

PELVIC FLOOR AND ITS CONNECTION TO LOW BACK AND HIP PAIN

Presented by:

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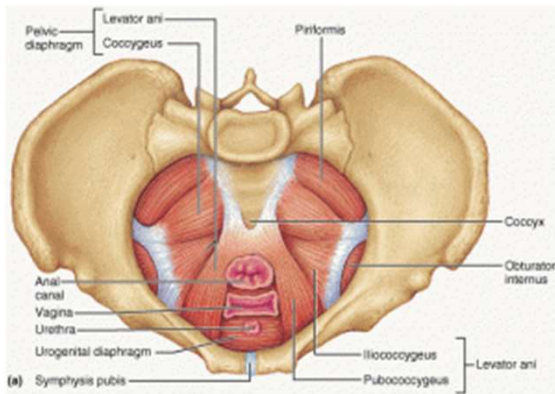
1

Prevalence of Pelvic Floor Dysfunction in Low Back, Hip and Pelvic Pain

- In females, 95.3% correlation of pelvic floor dysfunction with lumbopelvic pain¹
 - Tenderness, weakness, pelvic organ prolapse (POP)
- Individuals with low back pain have lower pelvic floor muscle function compared to individuals without low back pain²
 - Prescription of pelvic floor muscle exercises should be considered as part of treatment for low back pain
- Individuals with SI joint pain demonstrate altered motor control patterns of the pelvic floor muscles and diaphragm during ASLR³
 - Recommend integration of deep abdominal muscle coordination with pelvic floor and diaphragm function for lumbopelvic stability

2

What is the Pelvic Floor?



- The pelvic floor musculature is a group of muscles that sits like a sling within the pelvis and plays a vital role in providing stability, support and daily function
- The pelvic floor muscles, tissue, fascia and nerves work together to support and maintain function of the pelvic region
- The pelvic floor works to provide support for pelvic organs, stability to the low back, hip and pelvis, and controls bowel, bladder and sexual function
- It is part of a “canister” system that includes the multifidi (low back muscles), transverse abdominus (core muscle), diaphragm (respiratory muscle) and pelvic floor muscles to work as a unit for proper pressure modulation, stability and support

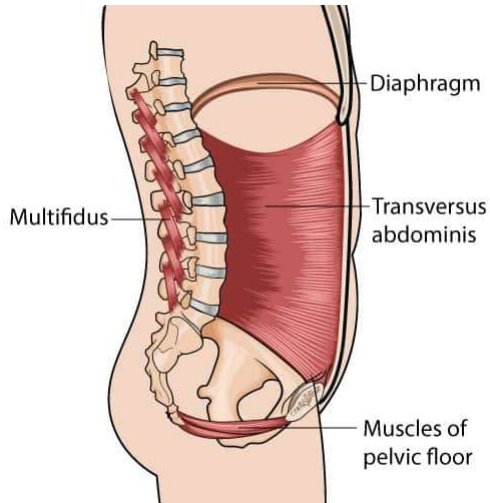
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“Core” Canister System

- **Multifidi**
 - Works to support the low back, pelvis/hips and trunk through movement
- **Diaphragm**
 - Works to modulate intraabdominal pressure through respiration
- **Transverse Abdominus**
 - Supports low back, pelvis/hips and trunk through movement
- **Pelvic Floor Muscles**
 - Pelvic organ support
 - Bowel, bladder and sexual function
 - Works synergistically with the diaphragm to help regulate intraabdominal pressure
 - Lumbopelvic stability

4

How is the Pelvic Floor Related on a Global Scale to the Body?

