



Bladder Troubles

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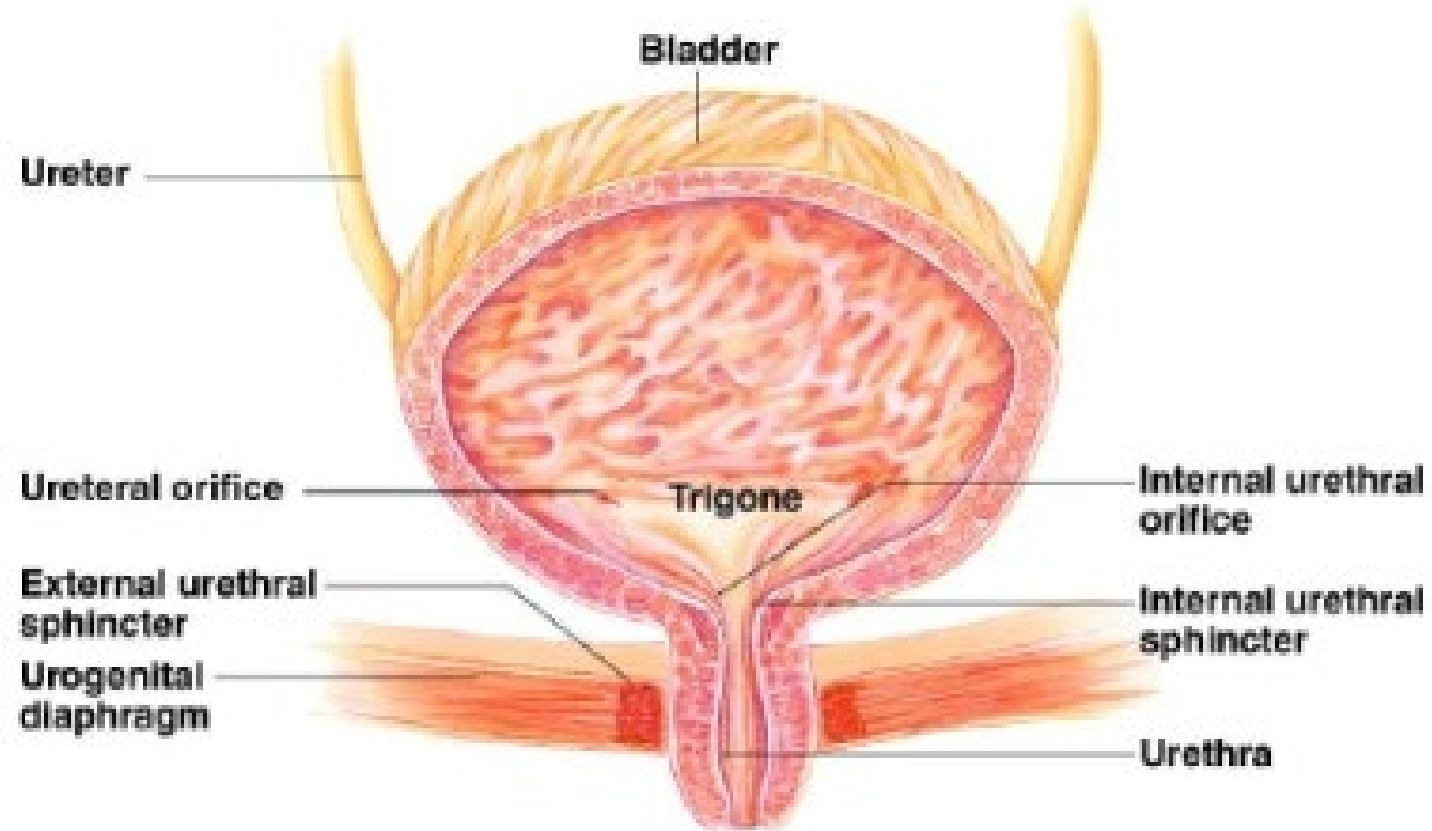
Associate Professor of Urology

