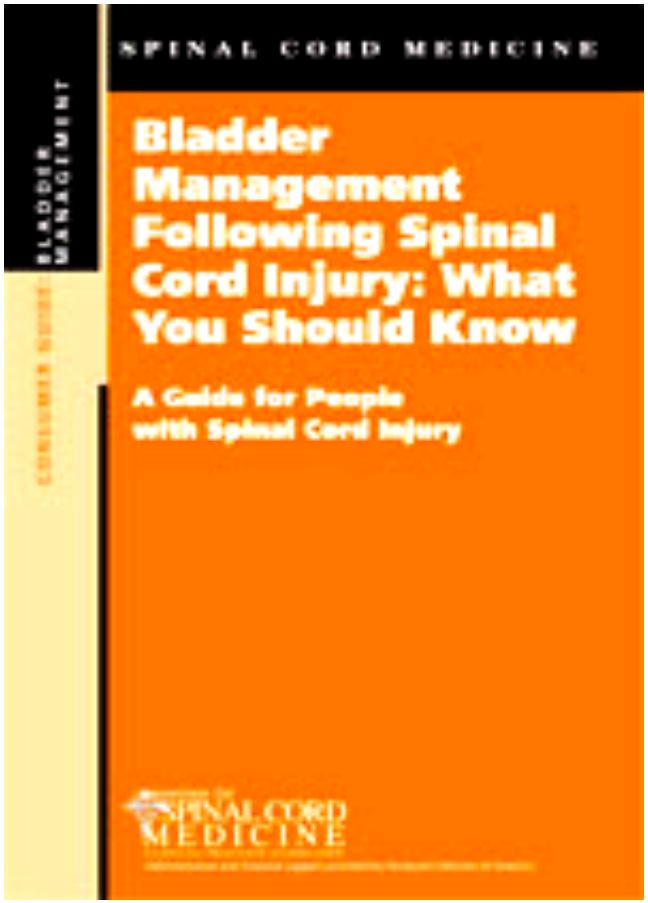
- Cecostomy - reversible
- ACE procedure - permanent
  - Allows you to do an enema from above

Spastic Bowel

- Be cautions of above procedure with spastic rectal sphincter

Resources





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