

Bladder & Bowel Dysfunction In Multiple Sclerosis

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Objectives

- Understand how the bladder & bowel may be affected by multiple sclerosis
- Learn important preventative strategies
- Understand that these are common, manageable symptoms. **Talk to your neurologist or nurse**

Agenda

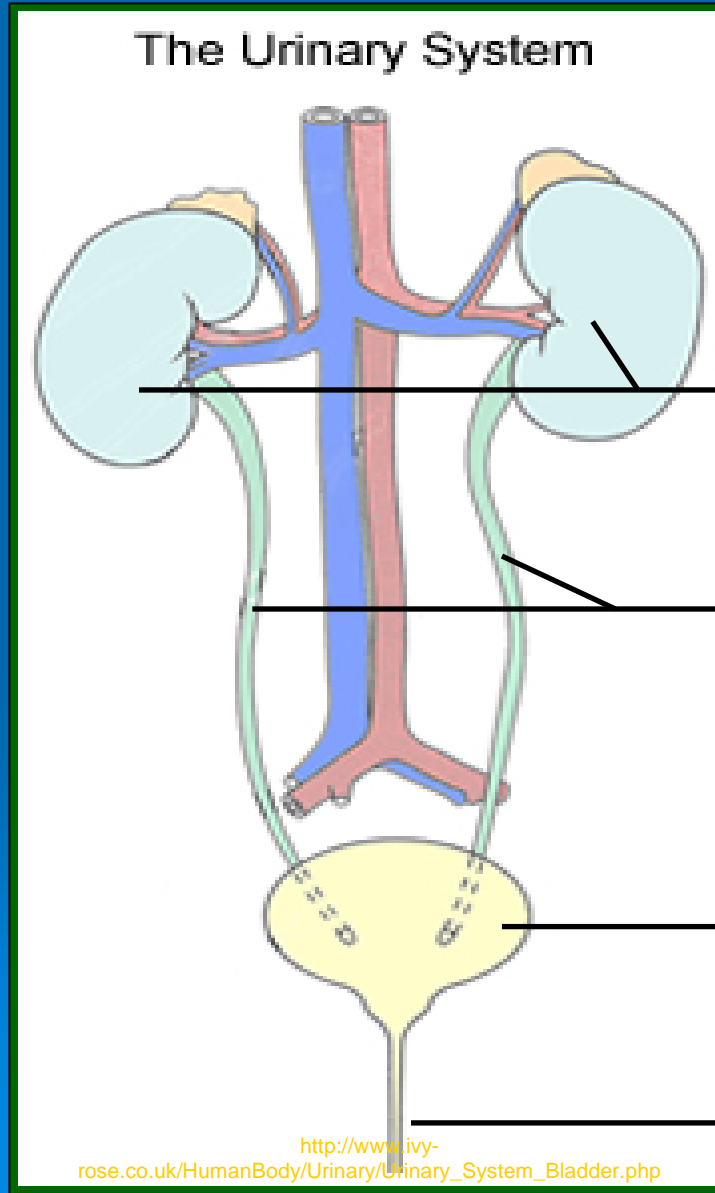
➤ Bladder & Bowel

- Normal anatomy & physiology
- Dysfunction in MS
- Methods of assessment
- Prevention & management of symptoms

Vocabulary

- Void = to pee, urinate
- Incontinence = leakage of urine
- Hesitancy = difficulty “getting the urine out”
- Nocturia = waking at night to pee
- Dysuria = painful urination
- Retention = inability of bladder to fully empty
- Post void residual (PVR) = amount of urine remaining in the bladder after voiding

