Maintain Control and Make it Count

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Urinary Incontinence

Melody Loechler, RN – Define urinary incontinence, behavior & lifestyle management

Dr. Adonis Hijaz – What treatment options are available: surgical, medications & others

Karen Connor, PT DPT – Anatomy of pelvic floor, pelvic floor exercises, & pelvic floor physical therapy

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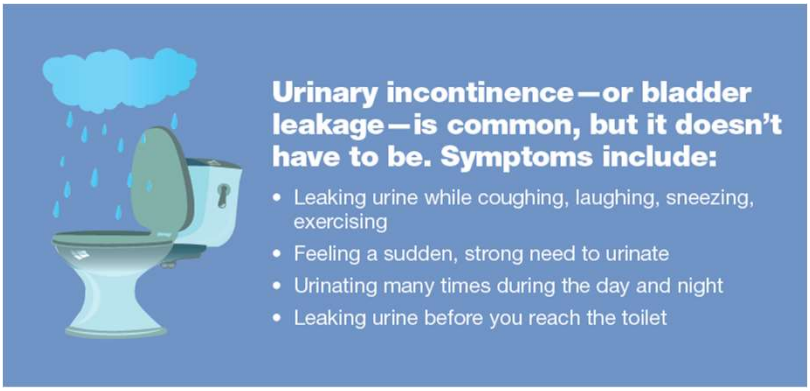
Thank you for choosing to attend this session!!

Experiencing Urine Leakage? You're not alone and you have options.



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Prevalence of Urinary Incontinence

According to the Urology Care Foundation "Approximately 25% of men suffer from urinary incontinence."

According to the Agency for Healthcare Research and Quality "More than half of women over 20 years of age reported urinary leakage."

EMPOWER Study – preliminary data shows 58% of women over the age of 18 suffer (14,118 women screened as of 4/3/24)

Inconsistent data

- Why?
  - Under reported by patients
  - Under assessed by healthcare
  - More research is needed

Direct cost of care for UI = $19.5 billion/year

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Definitions

Urinary Incontinence

Bladder leakage. The involuntary loss of urine.

- **Urge Urinary Incontinence (UUI)** – strong & frequent urge to urinate
- **Stress Urinary Incontinence (SUI)** – leakage with activity; like coughing, sneezing, laughing, running

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Definitions……

Urinary Incontinence - Bladder leakage or the involuntary loss of urine.

Stress Urinary Incontinence (SUI) – Involuntary leakage of urine during events that result in increased abdominal pressure such as sneezing, coughing, physical exercise, lifting, bending and even changing positions.

Urge Urinary Incontinence (UUI) – Occurs when you have a strong, sudden need to urinate that is difficult to delay. The bladder then squeezes, or spasms, and you lose urine.

Mixed Incontinence (MUI) – You experience more than one type of urinary incontinence – most often this refers to a combination of stress and urge incontinence.

Overactive Bladder (OAB) – a combination of symptoms that may cause you to urinate more frequently.

Patients may experience one or more of the following…

- **Urgency** – A sudden and intense need to pass urine that cannot be put off
- **Frequency/OAB** – Urination more than 7 times per day
- **Nocturia** – Waking up to urinate more than once during sleep time
- **Retention –** Bladder doesn't empty completely

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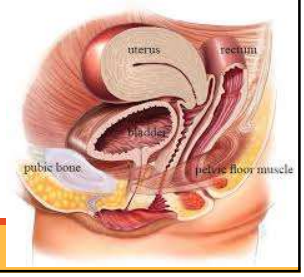
Common Causes for SUI

Weakening of the pelvic floor muscles

Your pelvic muscles are the muscles and tissues that support the organs in your lower abdomen.

Weak pelvic floor muscles can be a result of the following:

- Damage during pregnancy and vaginal birth
- Under use of the muscles
- Obesity or weight gain
- Straining the muscles secondary to chronic cough, chronic constipation, or chronic heavy lifting
- Weakened muscle tone with aging
- Changes in hormones



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Common Causes for OAB/UUI

Abdominal trauma – Pregnancy, childbirth, and prior pelvic surgery can stretch and weaken your pelvic muscles. Your bladder may sag out of its normal position if your pelvic muscles weaken.

Nerve damage – Sometimes your body sends signals to your brain and bladder to pee at the wrong time. Certain diseases and trauma can cause nerve damage, including pelvic or back surgery, herniated discs, radiation therapy, Parkinson's disease, multiple sclerosis or a stroke.

Bladder Irritants – Certain foods and drinks have been associated with worsening symptoms of urinary frequency, urgency, nocturia, and urge incontinence

Medications, alcohol, nicotine and caffeine – All of these can dull your nerves, which affect signals to your brain and cause your bladder to overflow. Diuretics and caffeine may cause your bladder to fill rapidly and potentially leak.

Weight gain – Having extra weight can put added pressure on your bladder, which can cause urge incontinence.

Infection – An infection, such as a urinary tract infection (UTI), can irritate your bladder nerves and cause your bladder to squeeze without warning.

Hormonal changes – Estrogen deficiency after menopause may cause urge incontinence. Estrogen therapy can help.

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How are patients affected by UI?

