Urinary Tract Infections · Incontinence
& other urological health issues in medically fragile individuals

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The Urology Team
I’ve reached that age where I’ve given up on *Mind Over Matter* and am concentrating on *Mind Over Bladder*!
Urinary Incontinence

What is it?

It’s the **loss of bladder control** that results in an involuntary leakage of urine.
Who is affected?
The National Association of Continence reports…

- Approximately 25 million adults in the United States experience incontinence
- 75-80% of those are women
- 53% of homebound older persons are incontinent
- Urinary incontinence is one of the top 10 diagnoses among homebound persons
- More than ½ of all nursing home residents are incontinent
- Incontinence is the second leading cause of institutionalization
- 22% of continent female residents admitted to a long-term care facility became incontinent within one year of admission.
Economic Impact

The cost of incontinence in the United States, in 2000, was estimated to be $19.5 billion dollars - $14.2 billion incurred by community residents, and $5.3 billion incurred by institutionalized residents.

50-75% of all costs are attributed to absorbent pads, other protection, and laundry.
Types of Urinary Incontinence

- Urge
- Stress
- Overflow
Urge Incontinence

Leakage occurs with...

- Urgency
- Frequency
- Nocturia
- During sex
Stress Incontinence

Leakage occurs during...

- Coughing
- Sneezing
- Exercise
- Laughing
Overflow Incontinence

Leakage occurs...

- When the bladder overfills and can’t empty
• Stress incontinence- 27%
• Urge incontinence - 43%
• Mixed incontinence (stress and urge) – 55%
• Other- 9%

Less than 50% of affected women seek help!
All have in common...
Toilet Mapping
Stress Incontinence

• What is Stress Urinary Incontinence?
• Risk Factors
• Evaluation
• Treatment Options
Stress Incontinence

- Is caused by activities that involve a rise in intra-abdominal pressure.

- Urine loss is experienced at the time of physical exercise, coughing, laughing, or sneezing.
Stress Incontinence

Increased pressure

Urine
Evaluation: Physical Exam

- Pelvic exam
- Demonstrate incontinence

- Other Tests:
  - Urinalysis
  - Post void residual
  - Bladder diary
  - Urodynamics
Treatment Options

1. Pelvic floor muscle training

2. Pessary

3. Surgical options-
   A. Bulking Agent Injection
   B. Midurethral Sling
Pelvic floor muscle exercise

Kegel Exercises

• Start off slowly and gradually increase repetitions.
• Must be consistent with kegels to see improvement.
• You should expect some results within 4 weeks.
• It can take up to 6 months to a year to become continent.
Pelvic floor muscle exercise

- Contract Pelvic Floor Muscles
- Quick Contractions – Repeat 30 times
- Long Hold Contractions – Repeat 30 times
- Repeat Twice a Day
Pelvic floor muscle exercise

Biofeedback
Bulking Agent Injection

• Using a cystoscope, a bulking agent is injected into the urethra to coapt the urethra and increase resistance.

• Outpatient surgery (10 minutes)

• Success at 1 Year:
  - Chance of being completely dry: 30-50%
  - Improved: 60-70%
Midurethral Sling

- Through a small vaginal incision, a thin mesh is placed along the urethra, acting as a support “hammock”.
- Outpatient surgery (15 minutes)
- Recovery 2-4 weeks (depending on procedure)
- Success >85% of women are dry!
Overactive Bladder
33 Million People Affected by Overactive Bladder
Risk factors for Overactive Bladder

- Diabetes
- Obesity
- Stroke
- Parkinson's Disease
- Multiple Sclerosis
- Menopause
The bladder performs 2 main functions:

• Relaxation of detrusor muscle to **store** urine
• Contraction of detrusor muscle to **void** urine
What is normal?

Bladder Filling & Emptying Cycle

1. Bladder fills
2. First desire to urinate (bladder half full)
3. Urination voluntarily inhibited until time and place are right
Treatment Options

- Conservative Management
- Medications
- InterStim
- PTNS
- Botox
Overactive Bladder

Conservative Management

• Dietary Suggestions
• Lifestyle Modification
• Timed Voiding
• Urge Suppression
• Pelvic Floor Training
• Kegels
Dietary Suggestions

Things to Avoid

- Alcohol
- Caffeine
- Carbonated drinks
- Food Allergies

- Spicy foods
- Sugars
- Sweetener substitutes
- Cranberries
Lifestyle Modification

**Things to Help**
- Drink when thirsty
- Lose weight
- Regular bowel movements
- Urinate every 2 to 4 hours
- Walk 30 minutes daily

**Things to Avoid**
- Chronic coughing
- Dehydration
- Ignore the urge to urinate
- Sedentary lifestyle
- Weight Lifting
- Sit ups
Timed Voiding

Normal Bladder Emptying
• Every 2 – 4 hours during the day
• 0 – 2 times at night
Urge Suppression

Breathing
- Diaphragmatic Breathing

Distraction
- Long Division

Meditate
- Yoga

Visualization
- Contraction of the Pelvic Floor Muscles
- Relaxation of the Pelvic Floor Muscles
Pelvic Floor Training
Medication for Overactive Bladder

• Antimuscarinic agents are the mainstay for treating OAB

• There is an alternative drug class... **Beta agonist**
Antimuscarinic Medications

- Ditropan XL (Oxybutynin)
- Detrol LA (Tolterodine)
- Sanctura (Trospium Chloride)
- Enablex (Darifenacin)
- Vesicare (Solifenacin)
- Toviaz (Fesoterodine)
- Gelnique (Oxybutynin)
- Oxytrol Patch (Oxybutynin)

Side Effects Include:
- Dry Mouth
- Dry Eyes
- Constipation
Beta Agonist Medication

Myrbetriq (Mirabegron)

Myrbetriq relaxes the detrusor muscle during the storage phase by activation of the beta-3 adrenergic receptor.