Female Pelvic Medicine, Reconstructive Urologic Surgery

Disclosures

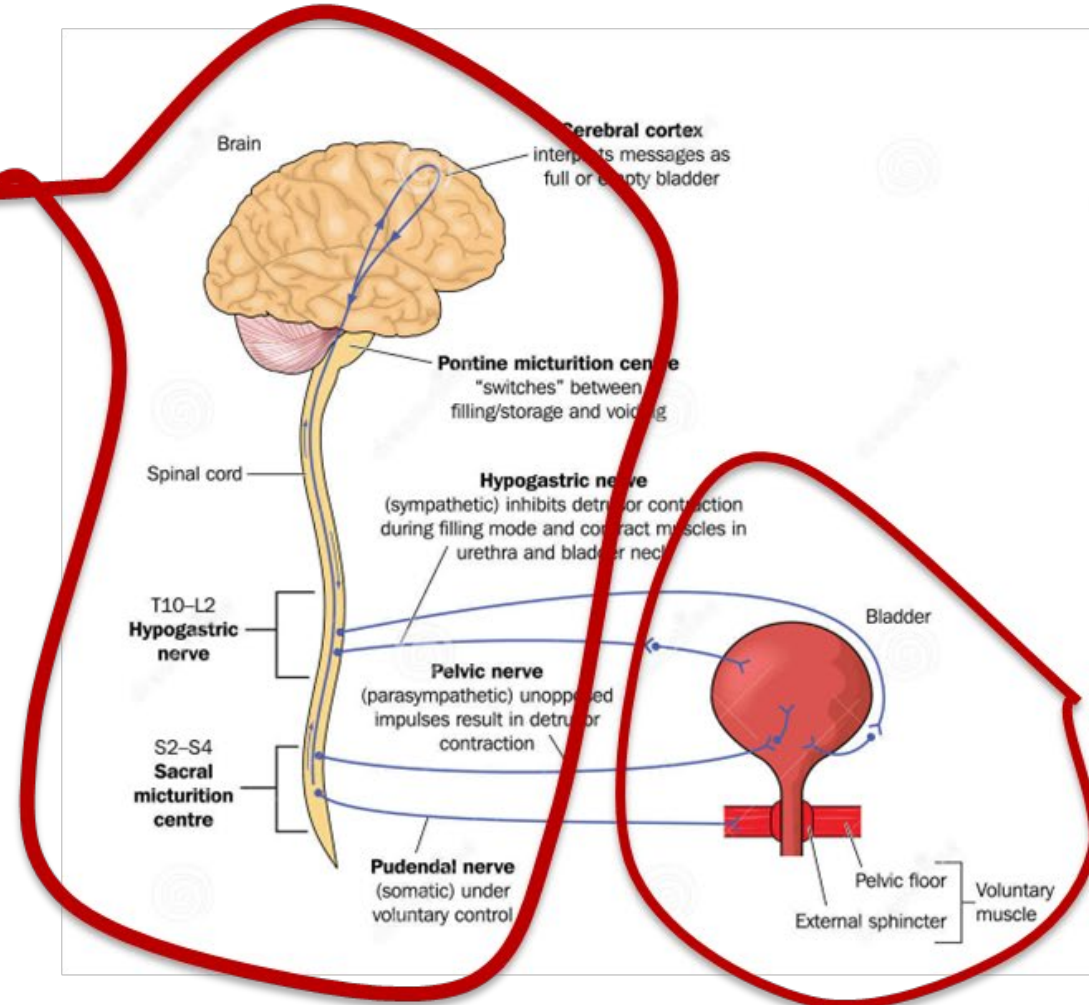
- Investigator for Medtronic Inc

Normal Function



Bladder Dysfunction

■ Neurogenic

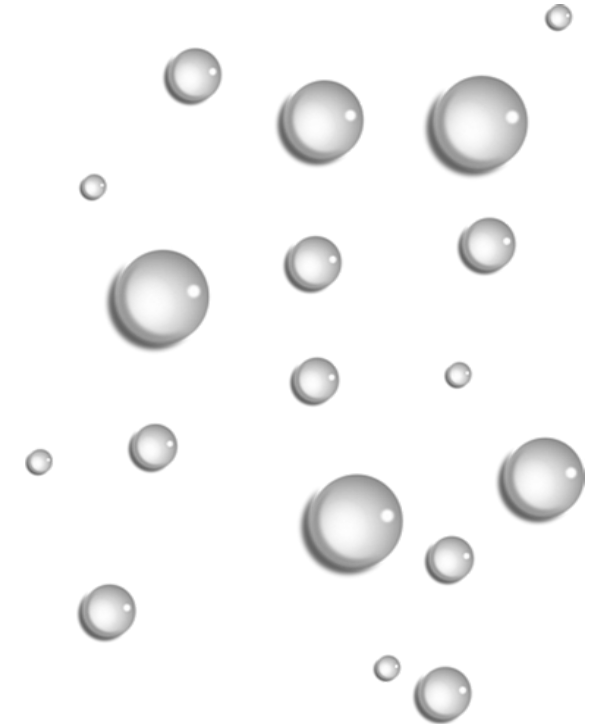


Non neurogenic



Bladder in MS

- 3-10% in early disease
- 75-80% of patients with MS overall
- symptom severity correlated with progression of MS
- lesion location – determines type of symptoms



