

## PHYSICAL THERAPY INTERVENTION FOR URINARY INCONTINENCE IN WOMEN

KAREN WINGERT DPT/RN

CLINICAL ASSOCIATE PROFESSOR  
MU PHYSICAL THERAPY DEPT.

DIRECTOR, LYMPHEDEMA AND PELVIC FLOOR REHAB CLINIC  
ELLIS FISCHEL CANCER CENTER

## HOW COMMON IS THE PROBLEM?

- 23 million Americans are affected
- Involves 50% of the nursing home population
- Affects 53% of the homebound elderly and is a major cause of institutionalization
- Direct cost of between 15-23 billion dollars

## Con't

- 53% of women between 20-80 report some problem with incontinence
  - 47% of women ages 20-49
  - 56% of postmenopausal women
  - According to December 1, 2000 article in American Family Physician, <1/2 of "community dwelling" persons with incontinence consult physicians about the problem

## True or False?

1. Incontinence is a normal part of aging.
2. Nothing can be done.
3. Postponing urination is bad.
4. Surgery is the only treatment.
5. Fluid restriction is a good idea in management.
6. An indwelling catheter will be an end to the problem.

## DEFINITION

- URINARY INCONTINENCE IS THE INVOLUNTRARY LOSS OF URINE SIGNIFICANT ENOUGH TO BE PROBLEMATIC

## TYPES OF URINARY INCONTINENCE

- STRESS-leakage with a cough, sneeze, exercise, lifting, going from sit to stand
- URGE-leakage with urgent desire to void, frequency, nocturia
- MIXED-stress+urge
- OVERFLOW-frequency, dribbling, incomplete emptying
- FUNCTIONAL-impaired mobility and/or cognition

### Commonly Used Drugs That Can Influence Bladder Function:

Antidepressants, Antipsychotics, Sedative - Hypnotics	sedation, retention (Overflow)
Diuretics	frequency, urgency <u>Overactive Bladder</u>
Caffeine	frequency, urgency, OAB
Anticholinergics (anti-nausea, anti-vertigo, anti-diahhreal agents) also Ditropan – for Urge Incontinence	retention (Overflow)

### Commonly Used Drugs That Can Influence Bladder Function ...

Alcohol	sedation, frequency (OAB)
Narcotics	sedation, constipation, retention (OAB & Overflow)
Alpha Adrenergic Blockers (peripheral vaso and arterial dilators, for HTN treatment)	decreased urethral tone (Stress Incontinence)
Alpha adrenergic agonists	Increased urethral tone, retention (Overflow)

### Commonly Used Drugs That Can Influence Bladder Function.

Beta adrenergic agonists (bronchodilator - asthma treatment)	Inhibited detrusor function, retention (Overflow)
Calcium Channel Blockers (for HTN)	Retention (Overflow)
ACE Inhibitors (for HTN)	Cough (Stress Incontinence)

### Treatment for Urinary Incontinence

- MEDICATIONS
- SURGERY
- PHYSICAL THERAPY

### MEDICATION FOR TREATMENT

- Antispasmodics
  - Detrol, Ditropan, Enablex, Oxytrol (patch), Vesicare
  - Common side effects: Dry mouth, constipation, nausea, upset stomach, blurred vision, dry eyes, dizziness, weakness, skin irritation (from the patch)
- Smooth Muscle Relaxants
  - Santura
  - Side effects similar to above

### Surgery options

- TVT (tension-free vaginal tape) sling to support urethra
- **Retropubic suspension** provide lift to bladder neck by attach to pubic bone or tough ligaments (Marshall-Marchetti-Krantz (MMK) procedure and Burch colposuspension procedure are two most common)
- **Urethral sling:** sling to support urethra

## How well does it work?

- **TVT surgery** can be an effective and relatively noninvasive treatment for stress incontinence.  
A recent study reported a cure rate between 85% and 87%, with an additional 4.5% to 7% of participants reporting improvement in symptoms.

