HOW PHYSICAL THERAPY CAN MAKE A DIFFERENCE AFTER PROSTATE SURGERY

JANE FRAHM, BS, PT, BCIA PMDB
For more than 50 years, the rehabilitation professionals at RIM have been helping people rebuild their lives after injury or illness.

At RIM we don’t just practice medicine, we are on the forefront of advancing it.

Our patients are given every opportunity to excel and successfully meet their goals.

RIM Leadership committed to all therapy provision, including multiple specialty services. I represent one of these specialties today.
PART OF COMPREHENSIVE TREATMENT PROGRAM ....

More appropriately “PELVIC FLOOR REHABILITATION”

• Because

MEN AND WOMEN ARE TREATED

• Post prostatectomy population
<table>
<thead>
<tr>
<th>Conditions Included in This Specialty</th>
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<tbody>
<tr>
<td>Incontinence - Urine or Stool – M &amp; F</td>
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<tr>
<td>Pelvic Pain - M &amp; F</td>
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<tr>
<td>Bowel Dysfunction – M &amp; F</td>
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<tr>
<td>Pregnancy and Postpartum</td>
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<tr>
<td>Osteoporosis and Biomechanical Changes – M &amp; F</td>
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BLADDER PHYSIOLOGY

- Kidneys make urine
- Ureters bring urine to the bladder
- Bladder = a hollow sac that *stores and empties urine.* It is never really “empty”
- Lining of bladder is the Detrusor m.
- The Detrusor is **SMOOTH** muscle.
BLADDER PHYSIOLOGY

- SMOOTH muscle **is not** under voluntary control. *(Striated muscle **is** under voluntary control)*
- When one feels an “urge” to go, it is the Detrusor muscle contracting
- After voiding, the Detrusor m. relaxes to allow the bladder to fill with urine again
BLADDER PHYSIOLOGY

- CONTINENCE REQUIRES
  - Bladder to store and empty
  - Muscles which work correctly
  - Intact nerve supply to make the muscles work
    - Motor nerves-control muscles/voluntary movements
    - Autonomic nervous system-control bladder reflexes/involuntary activity
    - Brain for cognitive control
    - Spinal centers which control bladder functions
URINARY INCONTINENCE

- Involuntary Urine loss in any amount
- Not a disease itself- but a symptom of an underlying condition
- Twice as many women affected as men
INCONTINENCE TYPES

- **STRESS INCONTINENCE**: Sudden urine loss—usually no urge to void is felt
  - Occurs with Physical Stress, such as
    - Movement from bed or chair
    - Coughing, sneezing, laughing, nose blowing
  - Made worse by:
    - Pelvic floor muscle weakness
    - Intrinsic sphincter deficiency
INCONTINENCE TYPES

- URGE INCONTINENCE / Over Active Bladder (OAB)
- Urine loss with urgency one can’t resist, or frequency
- Can be caused by an over-active detrusor muscle – in most cases
- Can be a neurological condition
WHAT HAPPENS WITH OVERACTIVE BLADDER OR UNCONTROLLABLE URGE?
“A picture is worth 1,000 words”
THREE IMPORTANT COMPONENTS

1. **Internal Urethral Sphincter** *(Smooth m.)*, in the bladder neck at the junction of urethra and bladder

2. **External urethral sphincter**, *(Striated muscle)* just below the prostate

3. **Voluntary Pelvic Floor Muscles** *(PFM)*
PHYSIOLOGY OF MALE CONTINENCE

*Internal Urethral Sphincter*

- Contains smooth m. cells that form a circular collar around the bladder neck and extend down into the prostate
- May be damaged after prostate surgery
PHYSIOLOGY OF MALE CONTINENCE

*External urethral sphincter*, located below the prostate contains layer of circular striated muscle fibers

- Number 1 mechanism of continence after prostatectomy
- This sphincter is under Voluntary control and can be made stronger through exercise
AFTER PROSTATE SURGERY...