*Having urinary incontinence dramatically impacts quality of life, activities of daily living, exercise, ability to travel, clothing choices, intimacy or partner relationships, determining whether or when to go out for social activities, and more.

*These symptoms can cause depression, anxiety, embarrassment, poor self-esteem, lack of sleep, etc.

*Leads to sleep deprivation, falls, sexual dysfunction, depression, social withdrawal, skin ulceration

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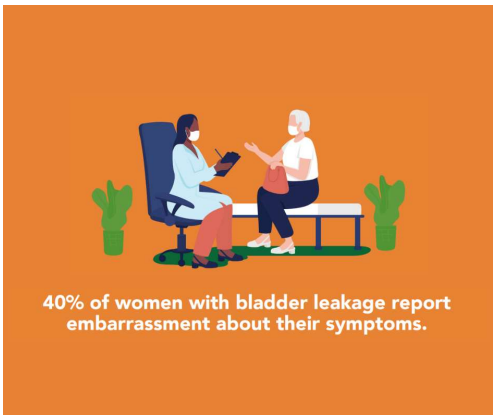
Why don't patients report urinary incontinence to their physician?



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Why don't patients report urinary incontinence to their physician?

- **We're taught that urinary incontinence is a normal part of aging**
- **Common does NOT equal normal**

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~ Urinary Incontinence is Treatable ~

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What can I do if I'm experiencing bladder leakage??

Talk to your physician.

*Primary Care Physician
*Gynecologist
*Urologist

First line treatment: Changes you can make yourself - Behavior & Lifestyle, Pelvic Floor Physical Therapy

Second line treatment : Need to see a physician for these; non-invasive therapies - Pessary, Pharmacotherapy/Medications

Third line treatment : Invasive therapies that a physician will need to perform - Bulking Agents, Surgical Interventions, Percutaneous Tibial Nerve Stimulation, Botox, Implantable Tibial Nerve Stimulation

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First-line Treatment for Urinary Incontinence

- Lifestyle changes (weight loss, smoking cessation)
- Behavioral modifications (affirmation, distraction, urge suppression techniques)
  "I am in control, not my bladder!"
- Manage stress and anxiety
- Maintain an active lifestyle
- Address fluids/irritants/limiting fluids in the evening
- Address constipation (high fiber diet, miralax, etc)
- Pelvic floor self exercises
- Continence products (pads, Poise pads, tampons, Impressa)
- Bladder training, timed voiding
- Assess times of medication
- Avoid urinating "just in case"

Do you have diabetes? Ensuring glycemic control will help with urinary incontinence.

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Examples of Urge Suppression Techniques

- Distraction
- Quick flicks
- Distraction & quick flicks together
- Long strong contraction
- Posture changes
- Deep breathing
- Stand on your tip toes
- Curl down your toes
- Press or rub on the backs of your thighs
- Press an inch above the inside ankle bone

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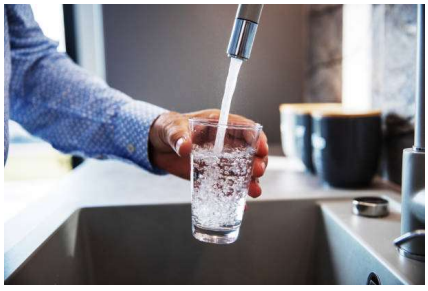
How much water is enough water??

Recommend 48-64 ounces of PLAIN water.

Try starting your day off with an 8 ounce glass of water ☺

*Drinks that contain bladder irritants don't count!



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So what are common bladder irritants?

- Carbonated beverages…… anything with bubbles
- Artificial sweeteners (aspartame/NutraSweet)
- Spicy foods
- Alcohol
- Acidic foods & drinks
- Caffeine (coffee, tea, soda)
- Chocolate
- Milk products
- Citrus (lemon, lime and orange)
- Sugary drinks

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How do I know what's irritating my bladder??

Example Bladder Diary

Date: 9/1/2023

	Drink		Urine		Leakage		
Time	Type	How Much	Occurrence	How Urgent	Leakage with Urgency	Leakage with Activities	Pad Change
	Water, carbonated, caffeinated, alcohol, etc.	Ounces	Mark with an "x" each time you urinate	0-3 3 = most urgent	Mark with an "x" each time you leak with urgency	Mark with an "x" each time you leak with activity	Mark with an "x" each time you change pad
Midnight							
1 am			x	2	x		
2 am							
3 am							
4 am			x	1			
5 am							
6 am	Coffee, caffeinated	8					
7 am			x	3	x		x
8 am							
9 am	Water	12					
10 am						x	x
11 am	Iced tea	16					
Noon							
1 pm	Water	12	x	0			
2 pm							
3 pm			x	0			
4 pm	Juice	8					
5 pm						x	
6 pm	Soda, caffeinated	12					
7 pm			x	2			
8 pm							
9 pm	Glass of wine	5					
10 pm			x	1			
11 pm			x	3	x		x

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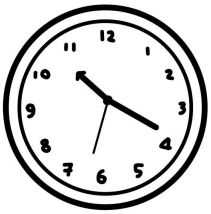
LM1

Bladder Training

Overactive bladder can occur from a lifetime of bad habits.

Bladder training can help overactive bladder.

Helps with urges and incontinence!



Extend time by 15 minutes!!

