Beyond the Hip and Core: Pelvic Floor Dysfunction in Female Athletes

AOASM 2026

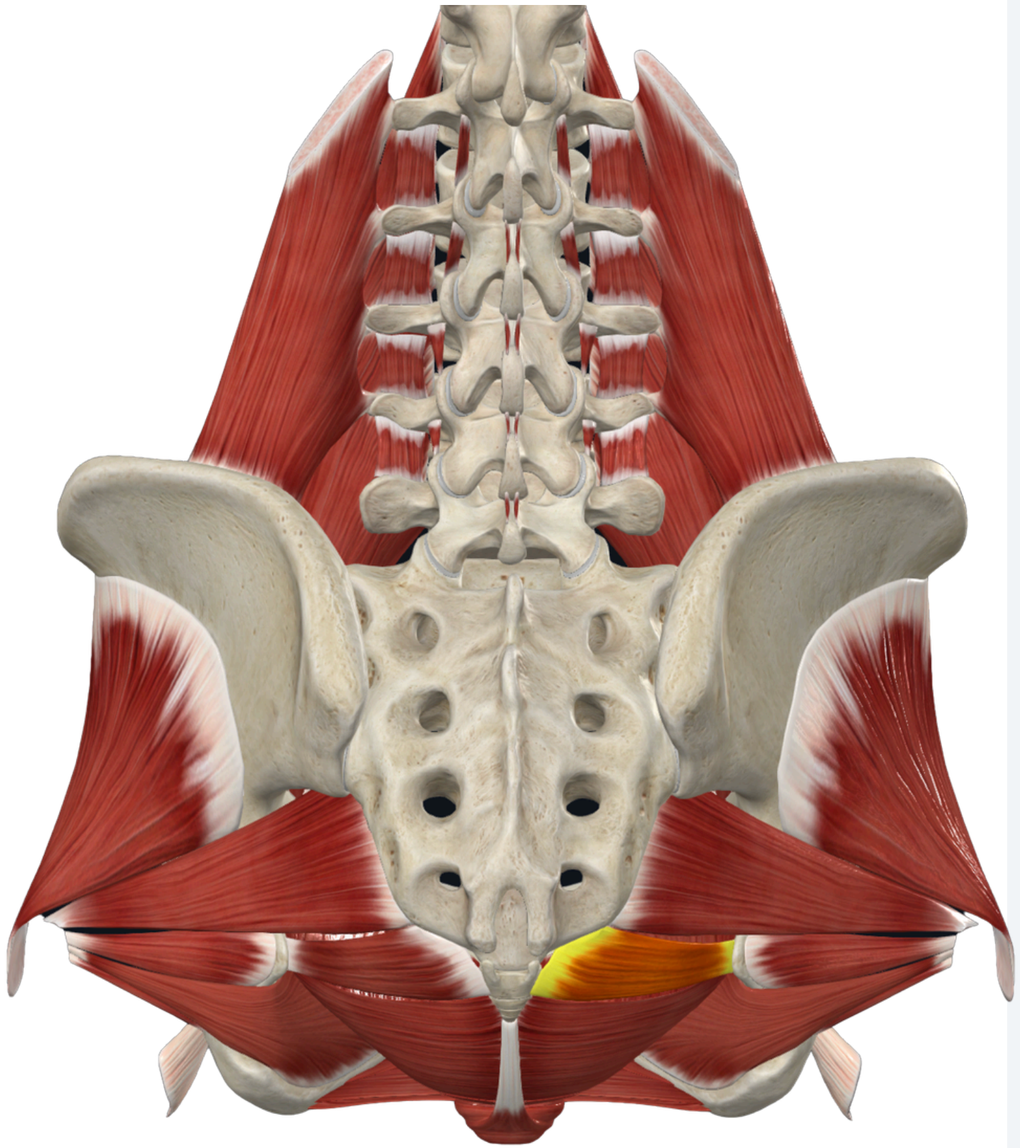
Presented by:
Dr. Rachel Doza PT, DPT, PCES, Cert DN
Pelvic Floor Physical Therapist

EMPOWERED
Physical Therapy

Lecture Objectives

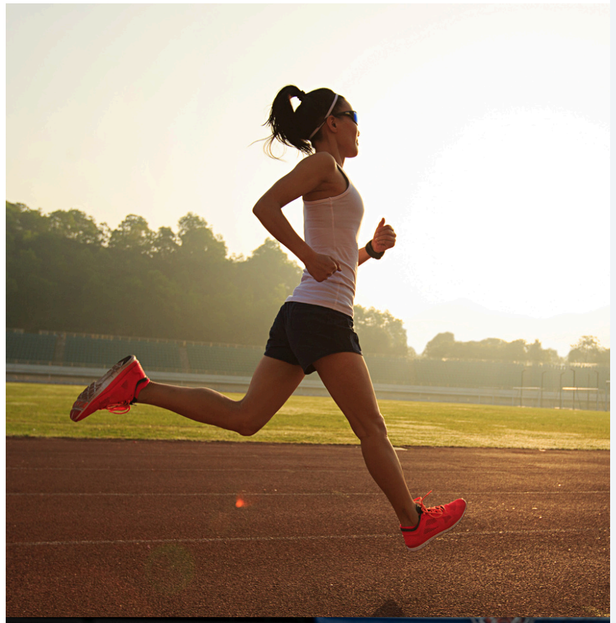
1. Describe the anatomy and role of the pelvic floor within the lumbopelvic canister, including its relationship to the diaphragm, abdominal wall, hips, sacroiliac joint, and pressure management during sport.
2. Summarize the scope of pelvic floor physical therapy, including common components of evaluation, internal and external assessment options, movement analysis, and evidence-based treatment approaches used in female athletes.
3. Recognize common athlete presentations associated with pelvic floor dysfunction, including urinary leakage, pelvic organ prolapse symptoms, sacroiliac and hip pain, dysmenorrhea, dyspareunia, and postpartum return-to-running challenges.
4. Implement a simple, evidence-informed screening process for pelvic floor dysfunction using symptom questions and a screening protocol to identify athletes who may benefit from a pelvic floor PT referral.
5. Demonstrate postpartum run-readiness screening and implement return-to-run protocol.
6. Apply foundational diaphragmatic and piston breathing strategies, breathing mechanics, and pressure-management principles that can be immediately integrated into sports medicine care and return-to-run progressions.
7. Identify opportunities for osteopathic sports medicine physicians to close treatment gaps through hormonal optimization, including recognition of hypoestrogenic states and appropriate use of vaginal estrogen to improve tissue resilience, urethral closure pressure, recurrent UTI risk, and dyspareunia.

Story time...



- 35 y/o F with CC R SIJ pain (also had intermittent SUI and superficial dyspareunia)
- Xray & MRI negative
- Laslett cluster negative
- Lumbar spine & hip joint tests negative
- Tried traditional PT, only minor improvement in pain.
- Friend suggested PFPT
- Reproduction of R SIJ pain with transvaginal palpation of R coccygeus muscle
    - “Someone finally ‘found’ my pain!”
- Treated in clinic with a combination of intravaginal manual therapy, single leg stability training, pressure management, and core re-training
- Significant improvements within 2 months

Why does this matter?