Continence may depend on the remaining 2 continence mechanisms

- **External urethral sphincter**, located in the distal prostatic urethra area
- **Voluntary Pelvic Floor Muscles (PFM)**
TREATMENT OPTIONS

Conservative Management / Behavioral Therapy treatment options

- PFM STRENGTHENING
- Biofeedback to monitor Pelvic Floor muscle performance during strengthening program
- Electrical stimulation for muscle reeducation
- Bladder training
ADDITIONAL CONSERVATIVE OPTIONS

- **Dietary Awareness** - avoid citrus/lime, tomatoes, highly spiced foods, sugar, honey, chocolate, corn syrup, alcohol, caffeine found in cola, coffee, tea
- ** Leakage Containment** - Drip collectors/pads
- **External collection devices** - condom cath.
- **Urethral compression** - Penile clamps
MEDICAL TREATMENTS

Drugs can be useful especially if a component of Urge incontinence is present

- Specific Medications (anticholinergics) help quiet an overactive bladder – Detrol, Ditropan
- Others may help sphincter weakness – often found in antihistamines, check with your doctor
SELF HELP

- INITIATE YOUR OWN PELVIC FLOOR MUSCLE STRENGTHENING PROGRAM BEFORE SURGERY
  - Assure yourself that you ARE contracting the right muscles- THE RIGHT WAY
  - Do PFM “exercises” each day
  - Start by identifying the correct contraction- i.e., the right muscles
PFM EXERCISE - The “Gold” Standard – or - HOW TO KNOW WHEN YOU ARE DOING IT CORRECTLY

1. YOU WILL NOT FEEL YOUR BUTTOCKS PINCH TOGETHER
2. YOU WILL FEEL YOUR PENIS MOVE A LITTLE
3. YOU WILL FEEL YOUR SCROTUM PULL UPWARD
WEAK PFM BEFORE EXERCISE
PFM AFTER EXERCISE
SELF HELP

PELVIC FLOOR STRENGTHENING

• Contract your PFM and cough or clear your throat without “LOSING” the sense of the contraction
• Work this exercise during certain of your normal every day activities. e.g. while showering, at red lights, washing hands, when getting up from a chair
FOR EXAMPLE

MAKE YOUR PFM STRENGTH FUNCTIONAL
BIOFEEDBACK EQUIPMENT AND GRAPHICS

ELECTRICAL STIMULATOR UNIT AND MULTI PURPOSE ELECTRODE
SELF HELP

PELVIC FLOOR STRENGTHENING

- STRONG HOLDS/FAST TWITCH M.
  - See if you can do a set of 5 where you feel yourself go from a resting state to a work state and back to rest again

Contract/work 5 sec

Rest 10-15 sec  1  Rest  2  Work  3, etc
SELF HELP

PELVIC FLOOR STRENGTHENING

- LONG HOLDS - SLOW TWITCH M.
  - See how long you can HOLD a contraction at a steady state-endurance, e.g.,

```
Rest → WORK, holding a long contraction → Let go contraction
```
SELF HELP

- PELVIC FLOOR STRENGTHENING
  - See if you can quickly contract and let go in a series of 6 or 8, e.g.,
**Session Timing:**
Work/Rest  Work Seconds: 10  Rest Seconds: 10  Number of Trials: 5

**Overall Session Values:**

<table>
<thead>
<tr>
<th>Channel A</th>
<th>W-R</th>
<th>Tot</th>
</tr>
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<tbody>
<tr>
<td>Avg</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>WORK</td>
<td>33.8</td>
<td>1.34</td>
</tr>
<tr>
<td>REST</td>
<td>5.00</td>
<td>0.00</td>
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### Channel A

**Sessions**

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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>#1) 2007-01-25</td>
<td>#2) 2007-03-01</td>
<td>Chan A Rest Avg</td>
<td>Chan A Work Avg</td>
<td>MicroVolts (μV)</td>
<td></td>
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**Patient:**