Goal is urinating every 3-4 hours

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Bladder Training & Timed Voiding *Step-by Step Technique*:

1) Keep track: throughout the day track times void or leak (bladder diary)

2) Calculate: how many hours between voids (e.g., 1 hour, etc)

3) Choose a starting interval for training that is 15 minutes longer* (e.g., 1 hour 15 min)
*diuretic use: wait 4-6 hours after diuretic dose to implement training interval

4) Hold back: empty bladder upon awakening→ stick to interval
If time arrives before have to go→ go anyways!
If urge hits first→ delay going (distraction, kegels, etc)

5) Increase interval: once comfortable with starting interval increase incrementally by 15 minutes, until reach ***goal of 3 hours between voids***

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Slide 19

LM1 Loechler, Melody, 3/11/2024

Nocturia

What's considered normal? Waking up ≤ 1 time to void

What can I do to help?

- Utilize urge suppression techniques to see if you can fall back to sleep
- Avoid consuming bladder irritants past 4-5 pm
- Do you take medications at night time? If so, can you move the time that you take them
- No drinks 2.5 hours before bed time
  - 3 ounces of plain water if you get thirsty
- Do you have symptoms of sleep apnea? If so, have you ever been tested for sleep apnea?

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Urinary Retention

Pelvic floor exercises

Drink 48-64 ounces of water daily

Manage constipation

Timed voiding can be helpful

Squatty potty

After urine stream is complete, move around a bit, see if more urine empties

Women – avoid hovering over toilet seats. Pelvic floor muscles need to be relaxed

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Consider this……

Do you snore, not sleep well, don't feel rested? Consider seeing a physician for a sleep study to test for sleep apnea

Women – Do you ever feel a bulge in your vaginal canal? See a physician for possible prolapse

Men – Have you had a prostate exam? Consider this especially if you are having trouble starting urine stream, retention of urine, painful urination. Urinary incontinence can be a symptom of enlarged prostate. Current *general* guidelines - prostate exam at age 55

Are you experiencing blood in urine, pelvic pain, more than 3 urinary tract infections in one year? See a physician/specialist

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Urinary Incontinence Medical/Surgical Interventions

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Box 1. Differential Diagnosis of Urinary Incontinence in Women

Genitourinary Etiology

- Filling and storage disorders
  - Urodynamic stress incontinence
  - Detrusor overactivity (idiopathic)
  - Detrusor overactivity (neurogenic)
  - Mixed types
- Fistula
  - Vesical
  - Ureteral
  - Urethral
- Infectious
  - Urinary tract infection
  - Vaginitis
- Congenital
  - Ectopic ureter
  - Epispadias

Nongenitourinary Etiology

- Functional
  - Neurologic
  - Cognitive
  - Psychologic
  - Physical impairment
- Environmental
- Pharmacologic
- Metabolic

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Box 2. Types of Urinary Incontinence in Women

Chronic urinary retention–involuntary loss of urine when the bladder does not empty completely; associated with high residual urine volumes*

Coital urinary incontinence–involuntary loss of urine with sexual intercourse

Continuous urinary incontinence–continuous involuntary loss of urine

Extraurethral urinary incontinence–urine leakage through channels other than the urethral meatus (eg, vesicovaginal, urethrovaginal, or ureterovaginal genitourinary fistulas; ectopic ureter)

Functional urinary incontinence–involuntary loss of urine that is due to cognitive, functional, or mobility impairments in the presence of an intact lower urinary tract system*

Insensible urinary incontinence–involuntary loss of urine that occurs without awareness

Mixed urinary incontinence–involuntary loss of urine associated with urgency and with physical exertion, sneezing, or coughing

Nocturnal enuresis–involuntary loss of urine that occurs during sleep

Occult stress incontinence–stress urinary incontinence (see below) that is observed only after the reduction of coexistent pelvic organ prolapse

Overactive bladder–urinary urgency, typically accompanied by frequency and nocturia, with and without urge urinary incontinence in the absence of urinary tract infection or other obvious pathology

Postmicturition leakage–involuntary passage of urine after the completion of micturition

Postural urinary incontinence–involuntary loss of urine associated with change of body position

Stress urinary incontinence–involuntary loss of urine with effort or physical exertion (eg, sporting activities) or when sneezing or coughing

Urgency urinary incontinence–involuntary loss of urine associated with urgency or a sudden, compelling desire to void that is difficult to defer

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Office evaluation - History

Characterization

- Duration
- Inciting events
- Frequency of occurrence
- Fluid intake
- Severity
- Pad use
- Effect of symptoms on activities of daily living
- Symptoms related to bladder storage – frequency, urgency, nocturia, incontinence
- Symptoms related to emptying – hesitancy, slow stream, straining, feeling of incomplete emptying

- Validated questionnaires (UDI, IIQ, I-QOL, ISI, ICIQ)
- Bowel symptoms
- PMH
- PSH
- Gyn hx
- Review meds
- Bladder diary

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Office evaluation - Urinalysis

- Treat urinary tract infection (UTI) prior to further evaluation or treatment of urinary incontinence
- Microscopic hematuria – follow American Urological Association guidelines

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Office evaluation – Physical exam