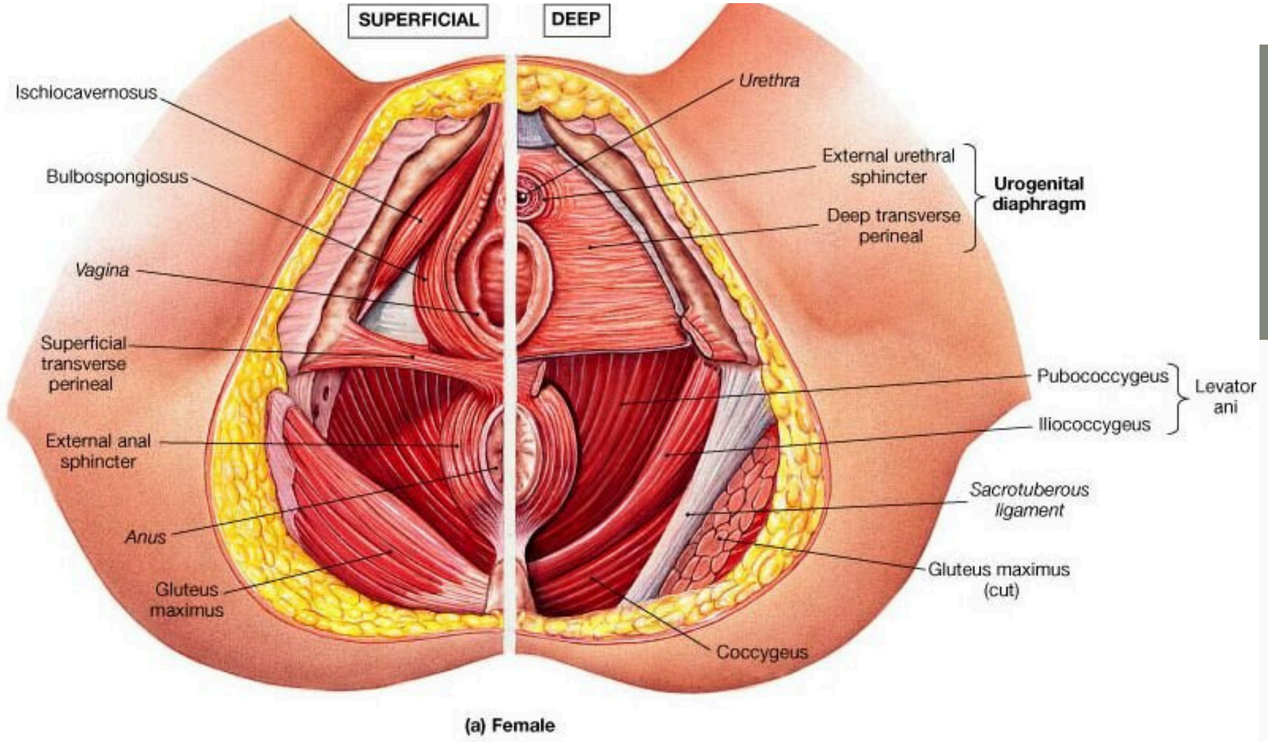


- **36–80% of female athletes**
  - SUI, FI (especially flatus), dyspareunia, and less commonly POP (1)
- **High-impact sport dramatically increases PFD risk:** UI ranges from 10.9% in cycling to **80% in trampoline athletes.** (2)
- Highest-risk sports include gymnastics, trampoline, CrossFit, powerlifting, weightlifting, swimming, and judo. (1)

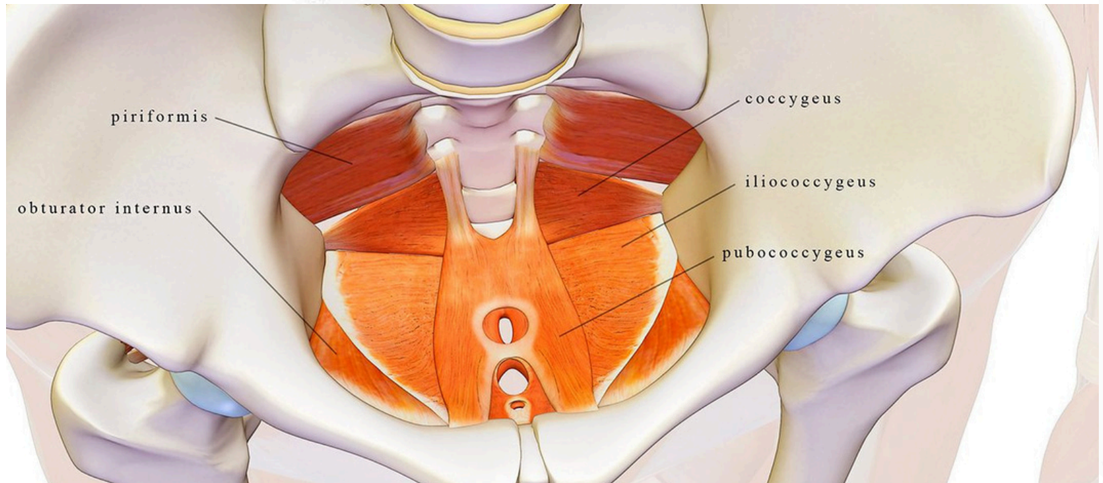
1. Almeida MB, et al. Scandinavian Journal of Medicine & Science in Sports. 2016.
2. Rodríguez-Longobardo C et al. Sports Health. 2024

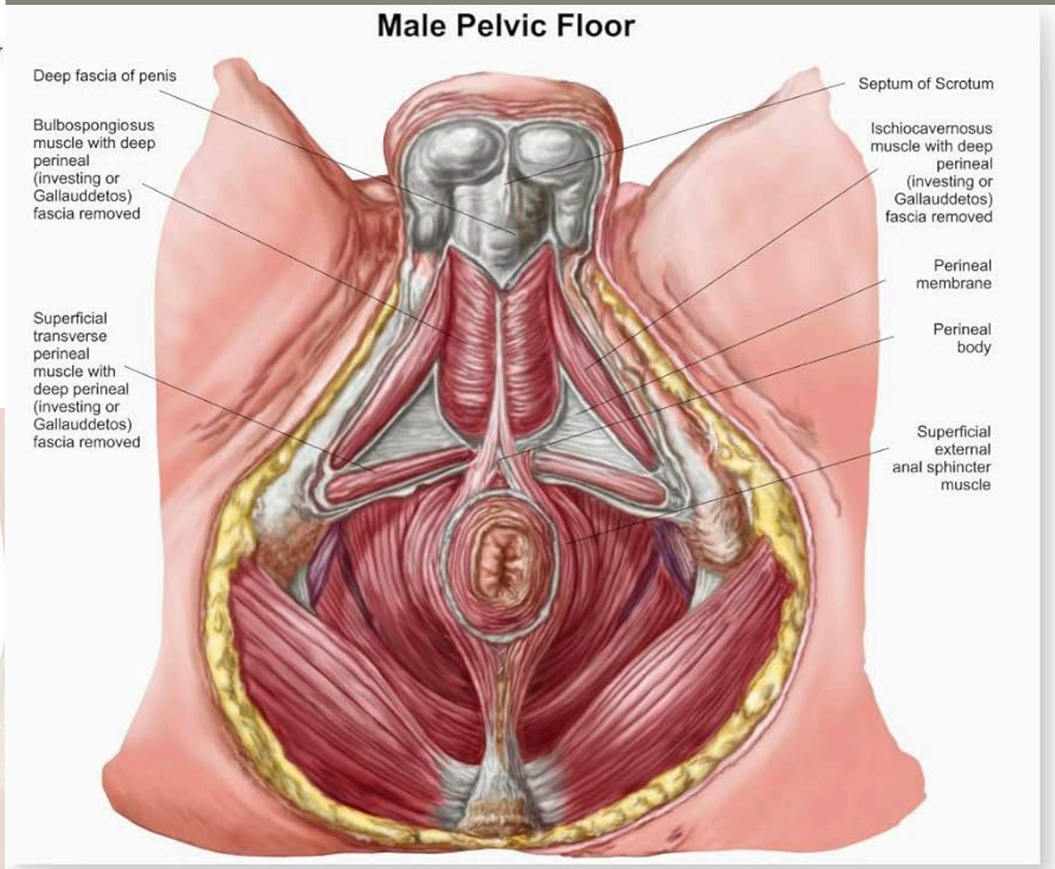
Pelvic floor- What's that?

