What We All Need To Know About Pelvic Health

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Objectives:

1. Explain the functional anatomy of the pelvic floor and its role in bladder and bowel control, respiration, balance and lumbopelvic stability.

2. To provide participants with current evidence to enhance clinical reasoning in the management of common pelvic floor dysfunction

3. To be able to perform basic interventions to address common bladder and bowel dysfunctions.

4. To be able to describe the role of a pelvic floor physical therapist to a patient and the process of referring to a specialist.
Did you know?

- Pelvic floor disorders affect almost **25%** of women in the United States.
- Urinary Incontinence (UI) affect **25 Million** people in the US.
- **50%** of men report leakage after prostate surgery.
- People with incontinence are more likely to also have low back pain.
- Nearly **40%** of Women between the ages of 20 and 45 have overactive bladder.
- Women and Men with UI are **3X** more likely to FALL than those without Leakage.
- **$66 billion** in 2007 in the US.

(National Association For Continence)
The Functions of the Pelvic Floor

Support: Holding Things Up

Sexual: Use it or Lose it

Sphincteric: When You Gotta Go

Stabilization and Breath: Your Inner Core

Sump Pump: Circulating Blood and Lymph

Image from adventpt
Pelvic Floor Muscles 101

Urogenital Triangle (Diaphragm)

Superficial

- Bulbospongiosus (cavernosus in men)
- Ischiocavernosus
- Superficial transverse Perineal

Middle Layer

- Deep Transverse Perineal
- Sphincter Urethra
Pelvic Floor Muscles 101

Anal Triangle

- Internal Anal Sphincter (Involuntary)
- External Anal Sphincter (voluntary)
Deep Muscles of the Pelvic Floor

**Levator Ani**

- Pubococcygeus
  - Puborectalias
  - Pubovaginalias
- Iliococcygeus
- Coccygeus
- Obturator Internus
Deep Hip/Pelvic Muscles Act as a Sling
Innervation

Pudendal Nerve

- S2,3,4
- Motor and Sensory
- Nerve to the Levator Ani

https://www.pudendalhope.info/node/13
Let’s Find Our Pelvic Floor!
PFM Exercise Prescription

- Individualized
- Correct performance of PFM contraction
- Quick contractions- 2 second hold, 4 second rest, 10 reps, 3 sets/day
- Endurance contractions- 5 second hold, 10 second rest, 10 reps, 3 sets/day
- Maximal intensity- 50%-75% of maximum contraction
The Power of Education

“The belief of doing correct PFM contraction was false in at least one of five postpartum women. Verbal instructions have a positive effect on performing PFMC in 73.6 % of women” - Vermandel et al. 2015.
Functional Anatomy of the Bladder
Pelvic Floor and Bladder Control

Storage Phase

- detrusor relaxed
- trigone contracted (internal sphincter)
- PFM contracted keeping all of the urine in
- outlet pressure > vesical pressure

Emptying Phase

- detrusor contracted
- trigone relaxed
- PFM relaxed
- outlet pressure< vesical pressure
Pelvic Floor and Bowel Function

- At Rest = Sphincter muscles closed
- Defecation = ↑ rectal pressure coordinated with relaxation of anal sphincters and PFM’s muscles

https://www.jaypeedigital.com/
Pooping Posture

- Sit fully on the toilet
- Knees higher than hips
- Rest forearms on legs
- Breathe
Pelvic Floor and Your Inner Core
Preserve the Canister

- Inhale: Diaphragm and PFM go down, rib cage expands (umbrella)
- Exhale: Pelvic floor rises belly flattens and ribs come back to resting
- Paradoxical breathing pattern can cause leaking
- Re establish breathing pattern
Common Pelvic Floor Dysfunctions

Overactive Pelvic Floor Muscles

Definition: Pelvic floor muscles are unable to relax or will contract during function, including defecation or micturition

Symptoms: Obstructive voiding or defecation, dyspareunia, pelvic pain

Signs: Absent voluntary relaxation, non relaxing pelvic floor and involuntary PFM contraction, Non Contracting PFM
Common Pelvic Floor Dysfunctions

Non-functioning PFM

Definition: A situation in which there is no palpable pelvic floor muscle action

Symptoms: Any pelvic floor symptom may be present

Signs: Non-contracting, non-relaxing pelvic floor muscles
Common Pelvic Floor Dysfunctions

Underactive Pelvic Floor Muscles

Definition: Pelvic floor muscles are unable to contract when needed

Symptoms: Urinary or fecal incontinence, pelvic organ prolapse (POP)

Signs: Absent or weak voluntary and involuntary PFM contraction, Non Contracting PFM
Incontinence

**Urge Incontinence:** Detrusor Overactivity

- Overactive Bladder (OAB): Sudden strong urge to urinate, “key in the door” voiding more than 8x/24 hours, running water
- Nocturia: waking up at night 1+ times to urinate
Incontinence

**Stress Incontinence:** PFM weakness or urethral hypermobility

- Failure to store urine secondary to decreased outlet resistance
- Loss of small volume of urine while laughing, coughing, jumping, etc
- Childbirth is a common cause

**Mixed Incontinence:** Combination of urge and stress
Incontinence

**Overflow Incontinence:** Outlet obstruction or under active neurogenic bladder

**Reflex Incontinence:** No sensation and no control of sphincters (CVA, Spinal Cord Lesion)

**Functional Incontinence:** Person can’t get to the bathroom fast enough
● Sudden onset of incontinence?
● Changes in sensation to the saddle area?
● Leaking occur after surgery or with a medication change?
● Burning/blood in urine/stool?
● Is there an odor change in vaginal discharge?
● Difficulty initiating the stream?
Putting it all together: Case Studies

Kim is a 45 y/o female, she’s a teacher and is on her feet all day, you are evaluating her for low back pain.