## How well does it work?

- **Marshall-Marchetti-Krantz (MMK) procedure:** Women experience short- and medium-term relief from stress incontinence symptoms after the MMK procedure. However, the symptoms of incontinence may recur as years go by.  
  
One study reported that 43% of women experienced incontinence symptoms 5 years after surgery, and 72% experienced incontinence symptoms 10 years after surgery.

## How well does it work?

- **Burch colposuspension procedure:** Women usually experience long-term relief from incontinence symptoms.  
  
One study found that about 69% of women who had the colposuspension procedure for stress incontinence experienced relief from their symptoms up to 13 years after surgery.

## How well does it work?

- **Sling surgeries** are generally effective in eliminating incontinence.

## Anatomy

3 layers of muscles make up PFM

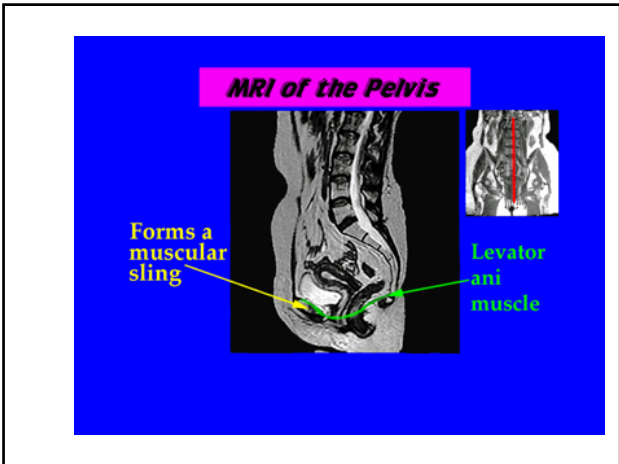
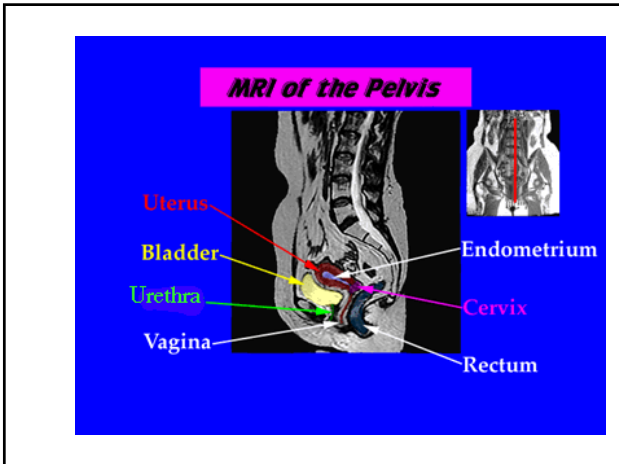
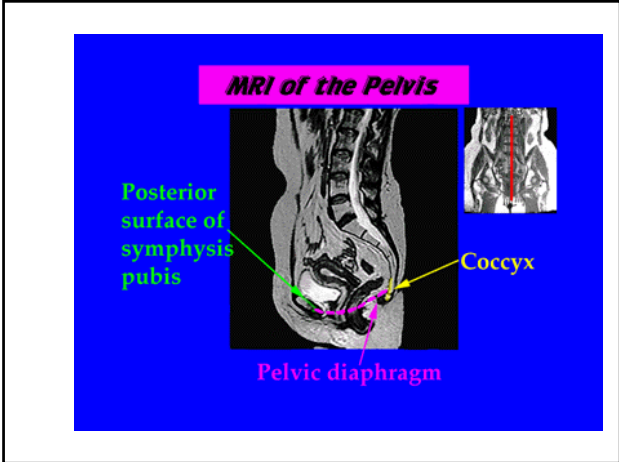
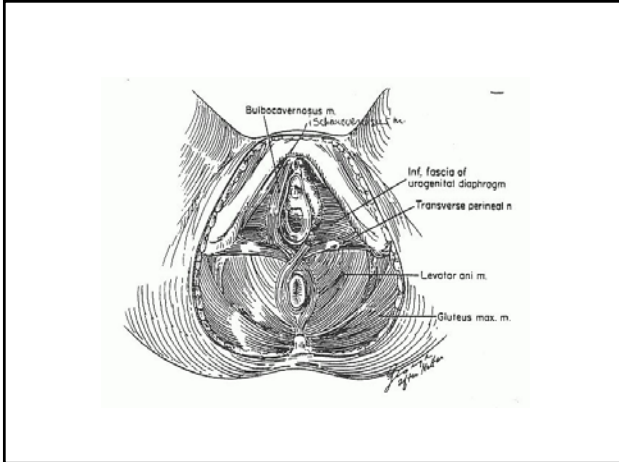
- Superficial external genital mm.
- Urogenital diaphragm
- Pelvic diaphragm