- Pelvic exam to evaluate for prolapse, discharge, diverticulum, extraurethral cause (fistula or ectopic ureter); should include bimanual and evaluation of PF muscle strength and relaxation
- Motor and sensory exam of perineum and lower extremities (anal wink and bulbocavernosus reflex)
- Rectal exam – for further eval of anorectal pathology or to rule out impaction

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Office evaluation – Cough Stress Test

- "Stress urinary incontinence should be demonstrated objectively before and surgery is performed."
- Repeated standing with a full bladder if negative when supine
- If leak is delayed and not simultaneous with cough, suggestive of cough-induced overactive bladder
- If negative recommend urodynamic study before surgical treatment

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Office evaluation – Assessment of urethral mobility

- "Resting angle or displacement angle of urethra-bladder neck with maximum Valsalva of at leas 30 deg from horizontal"
- Cotton swab test is traditional way to measure, can also assess Aa, visualization, ultrasound
- Continence surgery more successful in pts with hypermobility
  - Lack of hypermobility associated with 1.9x increase in failure rate of midurethral sling
  - If no hypermobility, may be better candidate for bulking

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Office evaluation – Postvoid residual

- Abnormal if >150cc
- Should be repeated if single high value obtained
- Elevated PVR in absence of pelvic organ prolapse should trigger further eval with pressure-flow UDS study

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Urodynamic testing

- Cystometry
  - Graphic depiction of bladder pressure during filling, storage, and voiding
  - Also assesses sensation, capacity, compliance, presence/magnitude of voluntary and involuntary detrusor contractions
- Uroflowmetry and pressure-flow studies
  - Measures rate of urine flow and mechanism of bladder emptying
  - Useful in evaluating voiding dysfunction
- Electromyography (EMG)
  - Study of pelvic floor/urethral sphincter neuromuscular activity during filling and voiding
  - Used to detect coordination (or lack thereof) between detrusor contraction and sphincter relaxation

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Urodynamic testing

- Measurement of urethral function
  - Urethral pressure profile – considerable variation between tests and overlap of normal and pathologic measurements, questionable clinical use
    - Outcomes studies suggest lower UP associated with poorer continence outcomes, but no reliable cutoff
  - Valsalva leak point pressure – weakly associated with incontinence severity, do not reliably predict surgical outcomes
  - Maximum urethral closure pressure < 30-40 and leak point pressure < 60 considered possible ISD

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When to consider Urodynamic Study (UDS)

- Unclear diagnosis after office evaluation (ie negative cough stress test with full bladder)
- Symptoms that don't correlate with objective findings
- Failure to improve with treatment
- Prior incontinence or pelvic floor surgery
- "Most experts do not recommend UDS in the initial evaluation of uncomplicated urinary incontinence"

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Urodynamic Study (UDS) before slings?

VALUE trial – NEJM 2012 Nager et al

- Multicenter, randmoized non-inferiority trial
- Preop basic office eval (normal PVR, neg UA, +CST) is not inferior to UDS in women undergoing midurethral sling
- Outcomes at 1 year were similar
- Conclusion – preop UDS not necessary before MUS in patients with uncomlicated SUI → PVR <150, neg UA, +CST, and no prolapse beyond hymen

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Cystoscopy

•Not routinely indicated in evaluation of UI

•Should be considered in presence of:

- Microscopic hematuria
- Acute-onset or refractory UUI
- Recurrent UTI
- Suspicion of fistula or foreign body after gynecologic surgery

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Treatment – continence pessary

- May improve symptoms of stress urinary incontinence or mixed urinary incontinence
- Work by supporting urethra and increasing urethral resistance
- ATLAS trial – Green journal 2010 Richter et al
  - Comparing continence pessary to PFPT
  - 3 month satisfaction higher in PFPT group (75% vs 63%)
  - Combination therapy not superior to single therapy (79%)
  - Overall satisfaction at 1 year dropped to 50%
- "Incontinence pessary may be an effective management option for SUI in women who wish to avoid surgery and not likely to adhere to PFPT or want more immediate symptom control than is provided with PFPT"

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Treatment - Estrogen

- Systemic therapy not effective in prevention of UI
  - Increased SUI in hormone users (E alone and E+P)
- Vaginal estrogen may have some benefit in decreasing UI

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Treatment - Anticholinergics

- Block M2/M3 receptors to inhibit involuntary detrusor contractions
- "May be offered as primary treatment for UUI"
- Significant reduction in UUI compared to placebo but only modest magnitude of effect
- Associated with significant discontinuation rates 2/2 side effects – dry mouth most bothersome
- Comparisons of different AChs show similar efficacy and safety profiles, but limited by lack of high-quality evidence
- Combination of AChs and behavioral therapy not more effective than AChs alone
- No discussion in PB re: dementia risk

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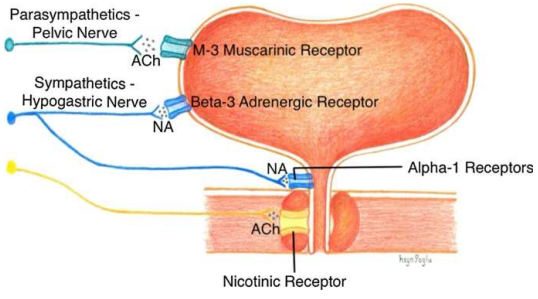
Treatment – Beta-agonists