During evaluation she tells you that she used to go to boot camp 3x a week and also used to run 2x a week. But since she had her hysterectomy she started leaking with box jumps and stopped going and now only walks occasionally and then she coughs, and says, “Mom bladder strikes again, that’s normal for having 3 babies.”

What can you say next?
"About one-third of women have urinary incontinence and up to one-tenth have faecal incontinence after childbirth. Pelvic floor muscle training (PFMT) is commonly recommended during pregnancy and after birth for both prevention and treatment of incontinence."

(Woodley SJ, et al. 2017)
Direct Follow Up Questions

- Do you get a strong urge to urinate?
- Do you go to the bathroom more than 8x’s a day?
- Do you rush to go to the bathroom?
- Do you wear a pad?
- Do you wake up more than 2x’s at night to urinate?
External Palpation

• Palm Up

• Firm pressure to the perineum

• Cue patient to perform a PFM contraction
“Knack”

Reduce downward pressure on Pelvic Floor

- Pre contraction of PFM’s
- Perform prior to cough, sneeze, laugh
- Use TrA to help

Clinical Pearl: “Blow before you go”

- Exhale and contract pelvic floor prior to the “most challenging” part of any movement

http://www.cfnaturalhealth.com/
Prepare Your Patients For a Pelvic Health Evaluation

- Pelvic Floor PT’s have to take certification courses in order to perform Internal Examination
- Need a Rx. for Pelvic Floor Physical Therapy from a referring MD
- Thorough Obstetric/Gynecological History
- Musculoskeletal Examination
- Evaluation of Pelvic Floor Muscles (Digital palpation, RTUS, sEMG)
- Exercise, manual therapy, modalities
- Use of Accessories ie: vaginal weights, dilators

https://milltownphysiotherapy.com/
John

80 y/o male who was referred to you following a total knee replacement 5 days post op. You are his home care PT and are at your follow up visit and notice a smell of urine when you enter the house.

He did tell you during the evaluation that prior to his knee replacement he had a fall going to bathroom at night because he gets up more times than he count to go to the bathroom. He also told you that he had a prostatectomy 2 years ago.

His TUG score is 30 seconds

How can you help?
Bladder Retraining

- Bladder Diary
  - Assess Fluid Intake
    - 6-8, 8 oz of fluid/day
    - ½ oz/pound of body weight in fluids
    - 50% should be water
  - Patients Behavior
  - Fluid Management Strategies
  - Bladder Irritants
    - ie: Alcohol, spicy foods, Citrus

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Bladder Retraining

- Timed Voiding (Bladder Drills)
  - Implementing mandatory voiding times
  - Progress or decrease interval times based on success up to 3 hours between voids
  - Do not void between unscheduled times
  - Don’t skip a void even if you don’t “have” to go
Bladder Retraining

Urge Suppression Techniques “Bladder Wave”

- Heel/Toe Raises
- Count Backwards from 50
- Distraction
- Quick flicks
- Avoid Going “Just in case”

www.medbridge.com
Managing Nocturia

- Fluid Management
  - Limit Fluid to 2-3 hours before bedtime
  - Fluids during the day
- Elevate Legs
- Compression stockings during the day
- Practice diaphragmatic breathing to calm the urge
- 5-10 PFM contractions
Electrical Stimulation “Calm the Bladder”

Posterior Tibial Nerve

Intravaginal

Sacral Nerve

“There is promising evidence for the efficacy of a transcutaneous stimulation approach for the treatment of OAB” -Slovaka et al. 2015
Electrical Stimulation

- Non invasive
- Low Cost
- Easy to use
- Patients can use it in their homes
- Parameters: (to calm the bladder)
  - Frequency: 10-20 Hz
  - 10s on 10 seconds off,
  - Duration: 200-300µs
  - Intensity: Strong but comfortable
  - 5-7 days a week 30 minutes a day
Pelvic Floor Muscle Training is EVIDENCED BASED!

- ACP recommends first-line treatment with pelvic floor muscle training in women with stress UI. (Grade: strong recommendation, high-quality evidence)
- ACP recommends bladder training in women with urgency UI. (Grade: strong recommendation, moderate-quality evidence)
“ACP recommends against treatment with systemic pharmacologic therapy for stress UI”

“ACP recommends pharmacologic treatment in women with urgency UI if bladder training was unsuccessful”

Clinical Practice Guideline-2014
While I Have Your Attention......

There are approximately 4 million births/yr in the US

2.7 million are vaginal...

54,000-89,000 grade 3-4 Perineal Tearing........

What if 80,000 people with a full ACL thickness tear didn’t get rehab and were told: “You’ll be fine, and by the way: here’s a newborn to care for.....See you in 6 Weeks.”

@thedowntheredoc
Additional Resources

https://www.homehealthsection.org/assets/docs/IncontToolkitLnkd_11-17.pdf

https://www.pelvicsanity.com/single-post/Screening

https://aptapelvichealth.org

https://hermanwallace.com/

https://pelvicguru.com/
Thank You

FLORIDA PHYSICAL THERAPY ASSOCIATION
References

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