Types of Bladder Problems

- Can't Pee!
- Pee too much!

- Significant impact on quality of life



Concomitant Risks

- Age
- Obesity
- Post-menopausal status
- Bowel dysfunction/chronic constipation
- Women: Pregnancy, vaginal delivery, number of children
- Men: BPH, post-prostatectomy status
- Neurogenic: diabetes, stroke, spinal disease/nerve injury, spinal cord injury

Screening for urinary symptoms?

- At diagnosis
- After a flare
- Left over urine in the bladder after urination (PVR >150 cc)



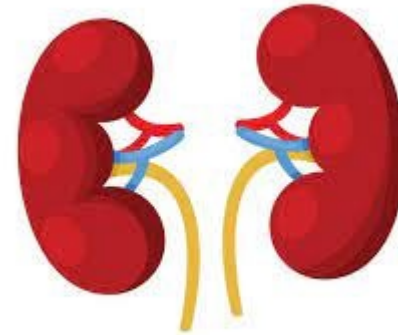
When to see a Urologist?

- Recurrent infections
- Not able to empty the bladder
- Worsening symptoms
- Significant bother



Urology: Goals

- Safety
 - Protect kidneys
 - Minimize infections
- Quality of life



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Patient Scernario:

Meet Lesley



Symptoms

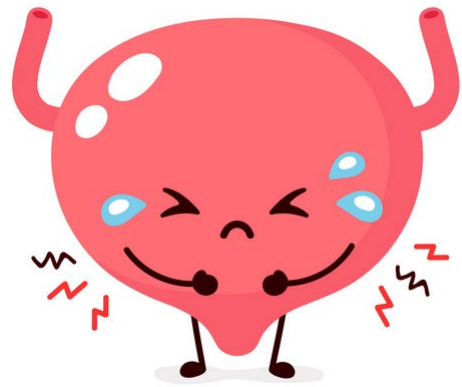
- Frequency, urgency, "turn-key" incontinence, up "all night"
- Uses 4 pads per day
- Significant bother – missing meetings, work, accidents
- Fluids: 2 coffee's in the AM, 8 bottles of water, 1 decaf in the PM
- Exam: Normal

Evaluation

- Questionnaires
- Exam
- Post-void residual (bladder scan)
- Urinalysis

Advanced Bladder Testing





Behavioral Modifications



Behavioral Modifications

- Fluid management
- Scheduled/timed urination
- Constipation management
- The "Knack" maneuver
- Biofeedback with pelvic floor physical therapy



Incontinence Devices



PureWick™ Urine Collection System

PureWick™ Female External Catheter

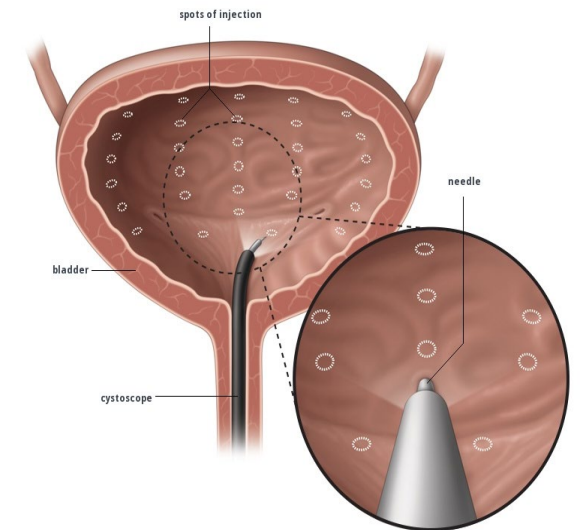


Medications



Onabotulinum Toxin A (Botox®)

- FDA approved in 2011 for neurogenic bladder
- Blocks nerve endings in the bladder muscle
 - Decreases spasticity
 - Decreases sensitivity
- Office-based procedure
 - Cystoscopy with injection