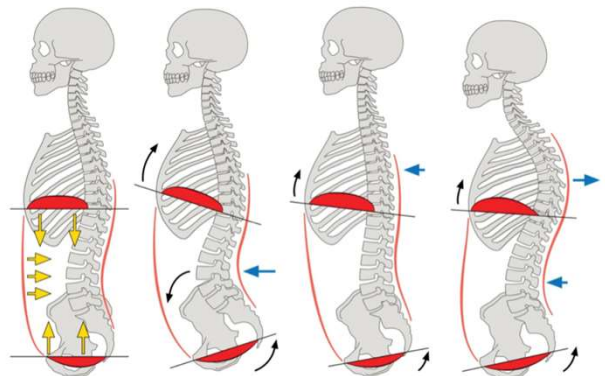


- It is typically not just about the pelvic floor, but how it coordinates and works in a synergistic fashion with surrounding structures of the body
- The pelvic floor is just one part of the functional system and commonly low back, hip and pelvic pain stems from a “break down” within the system

5

“Break Down” in the Canister System

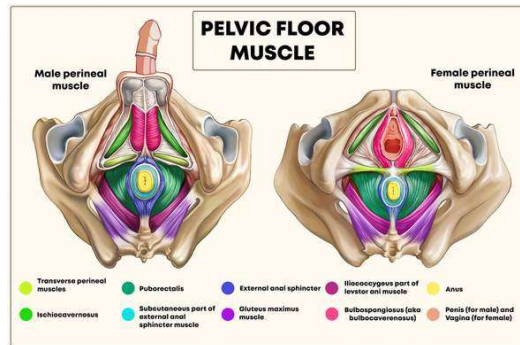
- **Intraabdominal pressure modulation**
 - If the diaphragm is not being recruited and used effectively, increased pressure throughout the canister can occur
- **Postural Deficits/Dysfunction**
 - Decreased lumbar, hip, thoracic and rib cage mobility can affect how the diaphragm and pelvic floor moves/coordinates
 - Shortened vs lengthened musculature throughout the pelvic floor, hips, lower back and thoracic region can lead to compensatory patterns
- **Decreased coordination throughout the canister system**
 - The pelvic floor and diaphragm **HAVE TO** work synergistically to provide stability, support and proper canister mechanics



6

Muscular Anatomy of the Pelvic Floor

- **Layer 1**
 - Bulbocavernosus
 - Ischiocavernosus
 - External Anal Sphincter
 - Superficial Transverse Perineal
- **Layer 2**
 - Deep Transverse Perineal
 - Sphincter Urethrovaginalis
 - Compressor Urethra
 - External Urethral Sphincter
- **Layer 3**
 - Levator Ani Muscle Group
 - Coccygeus
- **Pelvic Wall**
 - Obturator Internus
 - Piriformis



- There are multiple muscular layers to the pelvic floor
- Each layer has specific responsibilities, but ultimately they coordinate with each other as well as with the entire body for global support
- If dysfunctional, they can be **OVERACTIVE**, **UNDERACTIVE** or lack coordination (motor control issue)

7

Are the Muscles Overactive or Underactive?

- **Overactive pelvic floor musculature**
 - High resting tone
 - Sometimes has tenderness and/or pain with palpation
 - Tightness within the muscles
 - Decreased ability to RELAX
- **Underactive pelvic floor musculature**
 - Low resting tone
 - Decreased ability to CONTRACT
 - Sometimes presents with overcompensation of gluteal, hamstring and hip adductor region to perform pelvic floor contraction

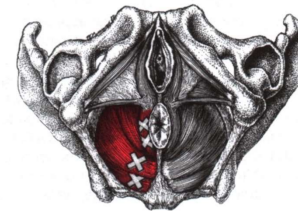
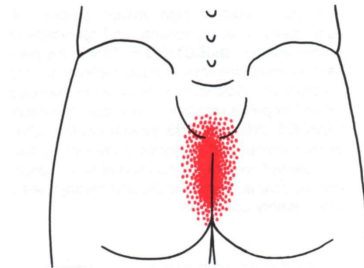
SOMETIMES SYMPTOMS CAN BE A COMBINATION OF OVERACTIVE AND UNDERACTIVE!