A group of muscles, ligaments, nerves, and connective tissue



(a) Female

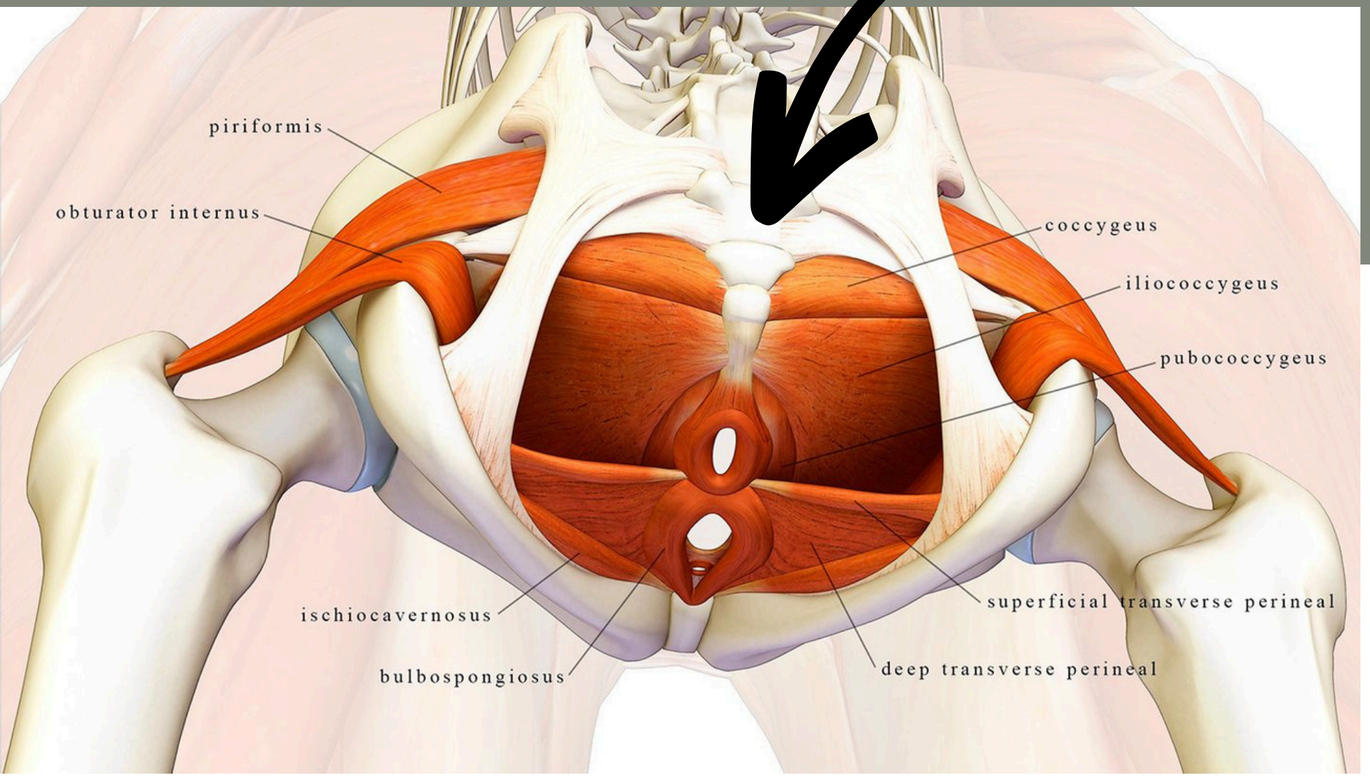


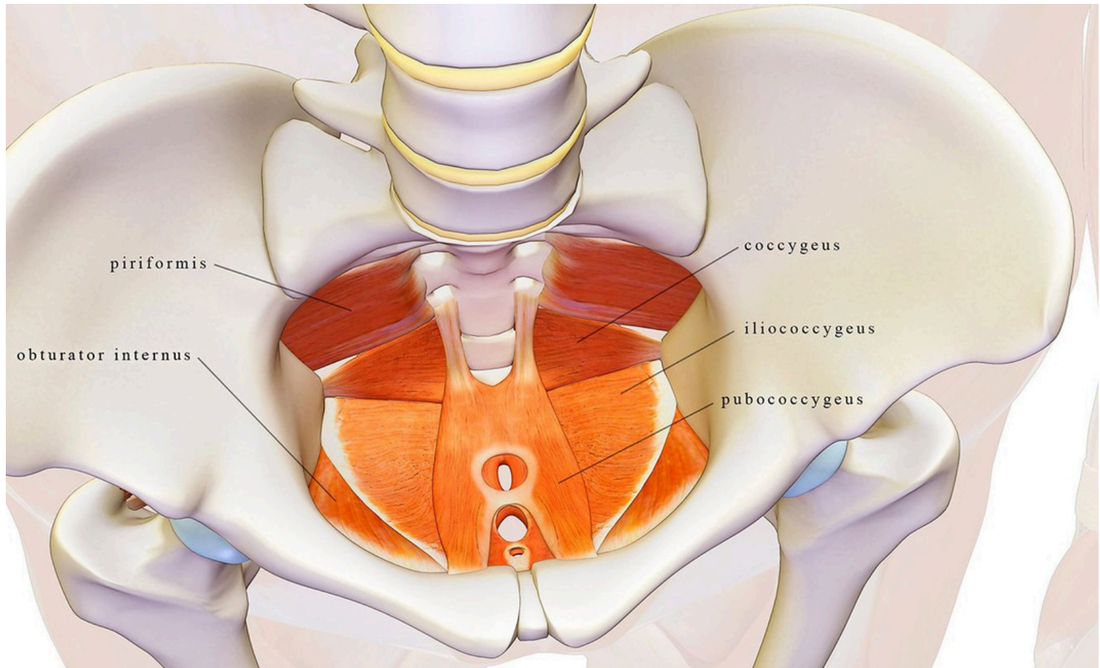


Relationship to spine

Attachments to coccyx (tailbone) and sacrum at the base of the spine

- spinal stabilizer



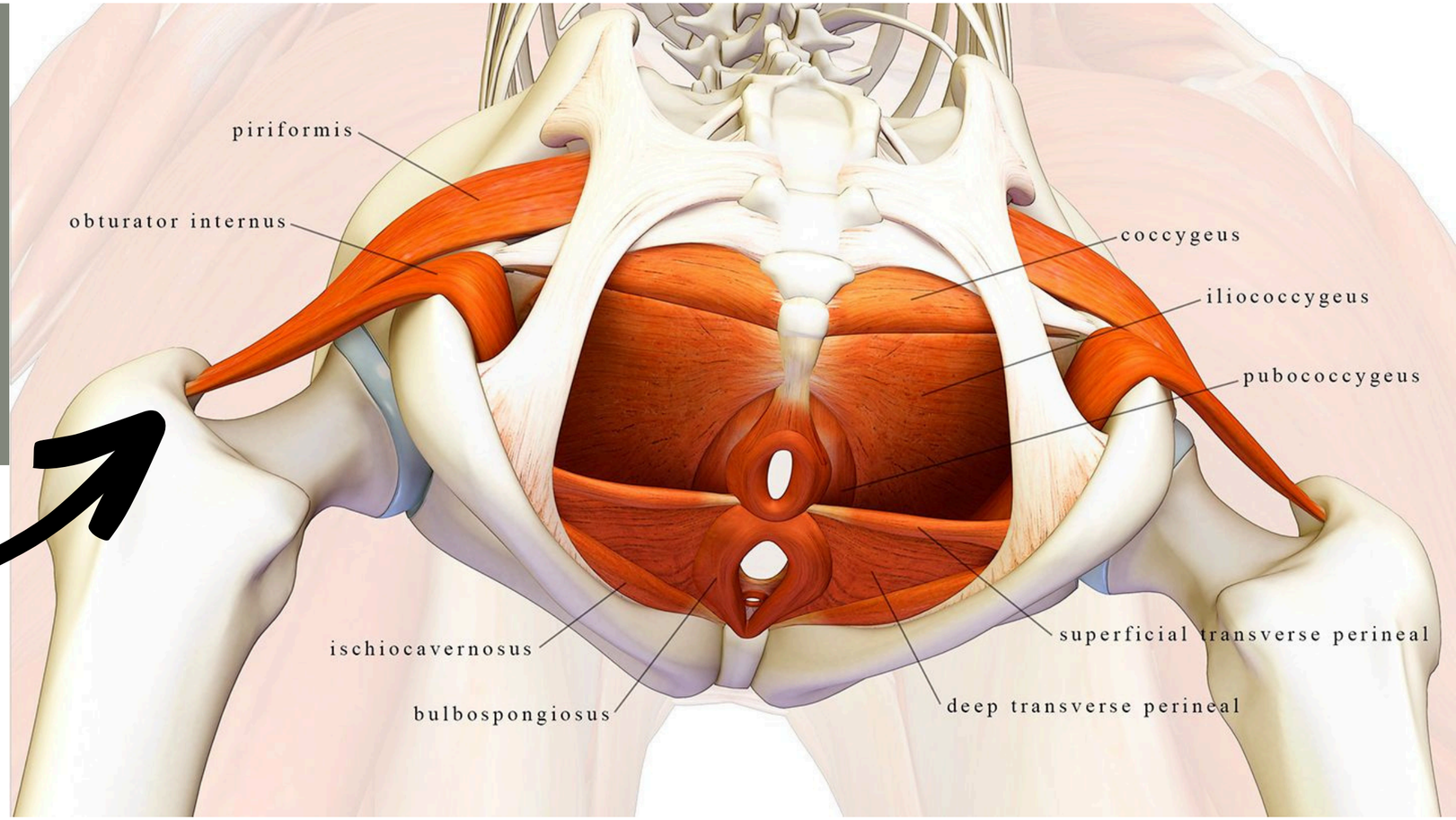


95% of women with lumbopelvic pain had PF dysfunction

1. Dufour S. et al. Musculoskeletal Science and Practice. 2018

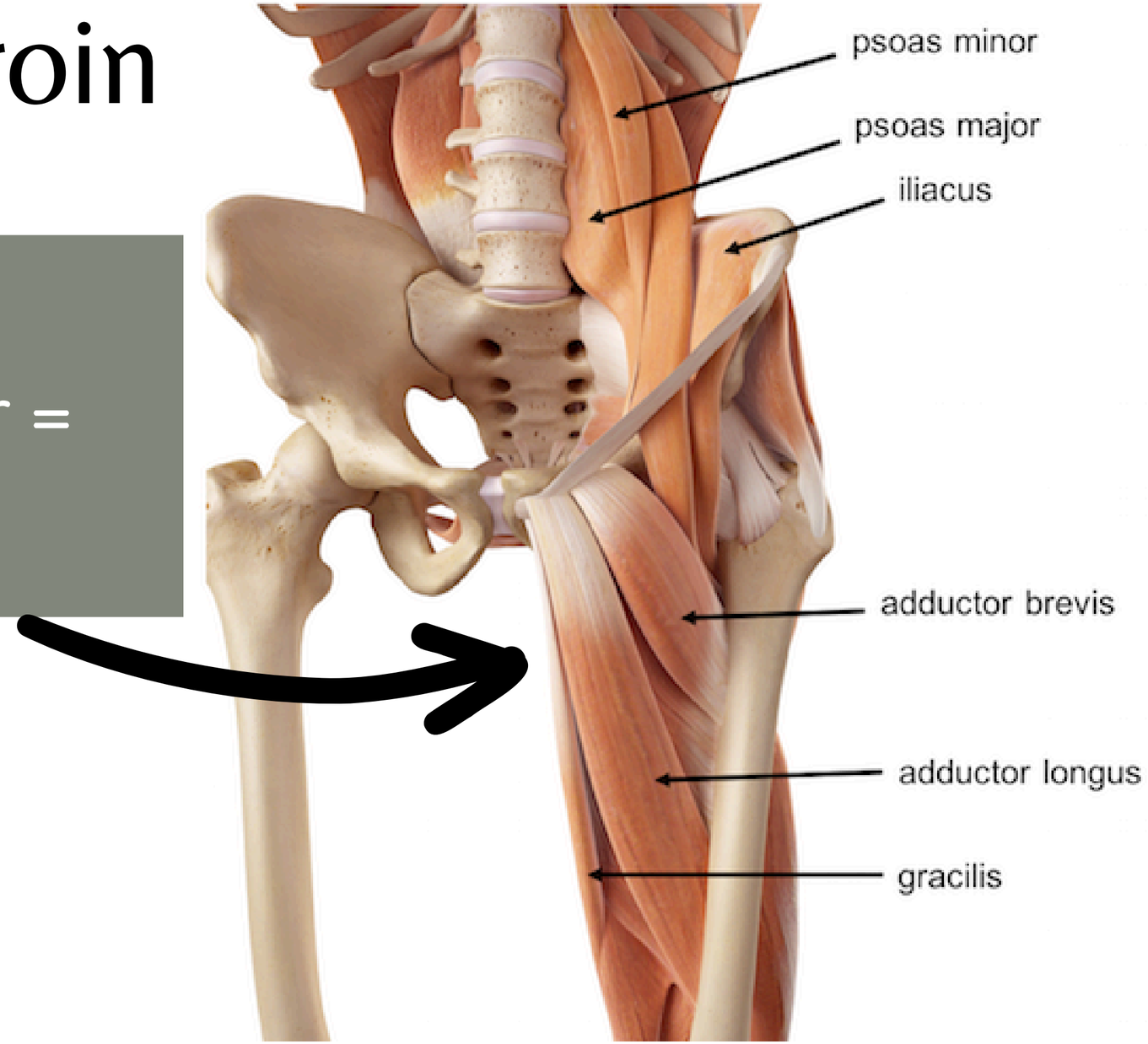
Relationship to hip