Anatomy of The Bladder



Kidneys

Ureters

Bladder

Urethra

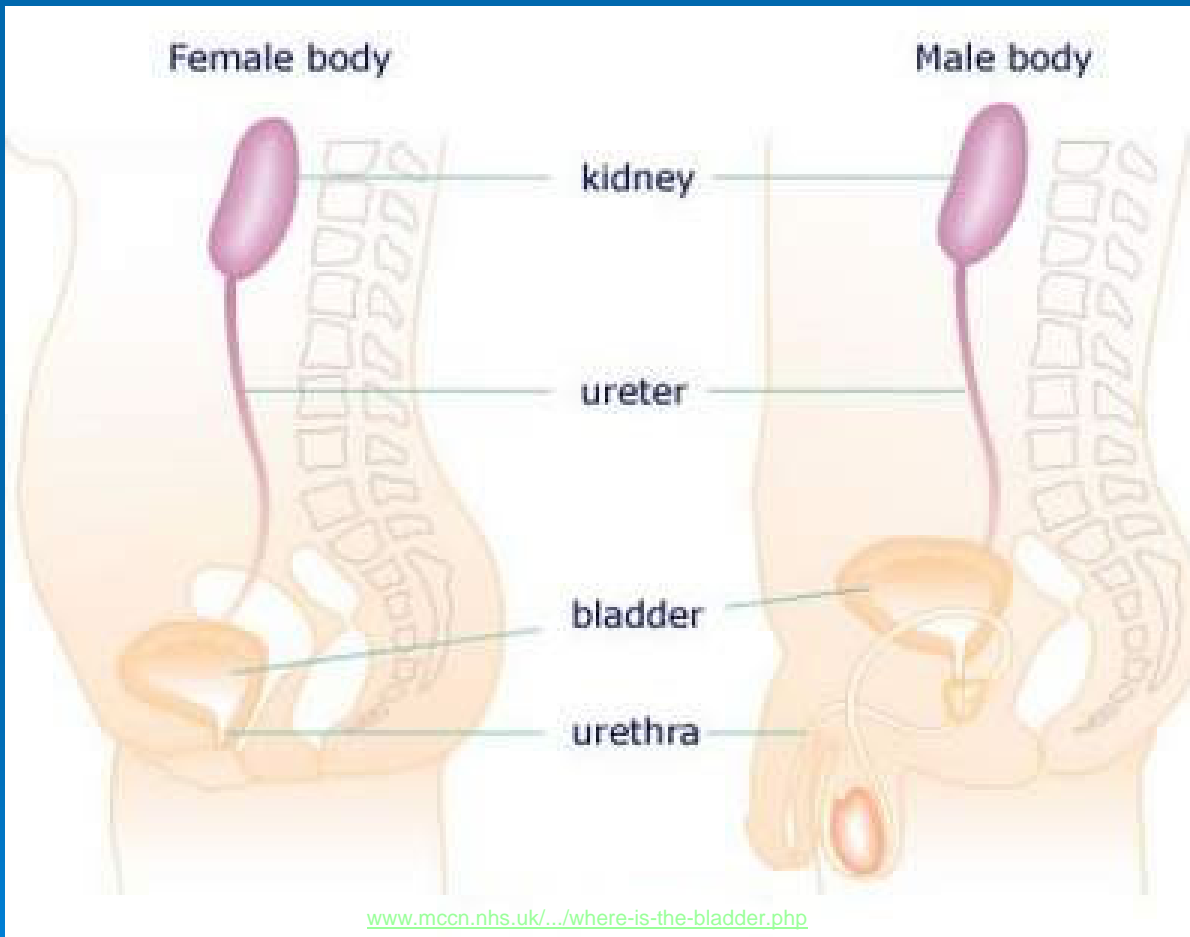
kidneys filter the blood

↓
urine flows down
ureters

↓
into bladder

↓
exits body via
urethra

Anatomy



Fluid is filtered from kidneys to ureters and into the bladder approximately 1 ½ - 2 hours after fluid has been ingested

Normal Function of the Bladder

- Receives and stores urine
- Smooth muscle allows it to stretch to hold large volumes of urine
- Stores b/w 200-300 ml before initial urge is felt
- Average capacity 500-800 ml
- Expels urine at individual's convenience
- Post void residual (PVR) negligible