8

Referral Patterns of the Pelvic Floor⁴

- **Posterior Pelvic Floor Muscles**

- Levator Ani Muscle Group
- Coccygeus
- Sphincter Ani



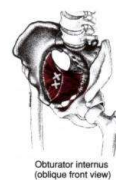
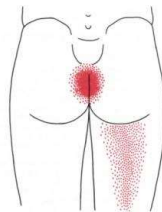
Sphincter ani, levator ani,
and coccygeus
(view from below)

- Refers to the global region of tailbone, sacrum and hip
- Most often refers near the coccyx, but can span out into the sacral and lower back region

9

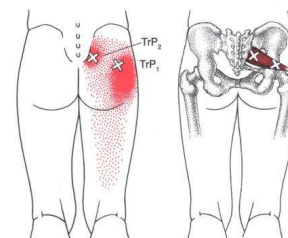
Referral Patterns of the Pelvic Floor⁴

- Obturator Internus
- Piriformis



Obturator internus
(oblique front view)

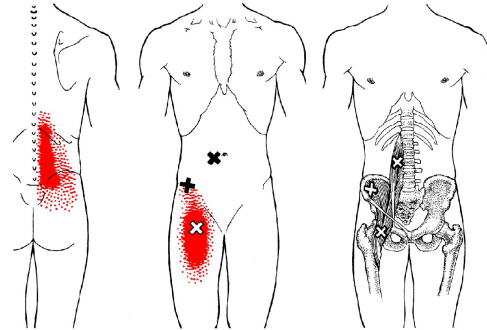
- Obturator Internus refers to the pelvic region as well as posterior thigh
- Piriformis refers to the pelvic region, posterior and lateral thigh and sacral region



10

Referral Patterns of Pelvic Muscles⁴

- **Iliopsoas (Psoas Major and Iliacus)**
 - Ipsilateral lumbar spine discomfort
 - Can refer into sacral and buttock region
 - Referred pain can extend into the anterior groin
- Due to its orientation within the body, it has an influence on the pelvic floor and canister system



11

Pelvic Floor vs Low Back vs Hip Pain

- As stated before, the pelvic floor is just one component of the bigger picture
- If the pelvic floor is dysfunctional, the lower back and hips could be dysfunctional as well
 - The bigger understanding is HOW are the lower back, hips and pelvic floor working or NOT working together
 - Over activity/increased resting tone, weakness, poor coordination/motor control, compensation from surrounding structures, etc.

12

Look for the “WHY?”

- The pelvic floor and canister system is complex and typically is a multimodal system that is dysfunctional
- It's important to assess the WHY
 - Why is there lower back or hip pain?
 - Past history of injury?
 - Past history of surgery to the hip/pelvic/low back region?
 - Don't forget about abdominal surgeries, gynecological surgeries and cesarean birth!
 - Women: Pregnancy and childbirth history? Menopause?
 - Men: Prostate, groin or hernia pain?
 - What is their occupation and could it be influencing their pain?
 - Manual labor vs. sitting at a desk
 - Posture?
 - Functional movements?
 - How is stair ascent/descent?
 - How is sit to stand?
 - Squatting?
 - Regional Interdependence?
 - What is the patient's bowel, bladder and sexual function?


13

Clinical Implications

- Is it just low back and/or hip pain or are there other underlying factors?
 - Examples: Incontinence (urinary and fecal), constipation, pelvic pain, pain with sexual intercourse, abdominal discomfort/cramping
 - Knee, ankle and thoracic or other body regions that could be influencing the problematic area?
- Did the patient have unsuccessful outcomes with other interventions targeting the lower back and/or hip region?
 - Examples: Past history of spinal or hip surgery but pain/limitations are still present, failed steroid injections, failed physical therapy that was not pelvic health focused
- It's important to assess for other symptoms that may be a result or contributor to a dysfunctional lumbopelvic system
- Use the Cozean screening tool in clinical practice to “screen” for pelvic floor dysfunction
 - Includes questions on lower back pain, tail bone pain as well as hip pain
 - A score of 3 or more indicates pelvic floor dysfunction
 - Referral to a pelvic floor physical therapist for assessment and potential treatment