Obturator internus – assists with hip external rotation and abduction



Relationship to groin

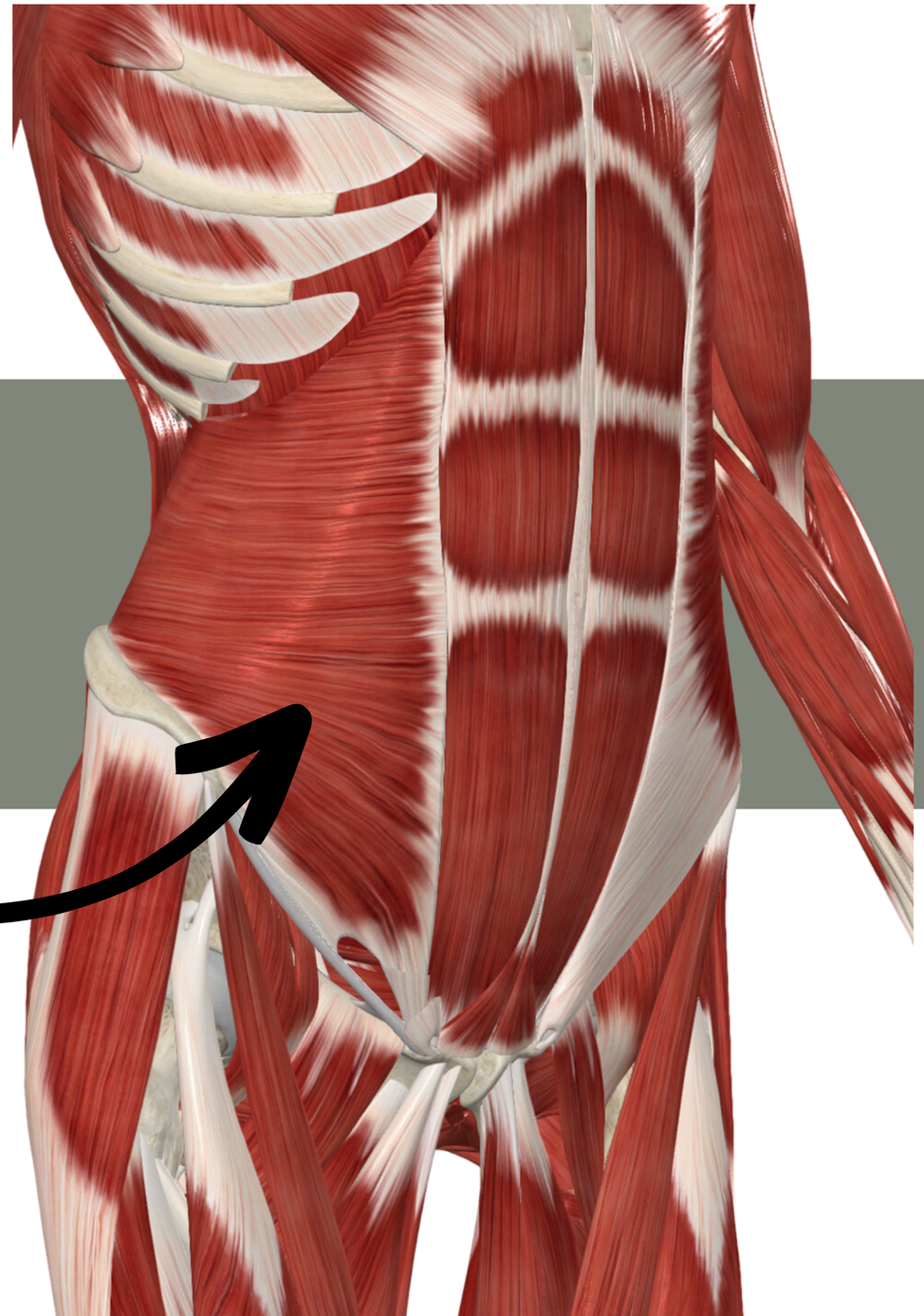
Adductor muscle fascia is continuous with pelvic floor = synergists



Relationship to core

Transverse abdominus (aka: TA, TRA, TVA, or “deep core”)

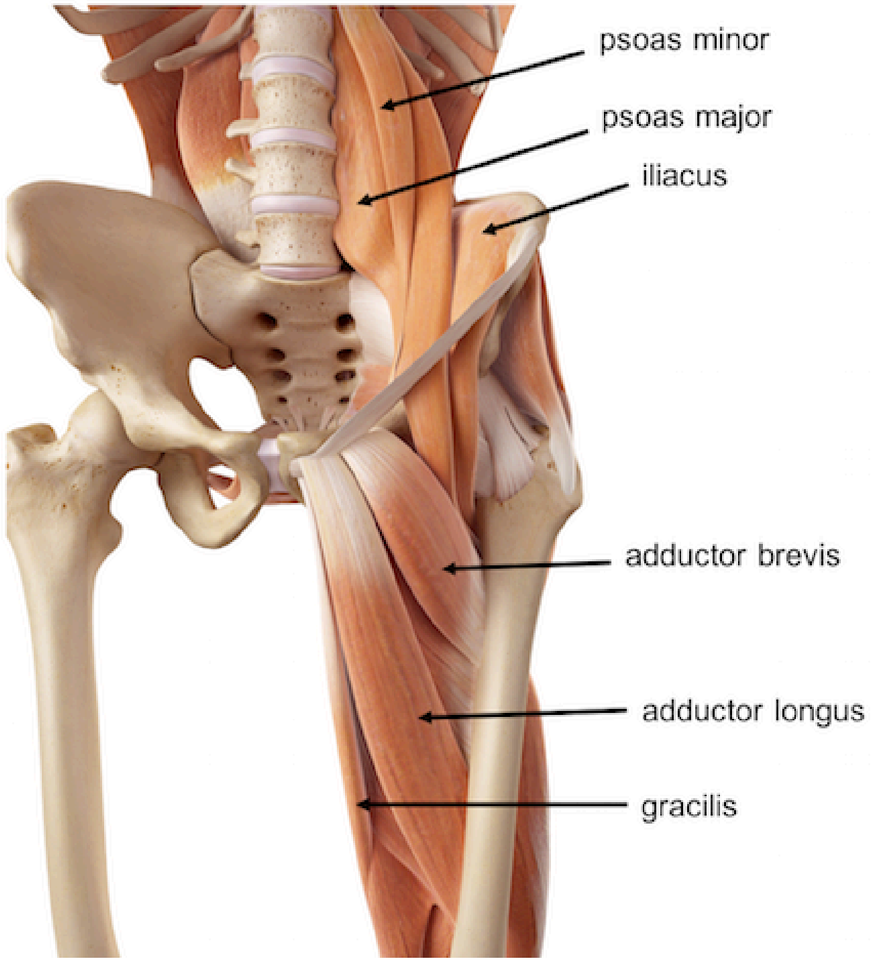
- fascial connections to pelvic floor
- contract together



More relationships

Quads, hamstrings, hip flexors, adductors, glutes, low back, and abdominal muscles attach to the pelvis.