- Activates beta-3-adrenergic receptor in detrusor muscles, leading to muscle relaxation and increased bladder capacity
- Significant reduction in UUI episodes compared to placebo
- Adverse event rate similar to placebo
- Not recommended for pts with severe uncontrolled hypertension, end stage renal disease, significant liver impairment



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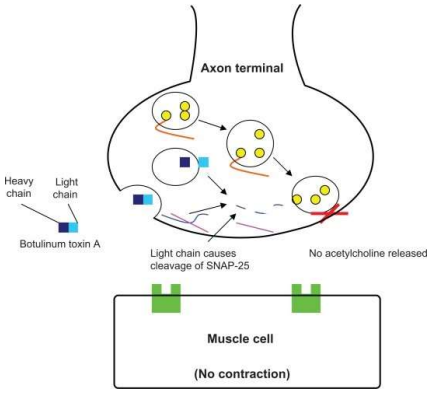
Treatment – OnabotulinumtoxinA (Botox)

- Inhibits presynaptic release of acetylcholine from motor neurons at NMJ thereby paralyzing the muscle
- ABC trial – NEJM 2012 Visco et al
  - Compared 6 months daily ACh vs 100u Botox for OAB pts
  - Similar reduction in daily incontinence episodes
  - Higher rates of complete resolution of sx in Botox group (27% vs 13%)
  - Less dry mouth in Botox group but higher rates of UTI (33%) and voiding dysfunction requiring catheterization (5%)
- "Intradetrusor Botox may be a treatment option for OAB in appropriate patients."



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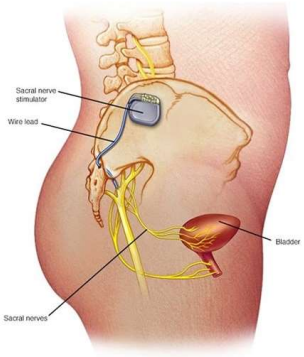
Treatment – Sacral Neuromodulation

- Stimulation of nerves that innervate bladder and pelvic floor to treat lower urinary tract dysfunction
- Exact mechanism unknown, thought to modulate reflex pathways affecting bladder storage and emptying
- Initial Medtronic study for FDA approval – 79% success - 45% dry, 34% had >50% improvement
- 2006 systematic review by Brazzelli found 80% overall success in controlled trials, 67% success in case series with larger sample size



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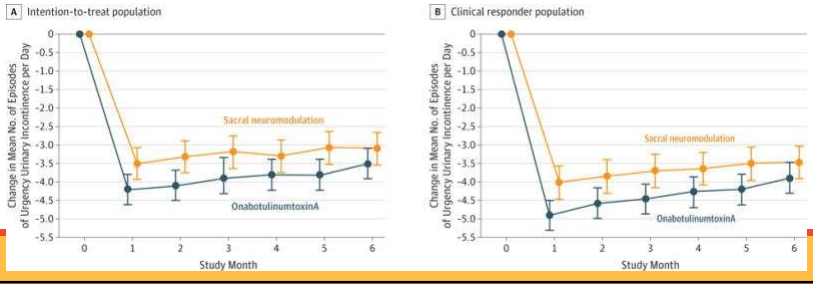
Treatment – Botox vs Sacral Neuromodulation

- ROSETTA trial – JAMA 2016 Amundsen et al
  - Randomized control trial of 200 Units Botox vs Sacral Neuromodulation
  - Primary outcome was change in number of daily UUI episodes over 6 months
    - Mean reduction in UUI episodes 3.9 for Botox and 3.3 for SNM (baseline mean UUI episodes was 5.4 and 5.2/day)
  - Botox had higher rate of complete resolution (20% vs 4%) and trended toward higher rate of >50% reduction (61% vs 51%, p=0.06)



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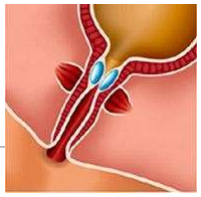
Treatment – Bulking agents



- For treatment of SUI with intrinsic sphincter deficiency
- Injected trans- or periurethrally into periurethral tissue at bladder neck/proximal urethra to increase urethral resistance
- "May be appropriate if surgery has failed to achieve adequate symptom reduction, if symptoms recur after surgery, in women with symptoms who do not have urethral mobility, or in older women with comorbidities who can't tolerate anesthesia or more invasive surgery"
- Less effective than surgical treatment of SUI
  - In 2012 Cochrane review, surgery 1.7-4.8x increased likelihood of cure
- Success 63-80% at 1 year for Durasphere and Coaptite

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Treatment – Bulking agents

- Bulkamid – polyacrylamide hydrogel
  - 66-74% cured or improved at 12 months across several studies
  - 7 year outcomes (Brosche et al Neurourol Urodyn 2021)
    - 67% cured or improved, 11% no change, 2.3% worsening incontinence
    - 32% had a top-up injection at median of 9 months after initial tx
    - 19.5% received subsequent other incontinence procedure

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Treatment – Midurethral synthetic slings

- Most common primary surgical treatment for SUI – AUGS and SUFU have recognized mesh slings as the "standard of care" for surgical treatment of SUI
- Similar efficacy but less morbidity than fascial slings and colposuspension

