You’re In Control: Prevention, Risk Reduction & Simple Treatment Options for Bladder Health

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Program Objectives

**Describe**
- normal versus abnormal female anatomy and bladder function

**Understand**
- common types of urinary incontinence along with the associated risk factors and prevalence

**Identify**
- self-help promotion strategies and non-surgical treatment options that can prevent, decrease or eliminate urinary incontinence

Normal Female Anatomy – Cross Section
Sling


URINARY TRACT
- Kidney Diuresis Fills Bladder at 0.5 to 10 ml/min rate
- Bladder Filling expands Detrusor Muscle as a continuous Stimulation
- This Stimulation is transferred to the brain via Sensory Pathways and interpreted as a Desire to Void
- Autonomic & Somatic System control Detrusor and Urethral Pressure
- "Strong Desire" – Then voluntary contraction of Urethral Sphincter
- Voiding Process:
  - Inhibition of Autonomic System
  - Detrusor contraction (Somatic)
  - Relaxation of Urethral Sphincter

Desire to Void
- I've a First Sensation It's a yet postse desire
  - First Desire (FD)
- At home, I would go to toilet
  - Normal Desire (ND)
- Here I can wait
- I've to go but, I contract my sphincter to finish what I'm doing
  - Strong Desire (SD)
- I go to toilet immediately before the leakage
  - Urgency (UR)
What Is Continence?

- Storage of increasing urine volumes with low bladder pressure
- Normal sensation of capacities
- Normal storage and release of urine

What is Normal?

- VOID 5 - 7 TIMES PER DAY
- 2-4 HOURS IN BETWEEN VOIDS
- CONSUME 64 -70 OZ OF FLUID DAILY
- NOCTURIA 0 – 1/NIGHT
- NO STRAINING OR PUSHING TO VOID

Urinary Incontinence

Prevalence

- 8th most common chronic condition in women
- Direct costs of UI in United States = 20 billion in 2000
- Increases with age with a reported 26-58% in women ages 25-64 years
- Incidence of UI during pregnancy and postpartum vary between 20% & 67%

Risk Factors

- Childbirth (9-36% incidence after first delivery)
- Forceps/vacuum assisted deliveries
- Baby weighing > 9lbs
- Loss of estrogen
- Neurological disease
- Obesity
- Smoking
- Caucasian

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Types of UI

- Stress Urinary Incontinence
- Intrinsic Sphincteric Deficiency
- Urge Urinary Incontinence
- Neurogenic Incontinence
- Mixed Urinary Incontinence
- Overflow
- Functional

Stress Urinary Incontinence

- Involuntary urine loss due to a rise in bladder pressure that exceeds urethral pressure
- Symptoms:
  - Leakage with exercising, coughing, laughing, sneezing, etc
- Cause:
  - Anatomic lack of urethral support above pelvic floor muscles
  - Failure of internal urethral sphincter
Urge Incontinence or Overactive Bladder

- Involuntary bladder contractions associated with urine loss OR urgency & frequency
- Voiding more than 7 times per day
- Getting up 2 or more times at night

Symptoms
- “Key in door” syndrome, cold weather, running water, washing dishes

Common Triggers for Overactive Bladder
Mixed Urinary Incontinence

- Combination of both Stress & Urge Urinary Incontinence
- MOST COMMON!

Other Types of Incontinence

- Neurogenic
  - Some symptoms of Overactive bladder, but is due to a neurological process (DM, Parkinson’s, MS, CVA, etc.)

- Intrinsic Sphincteric Deficiency
  - Intrinsic pressure of the urethra is poor (weak)
  - Leakage of urine with simple position changes, going from sitting to standing position, rolling over, “unconscious” type leakage.

- Overflow
  - Loss of urine due to overdistention of the bladder or from obstruction of the urethra
  - Symptoms: Dribbling small amounts continuously, weak stream, urinary hesitancy

Prevention Interventions

- Behavioral Therapies
- Core strength exercises – Pilates, Yoga
- Estrogen therapy during postmenopausal years
- Pelvic Floor Muscle Training – assisted or non-assisted
- Reduction of straining and heavy lifting
- Weight loss
Behavioral Therapy - Dietary

- Drink Plenty of Fluids!
- Decrease bladder irritability
- Helps prevent UTIs
- Will avoid constipation
- Avoid Too Many Fluids
- Avoid Bladder Irritants
  - Carbonated beverages, Aspartame
  - Caffeine
  - Alcohol
  - Spicy foods, Tomato-based foods, Citrus Juices
- Encourage foods high in fiber

Core Strengthening

- Provides strength & stabilization to enhance pelvic floor function
- Pilates, Yoga, Tai Chi
  - Transversus abdominis and pelvic floor are part of the stability system of the lumbopelvic region
  - Trunk stabilization exercises are important because the TrA, pelvic floor and multifidi all work together synergistically

Behavioral Therapies

- Double Voiding
  - Wait for 2nd contraction after initial void
- Proper Toiletting Technique
  - Sit up straight with elevation of knees aligns bladder to empty more complete. Do not push!
Urge Suppression Techniques

Determine how often you void during your normal day.