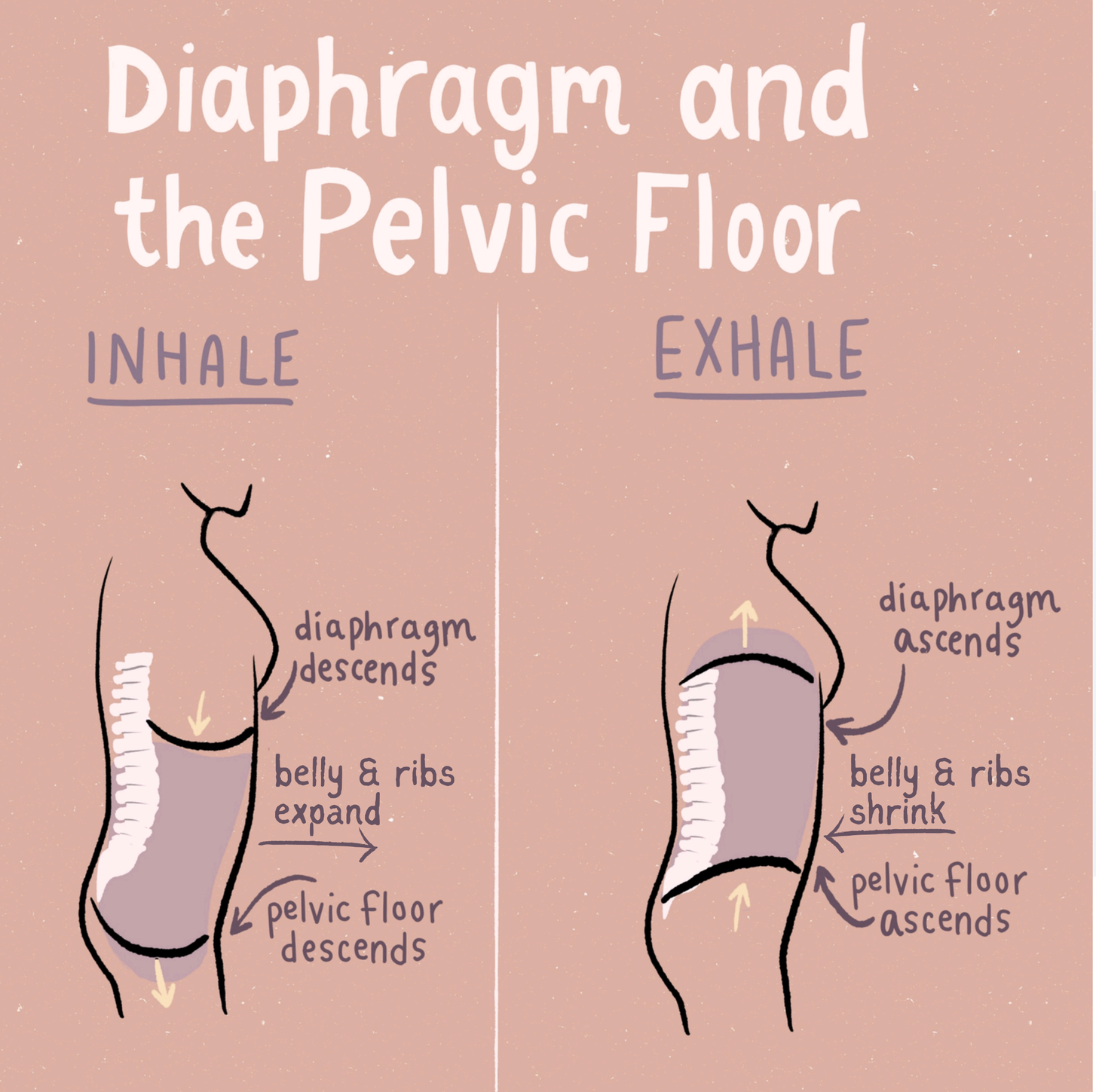
Tightness OR weakness in any of these muscles can put a torque on the pelvis, **creating extra demand on the pelvic floor muscles** as they attempt to compensate



Pause, breath check...

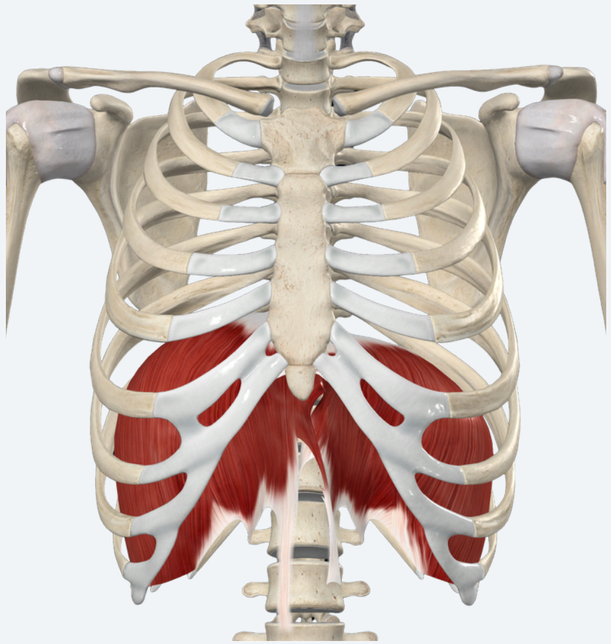
Put one hand on your chest, and one on your stomach.
Take 3-5 deep breaths

Diaphragm and the Pelvic Floor



You should have felt the hand on your belly rise FIRST and MORE than the hand on your chest

Diaphragmatic breathing

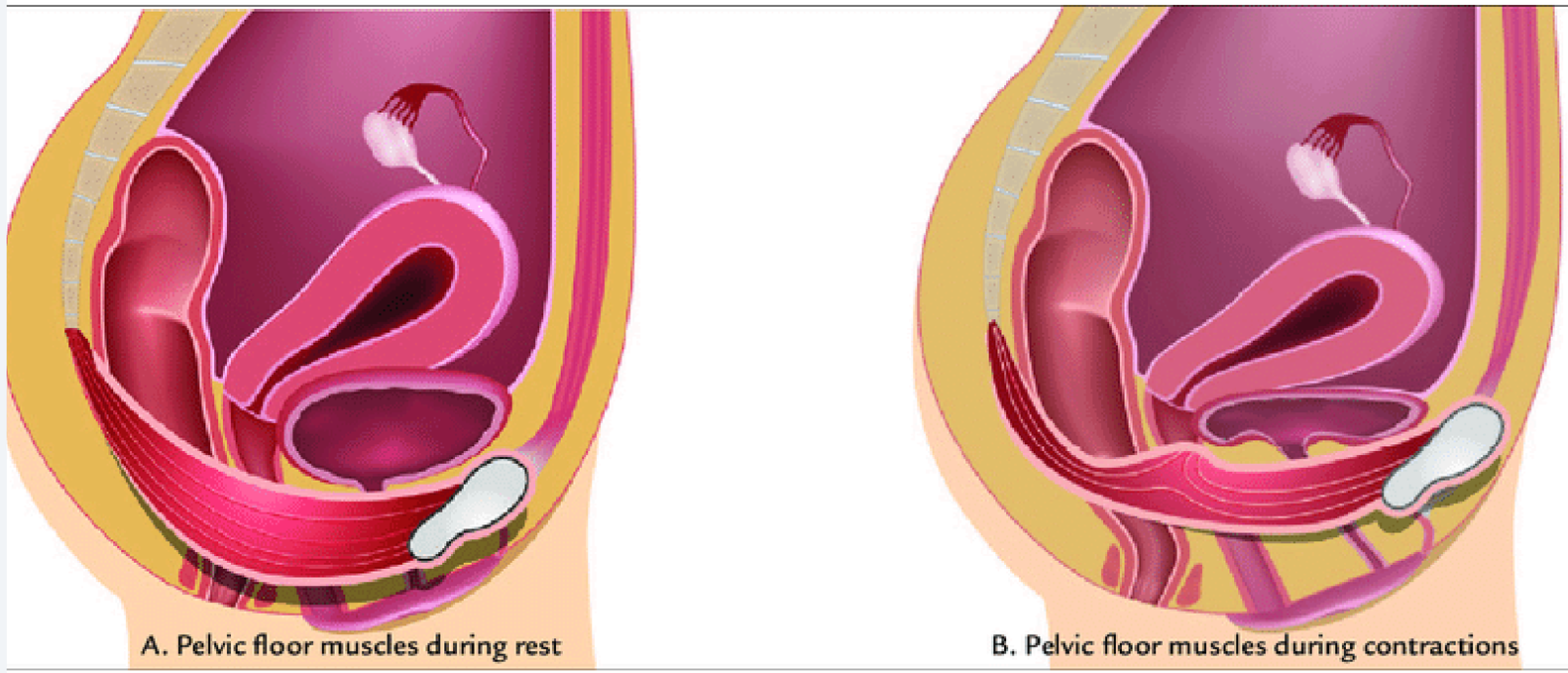


- **Autonomic Nervous System:** ↑ HRV (1), ↑ Parasympathetic Tone (2)
- **Cardiovascular:** ↓ Blood Pressure, ↑ Baroreflex Sensitivity (2)
- **Neuroendocrine:** ↓ Cortisol, ↓ Inflammatory Cytokines (3)
- **Central Nervous System:** ↑ Relaxation, ↓ Anxiety (4)
- **Gastrointestinal:** GERD Symptom Reduction (5)
- **Pelvic Floor:** improved PFM “precontraction” reflex time against SUI (6)