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Treatment – Midurethral synthetic slings

- Retropubic and transobturator slings have similar objective and subjective cure rates in 2015 Chochrane review
  - RP slings have more voiding dysfunction, bladder perforation, EBL, major vascular or visceral injury
  - TO slings have more groin pain
  - Mesh complications similar at 2%

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Treatment – Midurethral synthetic slings

- TOMUS trial – NEJM 2010 Richeter et al, J Urol 2015 Kenton et al
  - 1 year outcomes
    - Objective success 80.8% vs 77.7%
    - Subjective success 62.2% vs 55.8%
    - Voiding dysfunction requiring surgery 2.7% vs 0% (p=0.004)
    - Neurologic symptoms 4.0% vs 9.4% (p=0.01)
    - No difference in satisfaction, QOL
  - 5 year outcomes – 68% of pts from original trial
    - 51.3% vs 43.4% success, did not meet prespecified criteria for equivalence
    - 79% vs 85% satisfaction (compared to 93% and 79% at 1 year)
    - Pts in RP group had more urgency, lower QOL scores, worse sexual function
    - Mesh complications similar between groups (3 vs 4)

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Treatment – Midurethral synthetic slings

- Single-incision slings have lower subjective and objective cure rates compared to standard length RP or TO slings, higher rates of reoperation based on 2 meta-analyses
- 2023 Cochrane Review
  - Little to no difference in subjective cure or improvement at 12 months compared to RP and TO slings
  - Little/poor quality data on repeat surgery, pain, quality of life
- Minimal high quality long-term data

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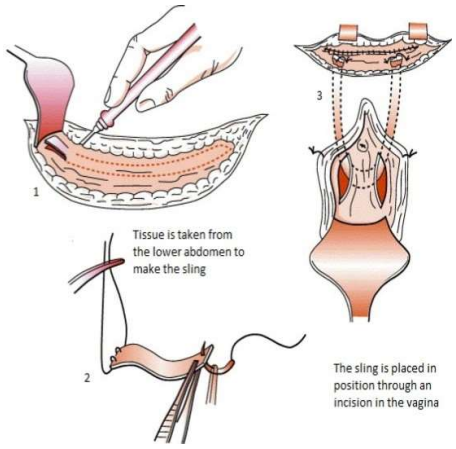
Treatment – Autologous fascial slings

- For women who decline or are not candidates for synthetic slings
- "Should be considered in women with severe SUI and nonmobile fixed urethra, urethral diverticula or fistula, or with complications from mesh previously placed in the anterior vagina"
- Higher rates of voiding dysfunction, more morbidity



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Treatment of SUI at time of prolapse repair

- SUI and pelvic organ prolapse coexist in up to 80% of patients
- "Prudent to correct both disorders"
- "Type of continence procedure based on route of access for prolapse repair"

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Patients with Pelvic Organ Prolapse but without SUI

- Patients with significant apical and/or anterior prolapse should have preop evaluation for occult SUI
- "These women should consider an incontinence procedure at the time of POP repair after appropriate counseling"
- CARE trial – NEJM 2006 Brubaker et al
  - Pts with no SUI sx undergoing ASC randomized to Burch vs nothing
  - Fewer women in Burch group had postop SUI (24% vs 44%)
  - At 7y f/u, 3x longer estimated time to failure in Burch group
- OPUS trial – NEJM 2012 Wei et al
  - Pts with no SUI undergoing vaginal POP surgery randomized to RP sling vs sham
  - 3 months – rate of SUI or treatment for SUI 23.6% sling vs 49.4% sham
  - 12 months – rate of SUI 27.3% sling vs 43% sham
  - NNT with sling to prevent one case of UI was 6.3
  - Women with +CST with prolapse reduction had higher benefit from sling at 3 months, no difference at 12 months
  - Patient preference cohort – those with + prolapse-reduction CST more likely to undergo sling than those with neg test, outcomes similar to randomized cohort at 3 and 12 months

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Physical therapy and the pelvic floor

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Pelvic floor physical therapy

AKA: YOU DO WHAT? WHERE???

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Physical Therapy

Physical therapists are now graduating at the doctoral level (DPT)

On average, it is seven years of schooling

PTs are being trained to be direct access practitioners

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Typical subject matter for a physical therapy program

Neurology
Gross anatomy
Pathology
Therapeutic exercise
Manual techniques
Modalities
Pharmacology
Orthopedics
Cardiopulmonary
Pediatrics
Geriatrics
Prosthetics/orthotics
Diagnostic imaging
Kinematics
Differential diagnosis

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Pelvic Floor PT

Consider a specialization within physical therapy

Pursuing a specialization typically begins after graduation

Specialization requires additional coursework and training

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What we treat – how we can help

-we can treat all genders and ages

Urinary dysfunctions
- Urgency, frequency, SUI

Bowel dysfunction
- Straining, constipation
- Fecal Incontinence

Pain
- Sexual dysfunction
- Abdominal/pelvic pain

Sexual health

Pregnancy pain and Postpartum recovery

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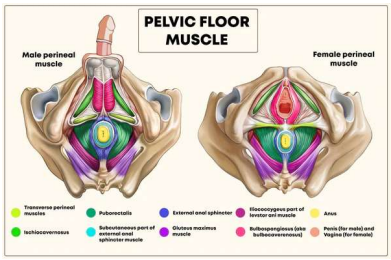
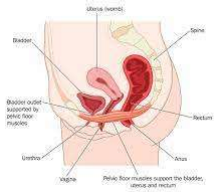
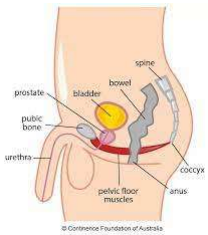
What is the pelvic floor?