Botox® Results

- Lasts about 6-12 months
- Side effects
 - UTI
 - Hematuria
 - Urinary retention (can't pee) – about 5-10% depending on dose

PTNS

Posterior Tibial Nerve Stimulation



PTNS

Posterior Tibial Nerve Stimulation

- Randomized trial PTNS vs tolterodine (medication)
 - PTNS 79.5% improvement in GRA vs tolterodine 54.8%
- Double-blind placebo controlled trial
 - 71% PTNS had >50% improvement vs placebo
 - OAB incontinence episodes
- Improvement for MS patients, Stroke, Parkinson's

Sacral Neuromodulation

Interstim (Medtronic), Axonics



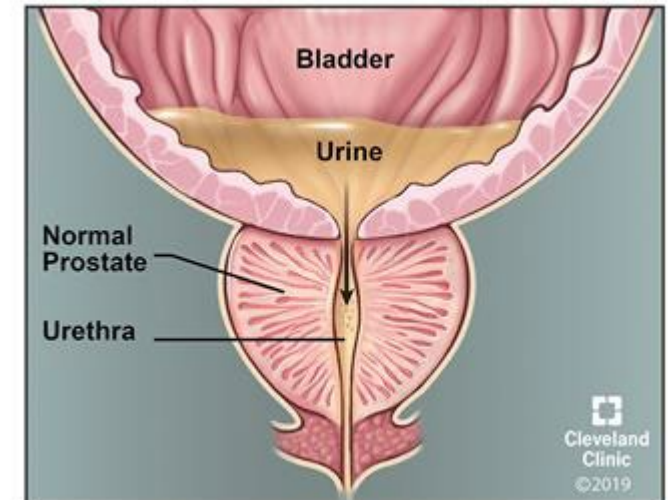
Sacral Neuromodulation

- FDA approval study
 - 60% of **refractory OAB patients** had >50% improvement
 - Approved for fecal incontinence
- Limitations
 - Battery life – average 5 years
 - Rechargeable device is an option
 - Worse in progressive disease

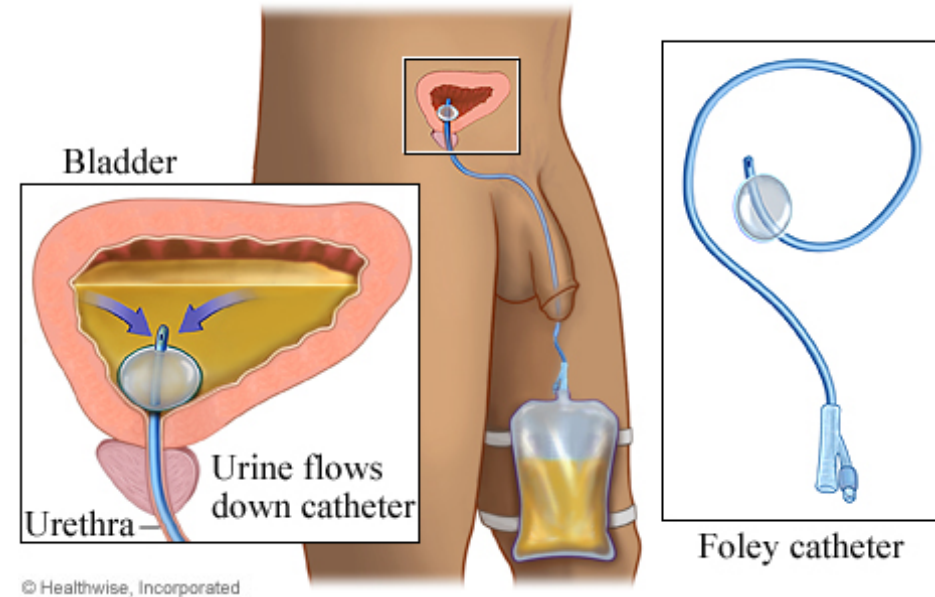


What about difficulty emptying?

- Weak bladder?
- Enlarged prostate?
- Abnormal urethral sphincter opening ?



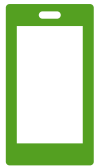
Difficulty Emptying?