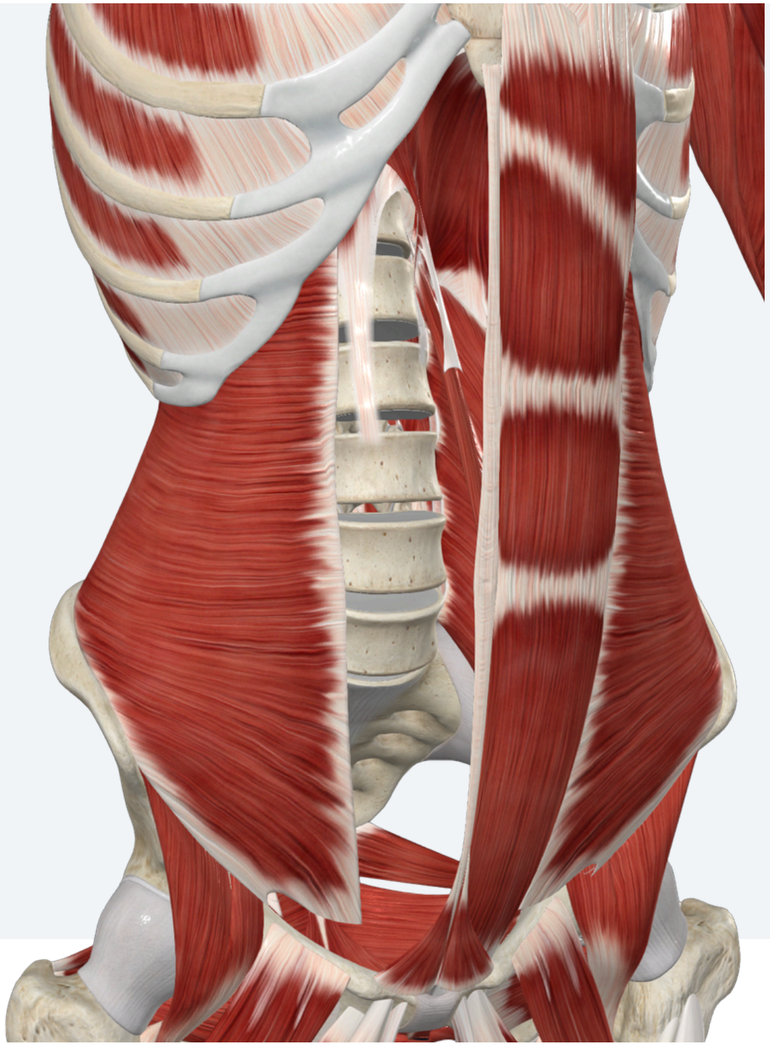
1. Laborde S, et al. Neuroscience and Biobehavioral Reviews. 2022.
2. Li C, et al. Medicine. 2018.
3. Maniaci G, et al. Stress and Health : Journal of the International Society for the Investigation of Stress. 2024.
4. Zaccaro A, et al. Frontiers in Human Neuroscience. 2018.
5. Kwon CY, et al. Complementary Therapies in Medicine. 2025.
6. Yakıt Yeşilyurt S, et al. Archives of Physical Medicine and Rehabilitation. 2026.

What is a pelvic floor muscle contraction, aka Kegel?

- voluntary contracting, drawing up and together of the pelvic floor muscles
- SHOULD feel muscles lift up towards your head
- kegels are just a small part of the puzzle
- pelvic floor issues are often due to tight and weak muscles
- if there is pelvic pain, kegels can make symptoms worse



The core + the pelvic floor

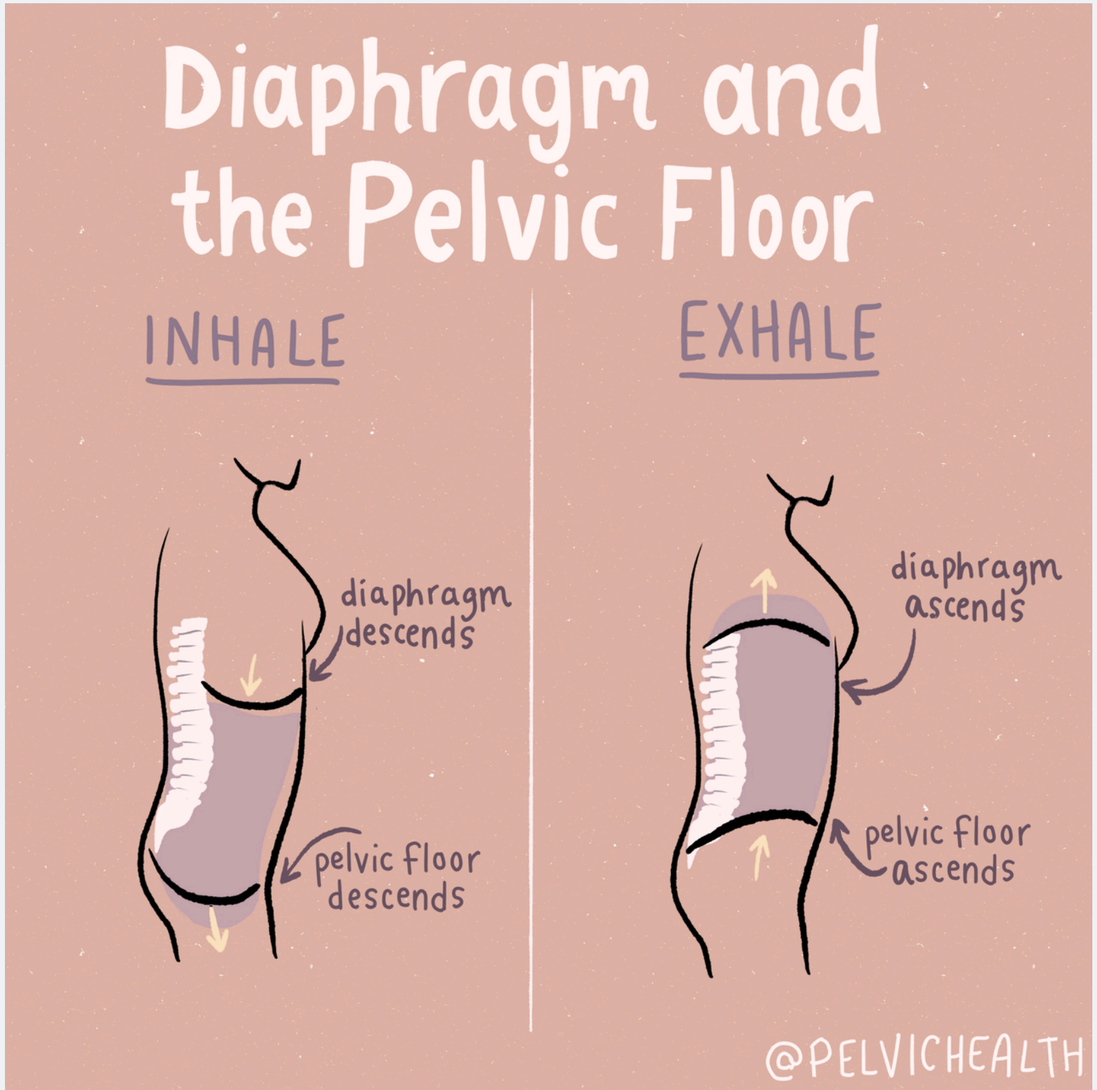


- TA is co-contractor with pelvic floor muscles
- Core exercises that target PFM improve both UI and low back pain, demonstrating interconnectedness (1)
- Higher intra-abdominal pressure = greater pelvic floor muscle response (2)