**Comparison of Statistics**

<table>
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<tr>
<th>Session Name</th>
<th>Comparison</th>
<th>Channel</th>
<th>Duration</th>
<th>Avg</th>
<th>Min</th>
<th>Max</th>
<th>Rise</th>
<th>%S</th>
<th>%S</th>
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<tbody>
<tr>
<td>1.) 2007-01-25,</td>
<td>FM 12_09_25</td>
<td>single, area, endurance30s.ses</td>
<td>(BASELINE Session)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.) 2007-03-01,</td>
<td>AM 11_45_00</td>
<td>single, area, endurance30s.ses</td>
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<td></td>
<td></td>
<td></td>
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<tbody>
<tr>
<td></td>
<td>Avg</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Session #1 WORK</td>
<td>20.4</td>
<td>1.33</td>
<td>89.8</td>
</tr>
<tr>
<td>Session #2 WORK</td>
<td>44.7</td>
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<tr>
<td>Session #1 REST</td>
<td>8.84</td>
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<td>82.1</td>
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<tr>
<td>Session #2 REST</td>
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Comparison: [Blank]
Session Name: 1.) 2007-01-25, PM 12:03:17 single, area, 10W1050T.ses (BASELINE Session)
2.) 2007-02-15, AM 11:51:55 single, area, 10W1050T.ses

Overall Session Values:

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<tbody>
<tr>
<td></td>
<td>Avg</td>
<td>Min</td>
</tr>
<tr>
<td>Session #1 WORK</td>
<td>33.8</td>
<td>1.34</td>
</tr>
<tr>
<td>Session #2 WORK</td>
<td>54.4</td>
<td>1.63</td>
</tr>
<tr>
<td>Session #1 REST</td>
<td>5.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Session #2 REST</td>
<td>4.72</td>
<td>0.00</td>
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SELF HELP

PELVIC FLOOR STRENGTHENING

- IT IS NEVER TOO LATE TO START!
  - Even if you have had surgery, it is not too late to start. You can start tonight.
  - Professional assistance might be needed to get you started on the right track

- DEVICES TO MONITOR YOUR EXERCISE PERFORMANCE
  - Portable/home biofeedback devices that use a small anal probe
  - Ideally under the guidance of a professional who is familiar with these products
PROFESSIONAL LITERATURE

- Moul, Judd. An important goal of prostatectomy: Minimizing incontinence, Contemporary Urology, March 1994: 15-27

- Moul, Judd For Incontinence after prostatectomy, tap a diversity of treatments, Contemporary Urology, April 1994: 78-88
RESEARCH

- Hundreds of studies on effects of conservative management in women
- Literature not so abundant with men
- Further research needs to be done on optimal timing and protocols for pelvic floor rehabilitation— for example pre-surgery, how soon post surgery
- Maybe even PRE-SURGERY, before the area is sore and inflamed
RESOURCES

- NAFC- National Association for Continence 1-800-BLADDER
- PFM exercise tapes, informational brochures, books
DMC SITES AND PROVIDERS

RIM STERLING HGTS – JANE FRAHM, KELLY DE LIND - PHONE 586 264-1043

RIM BRASZA CENTER – JANE FRAHM, CINDY DINSMORE - PHONE 313 745-1100

RIM WESTLAND CENTER – SUSAN COTTER - PHONE 734 722-5535

RIM NOVI CENTER – TINA FITZGERALD – PHONE 248 305-7575
DMC SITES AND PROVIDERS

RIM LAKES MEDICAL CENTER – RINKU SINGH, KIM TILLENS - PHONE 248 960-8237

RIM COMMERCE MEDICAL CENTER – SARAH LEVITT - PHONE 248 360-8700

RIM CROWNE POINTE – MYRLA GONZALES – PHONE 248 968-3900
THANK YOU FOR ATTENDING

TO START PHYSICAL THERAPY, CALL THE SITE NEAREST YOU

YOU WILL NEED:
Prescription from your doctor, stating diagnosis and “Evaluate and Treat”

If I may be of assistance, email me @ Jfrahm@dmc.org or call 313 745-4949 – voice mail
RIM Outpatient Locations