Advanced Disease

- Preventing infections
- Preventing wound complications
- Improving quality of life
 - Indwelling catheters
 - Reconstructive surgery (urinary diversion)

Electronic Tools to Help Navigate Bladder Health



Based via MyChart App



Fully integrated with EPIC



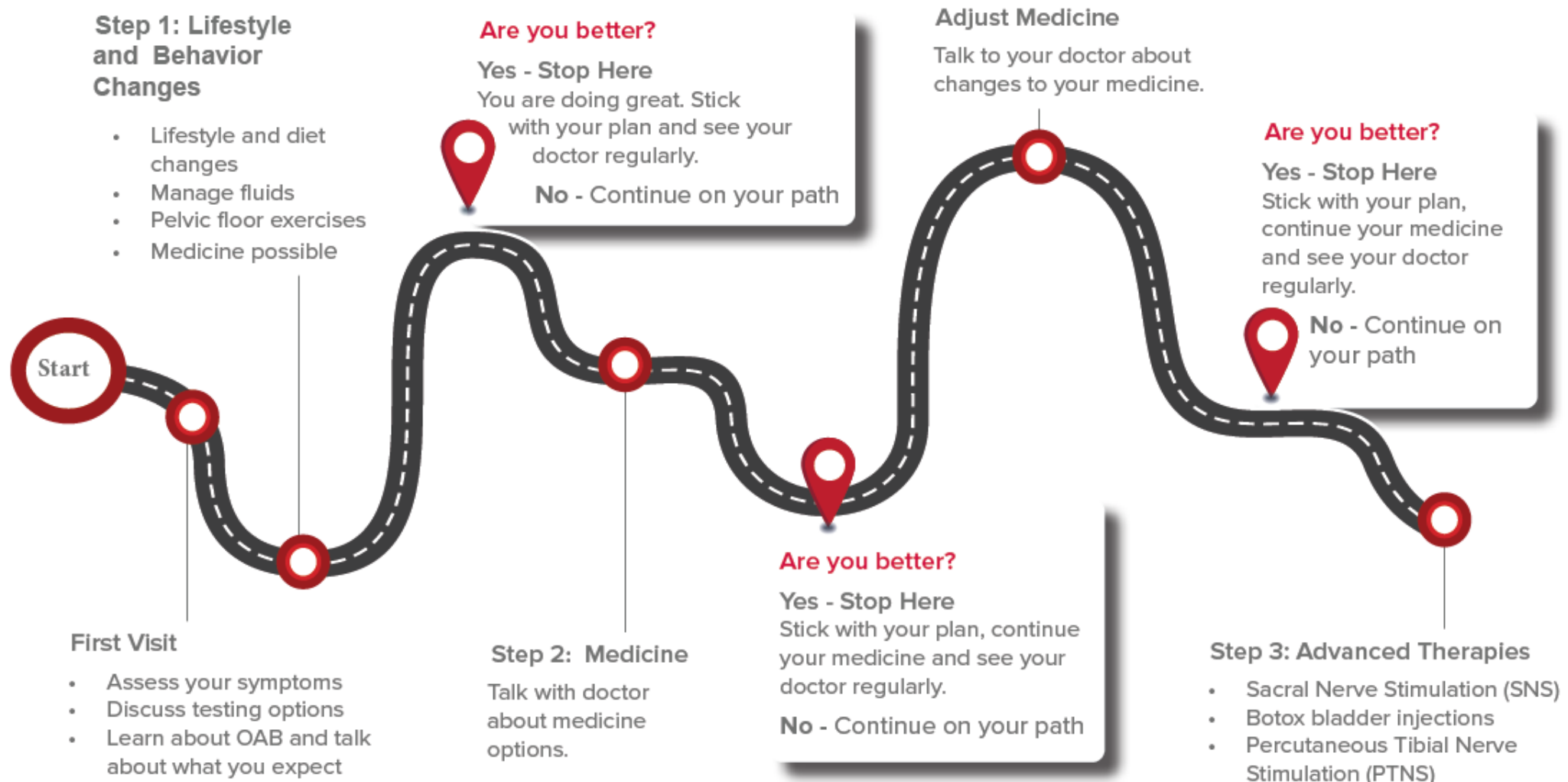
**Direct patient to provider
communication and
feedback**



**Part of the usual care for
neurogenic bladder**

Your Pathway to Managing Overactive Bladder Map

Work with your doctor as you follow your path to managing overactive bladder (OAB). There are many strategies and treatment options to help you on your way.





Thank you!

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