1. Ghaderi F et al. Urology. 2016
2. Amarenco G et al. The Journal of Urology. 2005

“Piston breathing” = effortful breathing

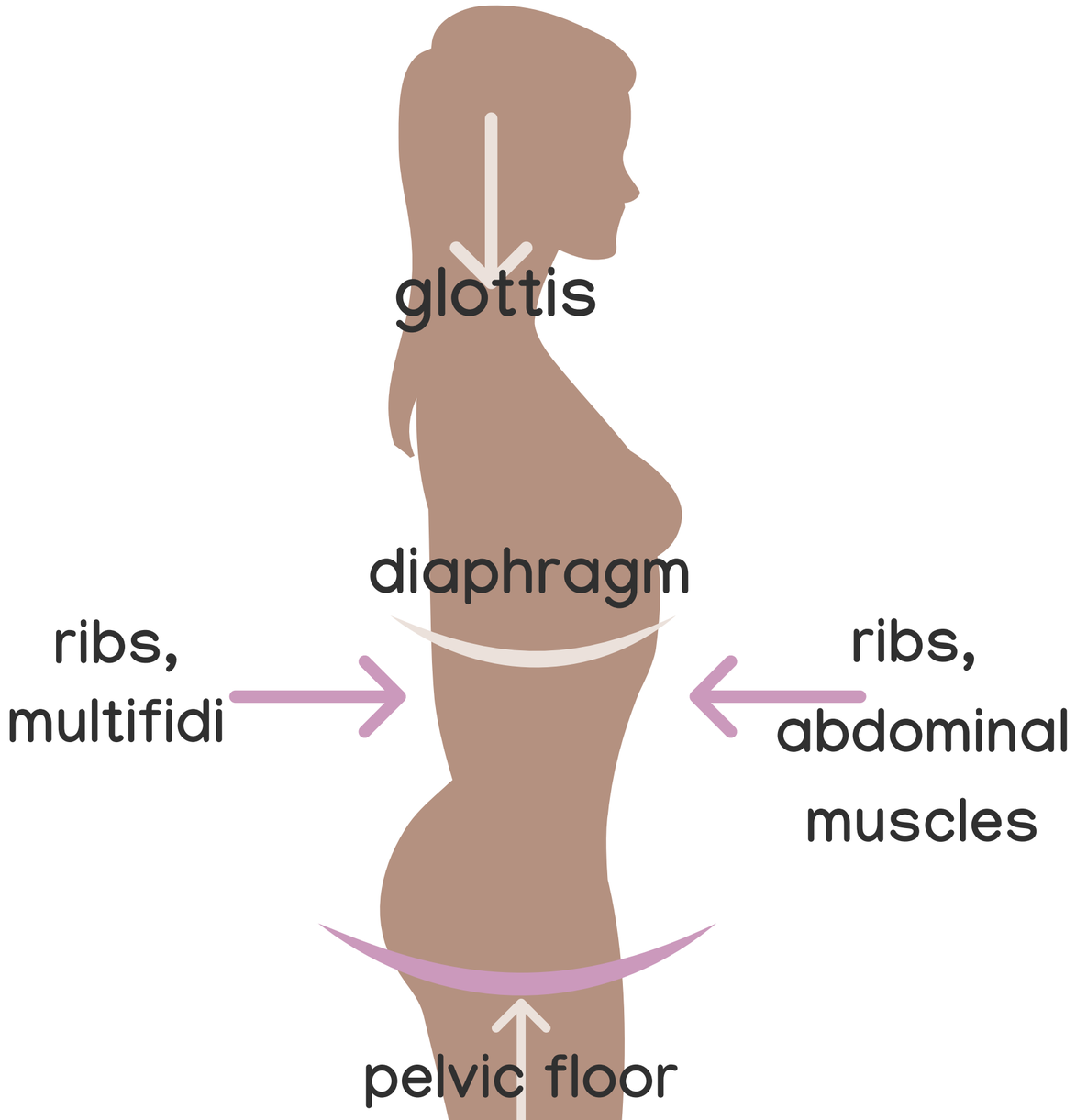
- “Piston breathing” = Exhale-driven TA + pelvic floor co-activation
- Inhale = 360 breath in
- Exhale with effort = voluntary contracting, drawing up and together of the pelvic floor muscles
    - SHOULD feel muscles lift up towards your head
    - Air (pressure) leaves your mouth/nose

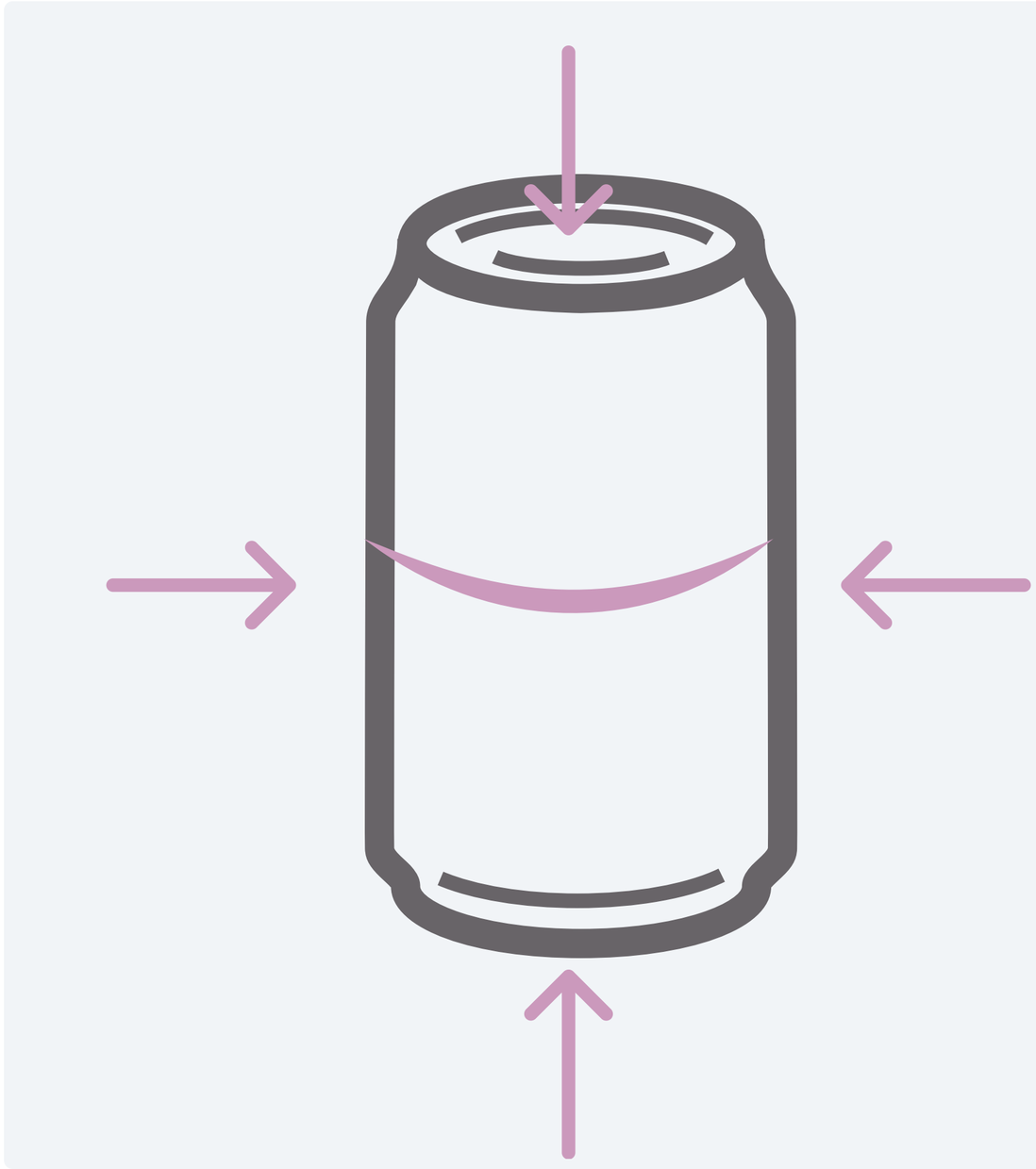


Pressure management system

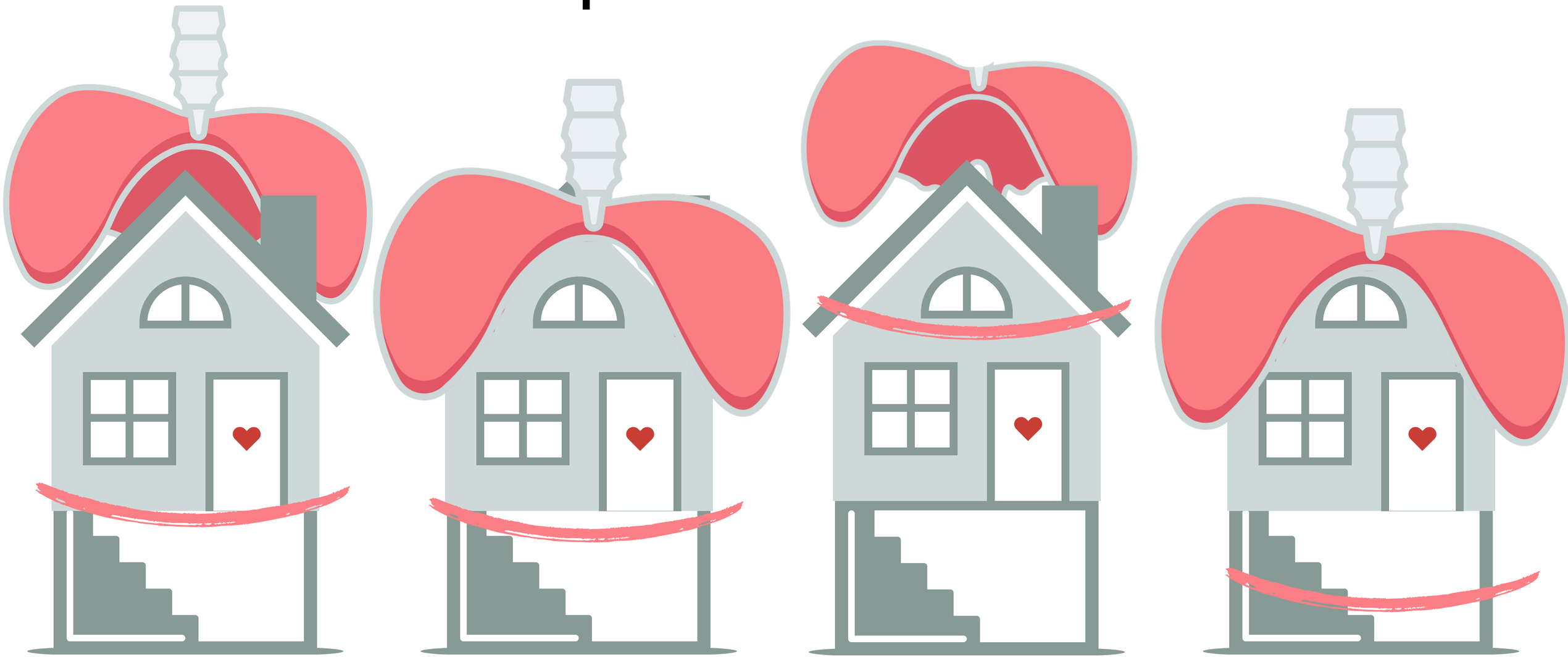
Pressure management system

Pressure management system





Your “pelvic floor house”