Innervation

- Pelvic surface 3<sup>rd</sup> and 4<sup>th</sup> sacral nn.
- Perineal surface pudendal n.
- Abdominal surface from the hypogastric plexus

## Anatomy

- **Muscle fibers**
  - 70% slow twitch
  - 30% fast twitch
- **Function**
  - Support organs
  - Sphincteric of the outlets
  - Sexual



**Organ mobility and stability**

- Too much mobility leads to prolapse or incontinence
- Too much stability/fixation leads to pain

**REHABILITATION OF THE PELVIC FLOOR**

- EVALUATION
  - History
  - Bladder diary
  - External exam
  - Internal exam
  - Baseline sEMG(biofeedback)
  - Musculoskeletal exam

## Signs of Pelvic Floor Muscle Weakness

- Leaking urine when sneezing, coughing, running or other sudden action
- Not getting to the toilet on time
- Tampons won't stay in place
- Bulging felt at the vaginal opening (prolapse)

## What weakens pelvic floor muscles?

- Pregnancy and childbirth
- Persistent heavy lifting
- Being overweight
- Changes in hormone levels at menopause
- Lack of general fitness
- Constant stress in the young athlete

## Types of prolapse

- Cystocele- herniation of bladder into vaginal wall
- Rectocele- rectum herniates against posterior vaginal wall
- Urethrocele- urethra herniates into vaginal wall,
- Uterine prolapse- uterus bulges down into vaginal canal

## What to Teach after Reviewing the Bladder Diary

- foods and fluids that serve as bladder irritants (caffeine, artificial sweeteners, ETOH, tomato products, citrus juices)
- establish a voiding schedule-may be voiding too frequently or not frequently enough
- importance of 48oz of water daily.

## What is normal?

- 5-7 times in 24 hours (every two hours)
- >65yo once at night
- Bladder can hold 2 cups urine
- 8 Mississippi
- Should delay the first urge (usually ½ full)

## TREATMENT

- Pelvic floor and core exercises
  - Supine, sit, stand and with functional activities
  - PFE with bridge, clam, abdominal progression
- Biofeedback (sEMG)
- Posture correction and education

## TREATMENT

- Education-
  - Pelvic Floor Anatomy
  - Bladder Function and Retraining
  - Diaphragmatic breathing and urge deferment
  - "NO JICs"

## Male Urogenital Problems

- Benign prostatic hypertrophy (BPH):
  - increased urethral resistance
- Prostate cancer
  - Tumor: slow growing
  - Bone metastases: pelvis and vertebrae
- Radical prostatectomy for Prostate CA :
  - risk of incontinence and impotence
- Radiation therapy for Prostate CA:
  - risk of lymphedema in groin nodes

## Other Appropriate Referrals to Women's Health

- Pelvic Floor
  - Vulvodynia
  - Dyspareunia
  - Musculoskeletal complaints during pregnancy and post-partum
- Osteoporosis
- Lymphedema



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