Pelvic floor consists of muscles and connective tissue that support your organs







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Functions of the pelvic floor

5 “S” of function

- Sphincteric – Helps open and close our openings
- Sexual - muscles need to move to have fun
- Sump pump - helps move lymphatic fluid/blood etc
- Support - so much support
- Stability - key for balance

- The most important thing is that the pelvic floor has to MOVE!
- A KEGEL is when we actively tighten/lift the pelvic floor

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No pelvic floor is an island…

AKA why doing just kegels can be a frustrating experience

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A team player

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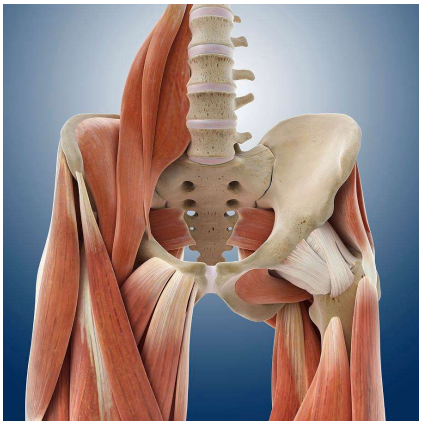
Part of an even bigger team…

Pelvic floor provides support and is supported BY a LOT of muscles

Did you know that if you point your toes down, your pelvic floor will tighten?

Clenching your jaw will tighten your pelvic floor



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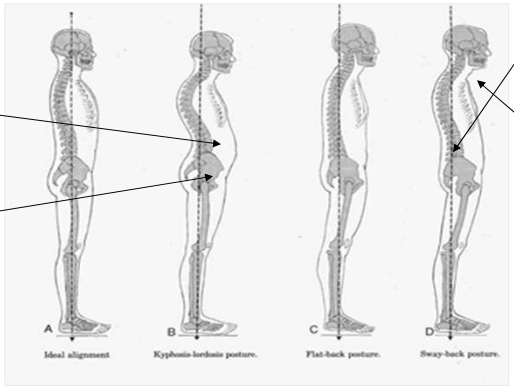
Looking at the bigger picture

Weak/long abdominals, decreased diaphragmatic excursion – altered intraabdominal pressure?

Muscle imbalance with anterior pelvic tilt – tight iliopsoas? Decreased pelvic floor excursion?



Decreased lumbosacral movement? Tight hamstrings increasing tone on pelvic floor

Forward head affecting diaphragm?

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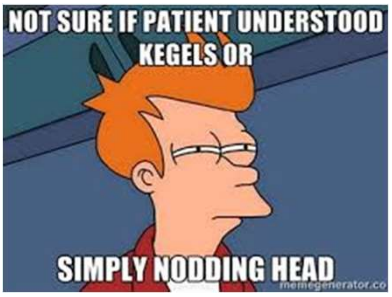
FYI…

- Studies have shown greater than 30% of women are not able to contract the pelvic floor even after thorough individual instruction



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Treatment

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Pelvic Floor Physical Therapy

A multi-faceted review of a patient

Detailed history taking

Orthopedic screening and assessment

Neurologic screening and assessment

External and internal assessment of the pelvic floor

Appointments are always in a private room and are almost always an hour

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History

Surgical history

Fluid/food intake

Bowel/bladder overview (diary given for home)

If pain – where is the pain? Intermittent or constant? Provoking/relieving factors

Pregnancies? Type of delivery? Issues with delivery?

Trauma?

Leaking – how much? When? Positional dependence?

Bowel history – constipated? Diarrhea? Strains?

Other pain… back pain?

Medication review

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How we treat

- Biofeedback
  - Neuromuscular re-education
    - Via internal sensor
    - Via rehabilitative ultrasound
- Manual muscle corrections
- Therapeutic exercise
- Education

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Biofeedback

- Surface EMG: measures the electrical activity of the skeletal muscles.
- Neuromuscular retraining using an internal sensor (although external is also available) attached to a computer program

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Biofeedback

Patient usually begins in a very supported supine position, with knees bent and supported or sidelying

Sensor placed vaginally or rectally

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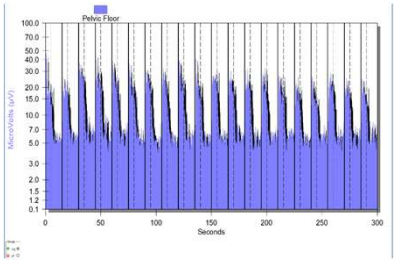
Biofeedback continued

- Machine is hooked into the computer
- Depending on the issue being treated and/or assessed, protocols can be use for downtraining or uptraining
- My emphasis is on **mobility**