Bladder and Sphincter Muscles

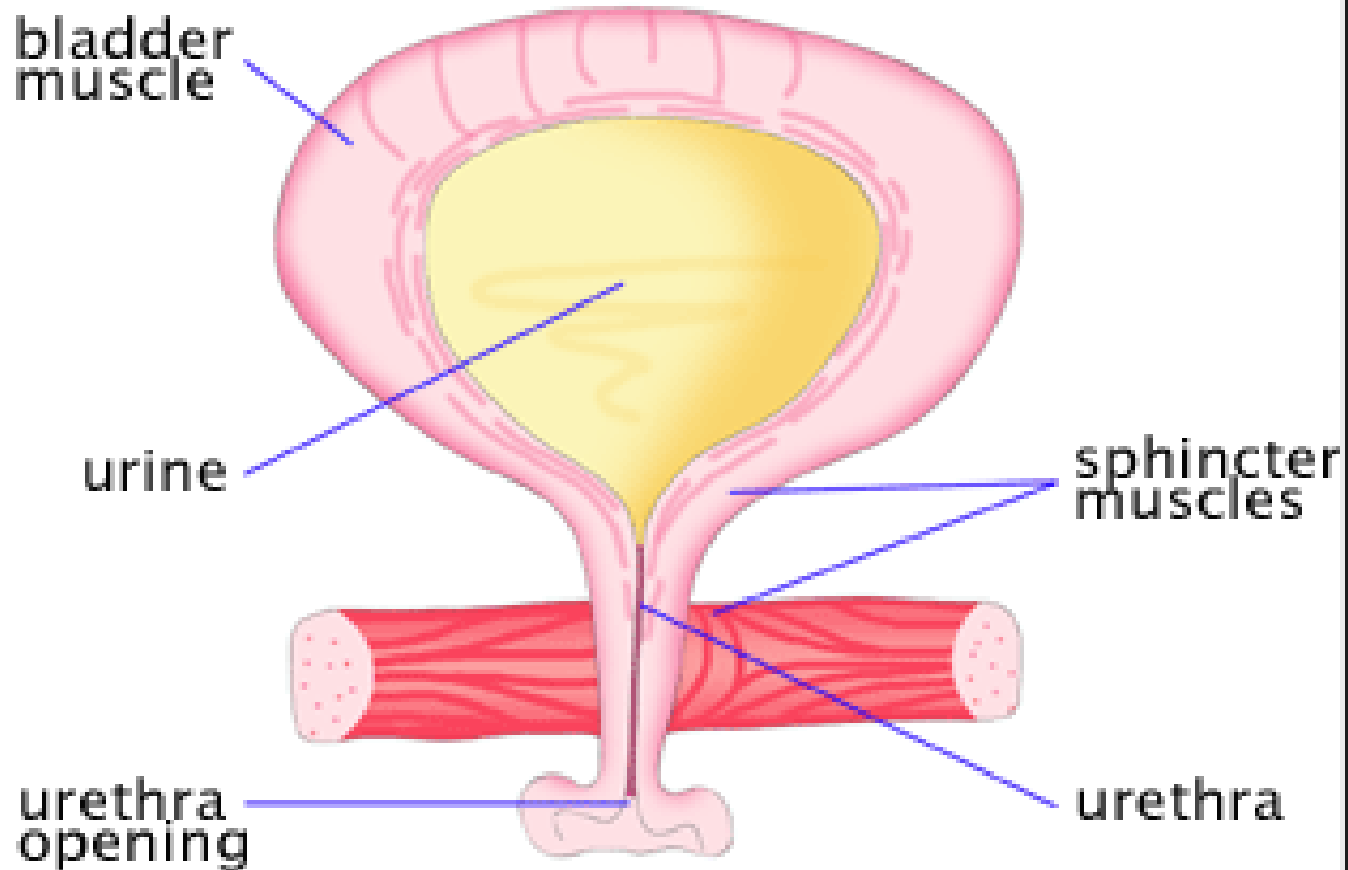


Image Source: National Kidney and Urological Diseases Information Clearinghouse.