Increase intervals in between restroom visits by 15 minutes for 3 consecutive days.

Use Urge Suppression techniques to help decrease urgency.

Once this is achieved, add an additional 15 minutes.

GOAL: INCREASE BLADDER CAPACITY TO DECREASE TRIPS TO THE BATHROOM!

Pelvic Floor Muscle Exercises

- Skeletal muscle – responds to exercise like other muscles
- Contraction of pelvic floor compresses the urethra, increasing resistance
- Maintain bladder and bowel function
- Provide proprioception to enhance sexuality
- Use it or lose it!
Manual Muscle Test

Normal contraction is for 5-10 seconds. Weak or absent contractions indicate that pelvic floor stim or biofeedback may be beneficial.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/5</td>
<td>No contraction</td>
</tr>
<tr>
<td>1/5</td>
<td>Flicker</td>
</tr>
<tr>
<td>2/5</td>
<td>Weak squeeze, no lift</td>
</tr>
<tr>
<td>3/5</td>
<td>Fair squeeze, Definite lift</td>
</tr>
<tr>
<td>4/5</td>
<td>Good squeeze, Good lift &amp; able to hold &amp; repeat</td>
</tr>
<tr>
<td>5/5</td>
<td>Strong squeeze, Long hold with Many reps</td>
</tr>
</tbody>
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At Your Next Break……
Test Your Ability to Perform a Correct Pelvic Floor Muscle Contraction

“Functional Stop Test”…
► In mid-stream, try to stop your urine flow and rate your strength as follows:
► 0 – unable to deflect the flow or slow the stream
► 1 – partial deflection of stream but not maintained
► 2 – maintenance of a deflection in the flow
► 3 – ability to stop the flow of urine in a gravity-resistant position

Biofeedback Therapy
► Allows for identification and training of pelvic floor muscles
► Able to see force of contraction on computer and compare your progress from week to week
► Use of surface electrodes monitors use of accessory muscle groups such as gluteals, adductors or abdominals

Training of the Pelvic Floor
Endurance Contractions Quick Flicks
Pelvic Floor Stimulation

- Vaginal probe that delivers electrical current
- Helps with identification and sensory awareness of pelvic floor muscles
- Performs a strong pelvic muscle contraction for you, increasing tone and sensory awareness, allowing you to progress to performing a contraction on your own
- Decreases both stress and urge incontinence

Innovo

FDA approved in 2018 for MILD stress urinary incontinence – Jan 2020 now OTC for $449.50

***NOT FDA cleared to treat urge urinary incontinence

Wearable, non-invasive
Delivers neuromuscular electrical stimulation to strengthen pelvic floor muscles

Treatment: 30 min session 5 days/week for 12 weeks
Prevention & Maintenance: 30 min session 1-2x/week

https://www.myinnovo.com/
Pessaries

Medication Management

- Antimuscarinics
  - Decreases spasticity during emptying phase, decreasing feelings of urgency/frequency
- Beta 3 adrenergic agonists
  - Promotes relaxation during storage phase
- Goal of Both Classes of Medications
  - To decrease urgency/frequency and leakage episodes, allowing for more time to get to the bathroom
- Side Effects
  - Antimuscarinics – dry mouth, constipation most common
  - Beta 3 adrenergic agonists: Potential to increase blood pressure. Other SE include nasal stuffiness, headache, dizziness,

Estrogen

- Increases blood supply to urethra, increasing urethral function
- Decreases bladder irritability, and sensations of urgency and frequency
- Vaginal rings, suppositories and cream
- Important: It is not systemic and provides localized effects
- Use every night for two weeks, then twice weekly thereafter
**Botox Bladder Injections**
- 20-30 minute Outpatient procedure
- 100-200 U of Botulinum toxin A is injected into bladder muscle to decrease bladder contractions
- Efficacy 3 - 9 months, repeat injections needed to maintain results
- 60-90% success rate
- Adverse events: UTIs most common, urinary retention (3%)

**Sacral Neuromodulation**
- Coordinates sacral nerve supply that controls the bladder, bowel and pelvic floor muscles
- A neurostimulator device is implanted and a fine lead (wire) transmits electrical impulses to the sacral nerves, allowing for appropriate communication between the sacral nerves and the brain
- Controlled with a patient programmer to adjust level of stimulation, as well as to change programs if need be

**Sacral Neuromodulation Therapy**
- Battery size ranges from a ½ dollar size to a thumb drive size (depending upon company)
- Some types are rechargeable
- Some types allow for MRIs
- 50% improvement of symptoms is considered successful with this therapy
Speax – Washable Underwear

Let's put an end to the leaks!

References