Side effects include:
- Nasal stuffiness
- Increased blood pressure
Estrogen helps maintain the integrity of our muscular and connective tissue.
Keys to success when trying OAB medications

- Keep a log of progress
- Take as prescribed

Be patient!
Third line therapies when medication fails

InterStim Therapy

Percutaneous Tibial Nerve Stimulation (PTNS)

Botox

All are FDA approved for Urgency, Frequency and Urge Incontinence
InterStim Therapy: A Surgical Option
Percutaneous Tibial Nerve Stimulation (PTNS)
Percutaneous Tibial Nerve Stimulation (PTNS)

- FDA approved for OAB
  - Frequency
  - Urgency
  - Urge incontinence
- Minimally invasive neuromodulation system
- 12 weekly – 30 minutes sessions, then monthly maintenance sessions
Botox...it’s not just for the face!
This is a last resort option for urinary incontinence.
Urinary Tract Infection
What is a Urinary Tract Infection (UTI)?

An inflammatory process in the bladder or urinary tract, due to the presence of bacteria.

About 50% of all women will get a UTI at some point in their life. If infection spreads to the kidneys or bloodstream, it can cause serious illness.
UTI Symptoms

- Pain or burning during urination
- Frequent urination
- Pain in the lower abdomen or kidneys
- Urine that is cloudy or foul-smelling
- Bloody or dark urine
- Some people may have no symptoms (asymptomatic bacteriuria)
What causes UTIs?

Bacteria live in the intestines and genital area – but not the urinary tract system (urine is sterile). When bacteria is introduced into the urinary tract system, by traveling up the urethra, a UTI can start.

Women are more susceptible to UTIs then men, because women have shorter urethras.
Factors that may increase the risk of UTI

- Infrequent voiding
- Incomplete voiding
- Personal hygiene
- Sexual activity
- Use of spermicidal contraception
- Genetics
- Menopause
- Diabetes
- Weakened immune system
- Not drinking enough fluids
- Kidney stones
- Tub bathing
- Incontinence
- Chronic Foley Catheter
Men are less likely to have UTIs than women. For men, it can be related to an underlying medical condition such as a kidney stone or an enlarged prostate.
People with diabetes have a high risk for UTIs.

- Immune system is weaker
- High blood sugar can spill into the urine and encourage bacteria growth
- Nerve damage related to the disease can prevent the bladder from fully emptying
UTIs are among the most common infections in the elderly. But the symptoms may not follow the classic pattern. Agitation, delirium, other behavioral changes, or foul-smelling urine may be the only sign of a UTI in elderly men and women.
UTIs and Menopause

When estrogen drops during menopause, it is easier for bacteria to thrive in the vagina and urethra.
The main danger with untreated UTI’s is that infection may spread from the bladder to the kidneys and bloodstream.
Initial Screening

- History and physical examination
- Urinalysis and urine culture
- Post void residual
Further evaluation

- Voiding diary
- Cystoscopy
- Imaging of the kidneys and ureters
Behavior therapy to reduce UTIs

- Drink additional fluids
- Void before and after intercourse
- Double void
- Wipe from front to back
- Avoid products containing perfume in the genital area

- Personal hygiene
- Maintain bowel regularity
- Good Diabetic control
- Take showers instead of baths
- Wash foreskin regularly if uncircumcised
Treatment options

Antibiotics

- Treat by culture
- Post-coital prophylaxis
  - *Single dose antibiotic before or after sex*
- Continuous prophylaxis
  - *Low dose antibiotic long-term*
- Self-treatment
  - *Take full strength antibiotics promptly when symptoms appear.*

Over-the-counter relief

- Phenazopyridine (AZO)
  Can help ease pain, burning, and irritation. It doesn’t cure your infection.
Alternative prevention options

- Cranberry supplementation
- Vitamin C supplementation
- D-mannose
- Probiotics
- Vaginal hormone replacement
Pelvic Organ Prolapse

Large Cystocele

Urethrocele with moderate Cystocele
Definition of Pelvic Organ Prolapse

The abnormal descent or herniation of the pelvic organs from their normal attachment sites.

This can include the:
- Urethra
- Bladder
- Uterus
- Small bowel/intestines
- Rectum
Pelvic Prolapse Symptoms

Vaginal
- Sensation or visual presence of vaginal bulge
- Pelvic or lower abdominal pressure
- Vaginal heaviness
- Dyspareunia – painful intercourse

Urinary / Bowel Symptoms
- Urinary incontinence, urgency, frequency
- Weak or prolonged urinary stream
- Feeling of incomplete emptying
- Positional voiding / defecation
- Splinting
- Constipation / Fecal incontinence
Management of Pelvic Organ Prolapse

1. Observation

2. Conservative Treatment
   - Physical Therapy
   - Pessary
   - Vaginal Estrogen

3. Surgery
   - Vaginal
   - Abdominal
Pelvic Prolapse – Conservative Treatment

- Lifestyle Modification
- Positions for Relief
- Pelvic Floor Exercises
- Vaginal Estrogen
Pessary Placement
Surgical Options

- Cystocele Repair
- Rectocele Repair
- Abdominal Sacrocolpopexy
Thank you!

Questions and Comments

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