Contraction of the bladder (detrusor) muscle expels urine from the bladder; two sphincter muscles surround the urethra and keep it closed by squeezing tight

Neurogenic Bladder

- Neurogenic bladder = impaired bladder function due to any type of neurologic disorder
- In MS, demyelination may cause interference of signals between the brain, spinal cord and the bladder
- Approximately **80%** of people with MS

Bladder Dysfunction in MS (Neurogenic Bladder)

- 1) Failure to store
- 2) Failure to empty
- 3) Combined dysfunction



Essential to determine which problem exists before effective treatment can be implemented

Symptoms of Neurogenic Bladder:

- Frequency
- Urgency
- Hesitancy
- Incontinence
- Nocturia (waking at night to void)
- Dysuria (painful urination)
- Urinary tract infections (bladder infection)

Urinary Tract Infection (UTI) (Bladder infection)

Symptoms:

- Painful urination (dysuria)
- Urgency/frequency
- Foul-smelling urine
- Cloudy looking urine
- Fever
- Abdominal or lower back pain
- In MS, may cause increased spasticity or sudden worsening of MS symptoms

What to do:

- Contact G.P. → Lab for urine sample
↓
Antibiotics if infection present

Effects of Incontinence

- Social isolation / embarrassment
- Lost sleep
- Increased fatigue
- Additional laundry

Assessment of Bladder Function

- History:
 - RN to administer bladder screening questionnaire
 - Fluid intake & voiding patterns
 - Bowel function
- Bladder diary (3 days)
- Bladder ultrasound (pre & post void)
- In/out catheterization
- Urine may be sent to lab for analysis

1) Failure to Store (Overactive Bladder)

- Frequent bladder contractions
- Small capacity bladder
- Sphincter dysfunction

Symptoms:

- Urgency
 - Frequency
 - Nocturia
 - incontinence
-
- PVR < 100 cc

Management

Failure to Store

- Timed voiding / frequent bathroom breaks
- Proper positioning
- Quick access to bathroom
- Decrease use of bladder irritants (caffeine, aspartame, alcohol)
- Pelvic muscle exercises (Kegals)
- Pads or protective undergarments
- Medication

Medication Failure to Store

Anticholinergic/ Urinary Antispasmodics:

- Ditropan/ Ditropan XL
- Oxytrol
- Detrol/ Detrol LA
- Levsin/Levsinex
- Pro Banthine
- Urispas

Anticholinergics/Antispasmodics

How do they work?

- Increase bladder capacity
- Diminish frequency of involuntary bladder contractions
- Delay initial urge to void

Side Effects:

- Dry mouth
- Constipation
- Blurred vision
- Drowsiness
- Urinary retention

2) Failure to Empty

- Detrusor dysfunction
- Outlet (sphincter) obstruction

Symptoms:

- Urgency
 - Hesitancy
 - Incomplete emptying
 - Nocturia
 - Incontinence
 - Frequent bladder infections (UTI)
- PVR >100 cc's

Treatments

Failure to Empty

- Adequate fluid intake
- Structured, timed voiding
- Proper positioning
- Double voiding
- Self intermittent catheterization
- Alpha blockers/anti-spasticity agents

3) Combined Dysfunction

- Detrusor-sphincter dysynergia
- Failure to store **combined** with Failure to empty

Symptoms:

- Urgency
 - Frequency
 - Hesitancy
 - Dribbling/incontinence
 - Nocturia
 - Bladder infections (UTI)
- PVR variable amounts
 - Diagnosed only by urodynamics

Treatments

Combined Dysfunction

➤ Anticholinergic medication

+

➤ Intermittent catheterization

Other Interventions

- Urology consult if initial interventions fail
- Indwelling Foley catheter
- Supra Pubic catheter
- Diversionary procedure
- Botox injections

Things to Consider ...