14

Pelvic Health
 Physical Therapy Services



Cozean Pelvic Dysfunctional Screening Scale

- I sometimes have pelvic pain (in genitals, perineum, pubic or bladder area, or pain with urination) that exceeds a 3 on a 1-10 pain scale, with 10 being the worst pain imaginable
- I can remember falling onto my tailbone, lower back, or buttocks (even in childhood)
- I sometimes experience one or more of the following urinary symptoms:
 - Accidental loss of urine
 - Feeling unable to completely empty my bladder
 - Having to void within a few minutes of a previous void
 - Pain or burning with urination
 - Difficulty starting or frequent stopping/starting of urine stream
 - I often or occasionally have to get up to urinate two or more times at night
- I sometimes have a feeling of increased pelvic pressure or the sensation of my pelvic organs slipping down or falling out
- I have a history of pain in my low back, hip, groin, or tailbone or have had sciatica
- I sometimes experience one or more of the following bowel symptoms:
 - Loss of bowel control
 - Feeling unable to completely empty my bowels
 - Straining or pain with a bowel movement
 - Difficulty initiating a bowel movement
- I sometimes experience pain or discomfort with sexual activity or intercourse
- Sexual activity increases one or more of my other symptoms
- Prolonged sitting increases my symptoms

IF YOU CHECKED 3 OR MORE BOXES, PELVIC FLOOR DYSFUNCTION IS LIKELY. YOU MAY BENEFIT FROM AN ASSESSMENT FROM A PELVIC FLOOR PHYSICAL THERAPIST.

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15

What is Pelvic Health Physical Therapy?

- A pelvic health physical therapist will provide a thorough initial examination and look at the entire body and how it is functioning as a unit
- It is frequently not just one thing causing pelvic floor dysfunction, but a “break down” in the system
- It is more than “just doing kegels”
 - Often times, kegels are not the appropriate intervention due to the pelvic floor muscles being “too tight” and can actually increase lumbopelvic pain/dysfunction symptoms
 - The pelvic floor muscles are just one piece to the functional system and only treating this region may not resolve the issue
 - It’s important to ASSESS and figure out the WHY of the symptoms before intervention is administered


16

Common Diagnoses Treated by Pelvic Health Physical Therapists

- Urinary Incontinence
- Urinary Urgency/Frequency
- Nocturia
- Fecal Incontinence
- Constipation
- Symptoms Associated with Colorectal Conditions
 - Irritable Bowel Syndrome
 - Crohn's Disease
 - Post Abdominal and Bowel Surgeries
- Interstitial Cystitis
- Symptoms Associated with Endometriosis
- Vaginismus
- Vulvodynia
- Vestibulodynia
- Pre- and Post-Natal Care
 - Diastasis Recti
 - Sciatica/Lumbopelvic Dysfunction
 - Postural Re-education
 - Transitional Movement Training
 - Proper Lifting Mechanics
 - Body Mechanics/Positions for Breastfeeding
- Post-Menopausal Care
- Chronic Pelvic and Abdominal Pain
- Coccydynia/Tailbone Pain
- Pudendal Neuralgia
- Pelvic Organ Prolapse
- Pain with Sexual Intercourse/Sexual Dysfunction
- Hip, Lumbar, SI Joint, Pelvic and Groin Pain
- Post-Hernia Repair
- Prostate Dysfunction
 - Prostatitis (non-inflammatory and no active bacterial infection present)
 - Pre- and Post-Prostatectomy
- Testicular and Penile Pain
- Ejaculation dysfunction including retrograde, premature and painful ejaculation
- Peyronie's Disease

17

Pelvic Health
Physical Therapy Services



CHI Health
Rehabilitation Services

If you are experiencing symptoms that affect your quality of life, contact one of our pelvic health physical therapists for treatment options.

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5045 S 153rd Street, Suite 102
Omaha, NE 68137
P 402.717.1243

CHI Health Clinic – Valley View
1288 Valley View Drive
Council Bluffs, IA 51503
P 712.242.2406

Creighton University Medical Center – Bergan Mercy
7500 Mercy Road
Omaha, NE 68124
P 402.398.5750

Creighton University Medical Center - University Campus
2412 Cuming Street
Omaha, NE 68131
P 402.717.0380

Immanuel Rehabilitation Institute
6901 N 72nd Street
Omaha, NE 68130
P 402.572.2295

Lakeside Rehabilitation Center
16940 Lakeside Hills Plaza, Suite 109
Omaha, NE 68130
P 402.758.5050

Midlands
11111 S 84th Street
Papillion, NE 68046
P 402.593.3000

18

CHI Health Pelvic Health Navigator

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19

Thanks for your time!

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20

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