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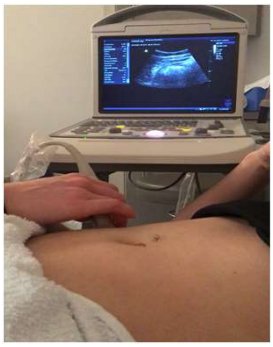

Biofeedback

With

Rehabilitative Ultrasound

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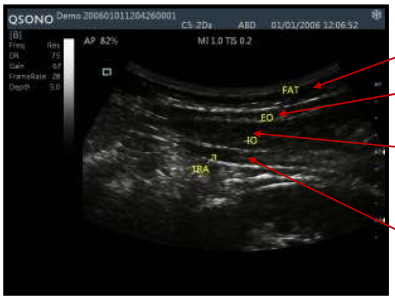
Real time ultrasound



Adipose layer

External oblique

Internal oblique

Transverse abdominis

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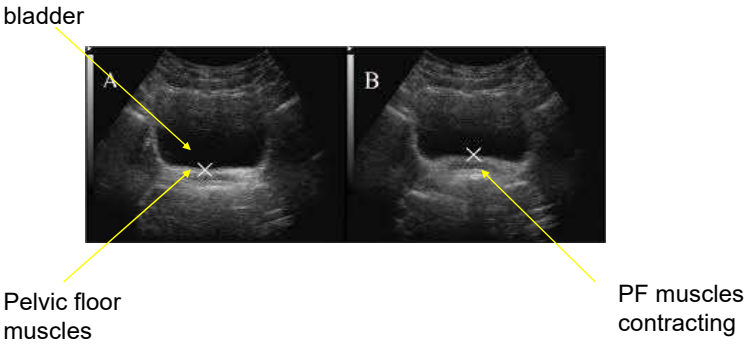
Biofeedback: Rehabilitative ultrasound



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Manual Therapy

How we treat continued

- Manual techniques to facilitate or inhibit muscle tone
- Manual techniques to address asymmetries – tissue, joint
- Visceral manipulation
- Manual techniques to resolve soft tissue restrictions including trigger points
- Trigger point dry needling

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Therapeutic exercise

- Improve lumbopelvic flexibility and stability
- Posture re-training
- Common areas of concern:
  - Hips
  - Low back
  - Abdominals

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Therapeutic exercise

- Gentle stretching to decrease tissue tone and improve blood flow – getting the patients used to non-painful movement
- Mild cardiovascular
- Mindfulness
- Breathing and relaxation

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Education

- Understanding of condition
- Basic anatomy
- Toileting hygiene and technique
- Fluid and food impact on bowel/bladder
- Sexual health
- Home program that can include: diet, exercise, ADL management

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What to know as a patient…

- Treatments are in a private room
- Treatments are NOT painful
- There is a high success rate with most conditions
- It is billed as “regular” physical therapy – we do not use any special “pelvic PT” codes – usually very well covered by insurance.

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Activities to practice*

Get in and out of a chair without using the arms

Standing on one foot - aiming for at least 30 seconds

Getting on and off the floor

*if you have a history of falls/dizziness/fainting do not start the exercises without consulting a health care practitioner

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My top 3 exercises

ALMOST EVERY PATIENT STARTS WITH THESE

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Clamshells

Reverse Clamshells

Glute Bridge

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So you need a PT?

We've brought a list of UH pelvic floor therapists

Check out Herman & Wallace

Hermanwallace.com

Check out the Pelvic Health Academy

https://www.aptapelvichealth.org/ptlocator

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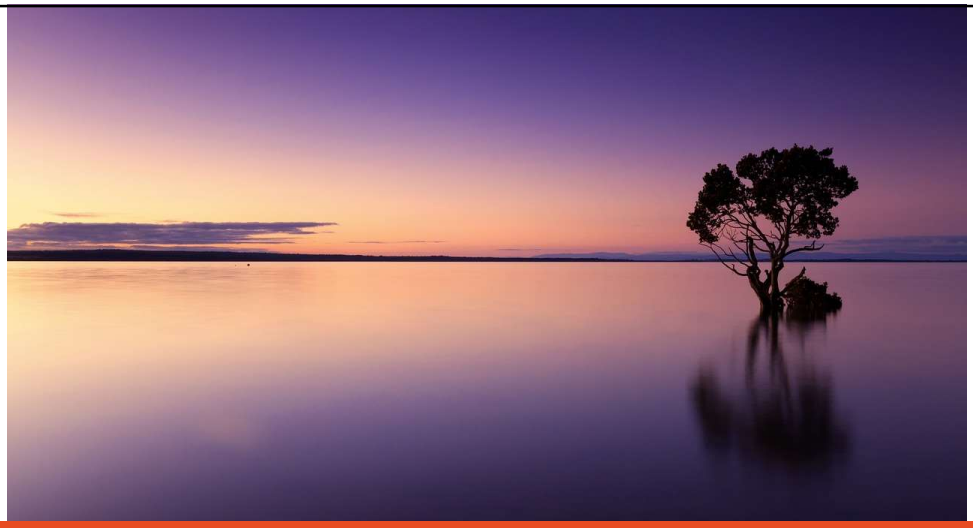

Thank you!

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