- Mobility aids
- Balance
- Spasticity
- Upper body strength
- Lower body strength
- Ability to transfer
- Clothing
- Availability of care partner
- Effect of heat
- Effect of fatigue
- Cognition
- Availability of bathroom
- Accessibility of bathroom
- Stairs

Preventative Strategies

- Adequate fluid intake is 6-8
8 oz glasses/day (48-64 oz)
- Urge to void occurs about 1 1/2- 2 hours
after drinking something
- Avoid caffeine, aspartame and alcohol
(bladder irritants)
- Limiting fluid intake is harmful & can
actually make symptoms WORSE

Preventative Strategies

- Stop drinking fluids about 2 hours before bedtime
- It is not normal to leak urine, wake up more than twice a night to void, or have frequent UTI's
- Recognize symptoms of UTI
- Effect of UTI's on MS symptoms
- Importance of early treatment of UTI's

Urinary Tract Infection (UTI) (Bladder infection)

Symptoms:

- Painful urination (dysuria)
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What to do:

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↓
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Remember ...

➤ If you sip, sip, sip ...

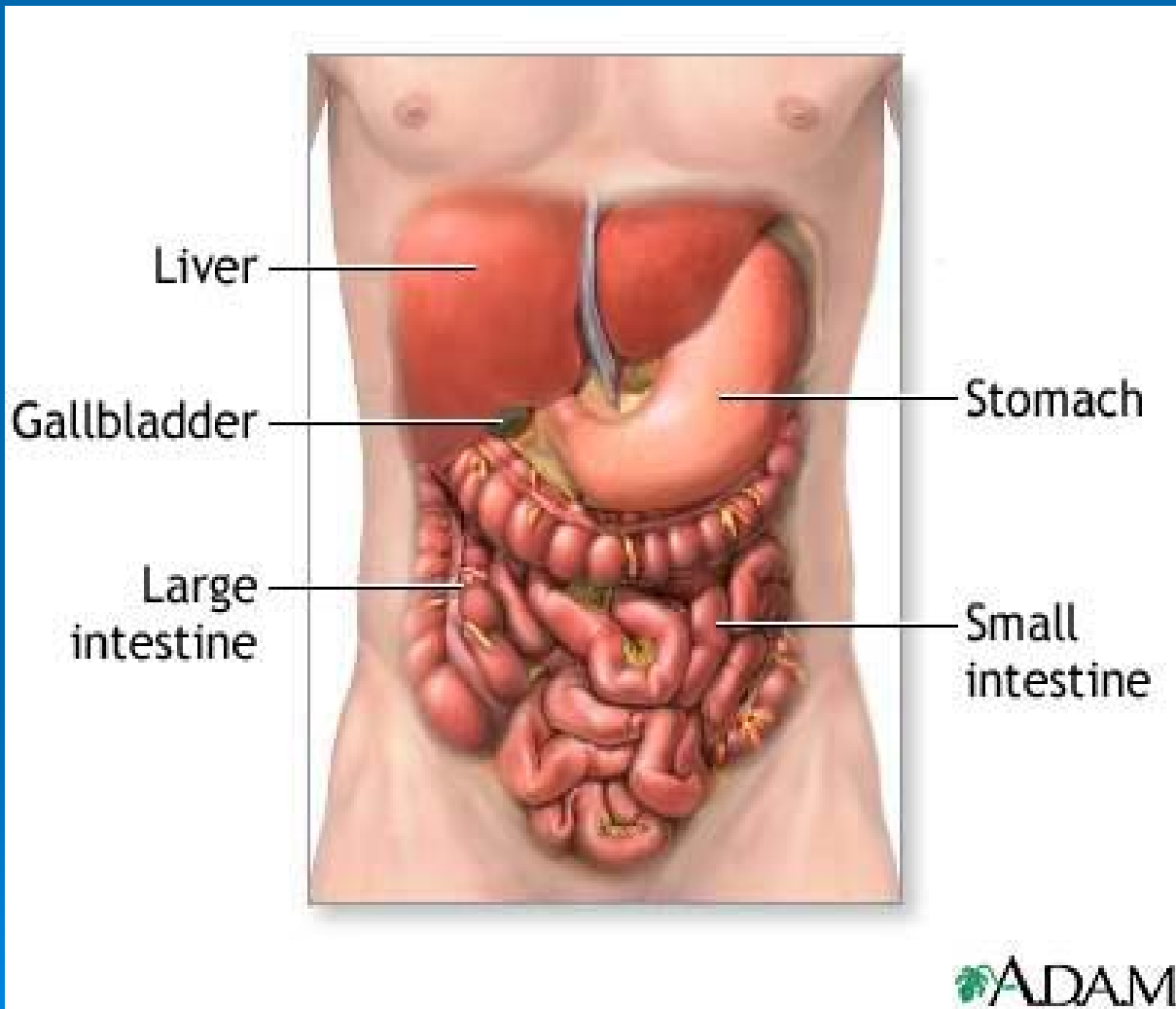
you will

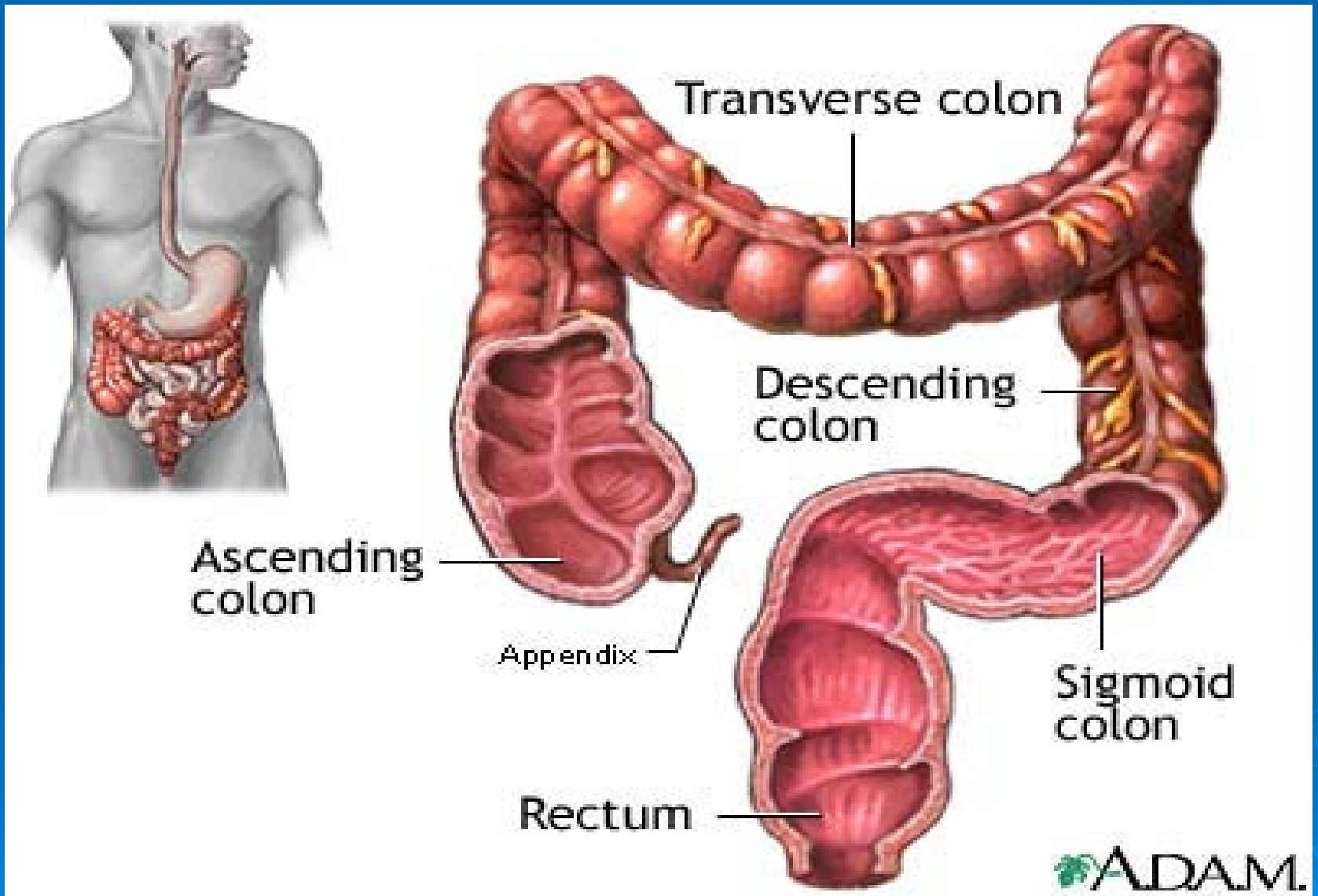
pee, pee, pee

So ... if you're going to drink, just drink!

Moving on

Anatomy of the Bowel





The Bowel

- Also referred to as the colon or large intestine
- Approx 1.5 m long

Function:

- Water & electrolyte absorption
- Forms, stores and expels feces from the body
- Frequency of bowel movements (BM) are individual

Normal: 3/day to 3/week

Bowel Dysfunction in MS

Frequency???

Common problems:

- Constipation
- Diarrhea
- Involuntary bowel
- Fecal impaction

1) Constipation in MS

- Most common problem
- Can lead to fecal impaction and diarrhea

Cause:

- Insufficient fluid intake (? due to bladder problems)
- Poor dietary habits
- Reduced physical activity and mobility
- Decreased or slow motility (slow bowel)
- Medications
- Weak abdominal muscles

Management Constipation

- Fluid intake of at least 48 oz per day (6-8 8 oz glasses / day):
 - ★ Any bladder problems should be managed first
- Adequate daily fiber (20-30 grams/day)
- Increase physical activity
- Establish routine (meals, toileting)
- Proper positioning

Positioning for Bowel Movement



Management Constipation

Medications:

- Bulk forming agents
- Stool softeners
- Oral stimulants
- Mild laxatives
- Suppositories/mini enemas

★ May take several weeks for bowel to be regulated

2) Diarrhea in MS

- Less frequent
- May lead to bowel incontinence

Cause:

- Infection
- Malabsorption
- Food intolerance's/allergies
- Medications (antibiotics)
- Fecal impaction

Management

Diarrhea

- Bulk forming supplement (Metamucil)
- Medication to decrease GI motility
- Medication review
- Assess diet, food intolerance

3) Involuntary Bowel in MS

- Loss of bowel control
- Uncommon in MS

Cause:

- Sphincter dysfunction
- Constipation
- Reduced rectal sensation

Management

Involuntary Bowel

- Establish a regular elimination routine
 - ★ **stick to it** (takes time for the bowel to adjust)
- Avoid dietary irritants (caffeine, alcohol)
- Have medication review
- Medication (anticholinergics)

4) Fecal Impaction in MS

- A mass of stool “stuck” in the rectum
- Caused by chronic constipation
- Requires Immediate attention

Symptoms:

- Constipation
- Abdominal cramping
- Sudden, watery diarrhea in someone with chronic constipation
- Fecal incontinence

Management Fecal Impaction

- Remove impacted stool (enema, manual removal, suppositories)
- Establish regular bowel routine to **prevent constipation** and future fecal impactions

Bowel Management Goal

- Comfortable bowel movement in an appropriate place

Preventative Strategies

- Drink enough fluids
- Add fiber to your diet
- Regular physical activity
- Establish routine
- Take your time -- HASTE DOES NOT MAKE WASTE
- 1/3 cup of Fiber One, All Bran or Bran Buds can provide half of daily fiber needs
- Meat does not have fiber

More Information

The MS Bladder & Bowel

- Neurologist or nurse
- MS Society
- G.P.

References

I would like to kindly thank:

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For generously allowing me to share many
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