Clinical implications of dysfunctional breathing

- 90.6% of 1,933 competitive athletes had dysfunctional breathing patterns; only 9.4% demo'd diaphragmatic breathing. (1)
- Often misdiagnosed as asthma/EIB, leading to unnecessary pharmacotherapy.
- Disrupts posture, spinal stabilization, and running gait mechanics. (2)
- Healthy co-contraction= PF + TrA
- Breathing problems ↑ risk of back pain; back pain ↑ risk of incontinence (3)
- Disrupts coordination of deep PFM layer

1. Shimozawa Y, et al. Journal of Strength and Conditioning Research. 2023.
2. Greiwe J, et al. The Journal of Asthma : Official Journal of the Association for the Care of Asthma. 2022.
3. Smith MD, et al. The Clinical Journal of Pain. 2014.
4. Journal of Applied Physiology. 2019. Aljuraifani R,

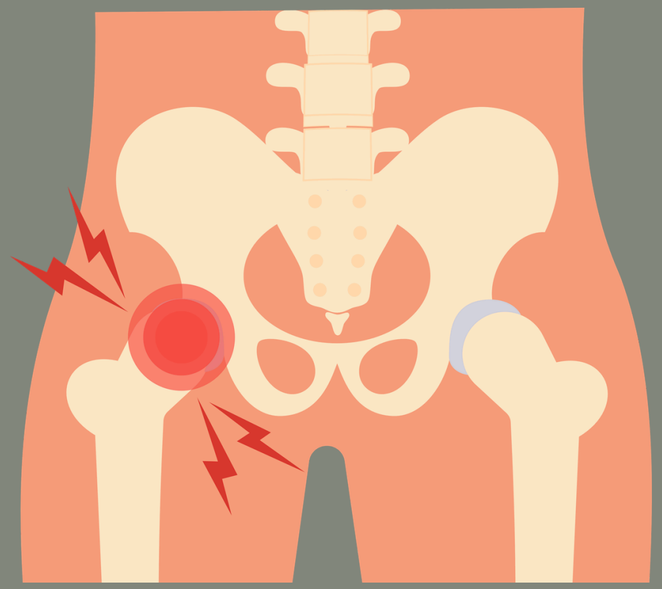
Common Athlete Pelvic Complaints

Common Athlete Pelvic Complaints:
Stress UI & Leakage

- Is Urethral Closure Pressure > forces?
- Determination of cause of leaking (strength, timing, coordination, combo?)
- Pressure canister balanced?
- Biomechanics of impact activity?
- Strength deficit in PFM alone? = targeted kegels
- PFPT is highly effective: 56% cure vs 6% with no treatment (1)

1. Dumoulin C et al. The Cochrane Database of Systematic Reviews. 2018

Common Athlete Pelvic Complaints:
Hip/SIJ/Groin pain



Prevalence in Athletes:

- Pelvic floor dysfunction (PFD) accounts for 8.11% of long-standing **groin pain** syndrome in female athletes (1)
- 95.3% of women with lumbopelvic pain demonstrate some form of PFD (2)
- Women with external lumbar, hip, or pelvic girdle pain are **7.24 times** more likely to have pain on vaginal pelvic floor muscle exam (3)

1. Bisciotti GN et al. The Journal of Sports Medicine and Physical Fitness. 2022
2. Dufour S et al. Musculoskeletal Science & Practice. 2018
3. Dune TJ et al. International Urogynecology Journal. 2023

Common Athlete Pelvic Complaints:
Pelvic Organ Prolapse- Defining it

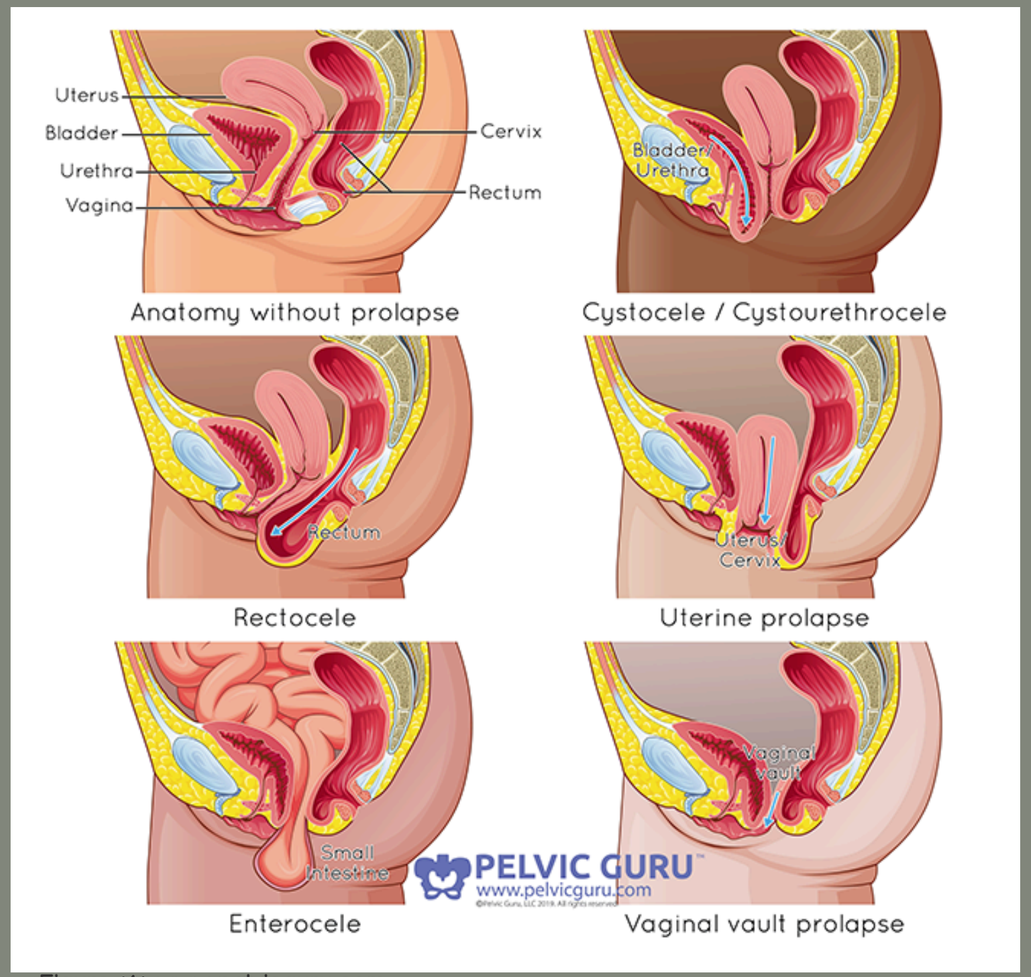
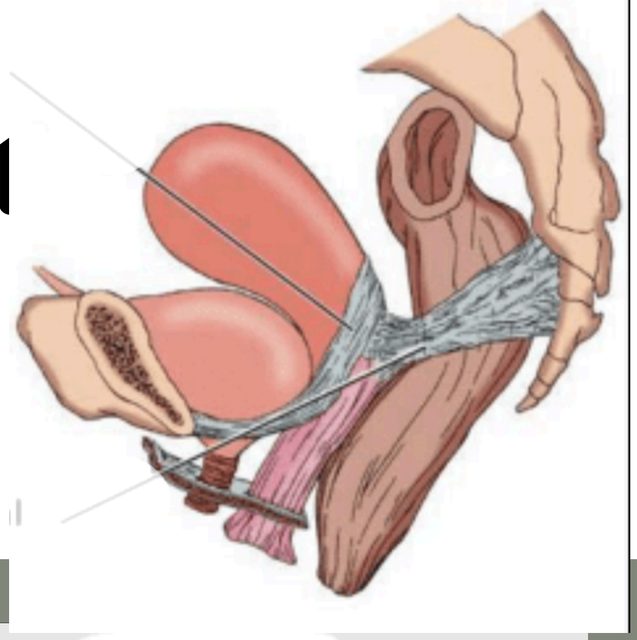


Figure (1) www.pelvicguru.com

- The descent of pelvic organs into or beyond the vaginal canal as a result of impaired pelvic floor and <u>connective tissue support</u>

Common Athlete Pelvic Complaint

Pelvic Organ Prolapse- Defining it



Functional anatomy

Endopelvic fascia (gray)

A. Parametrium/ Paracolpos*

B. Uterosacral/ Cardinal ligaments*

C. Rectovaginal fascia*

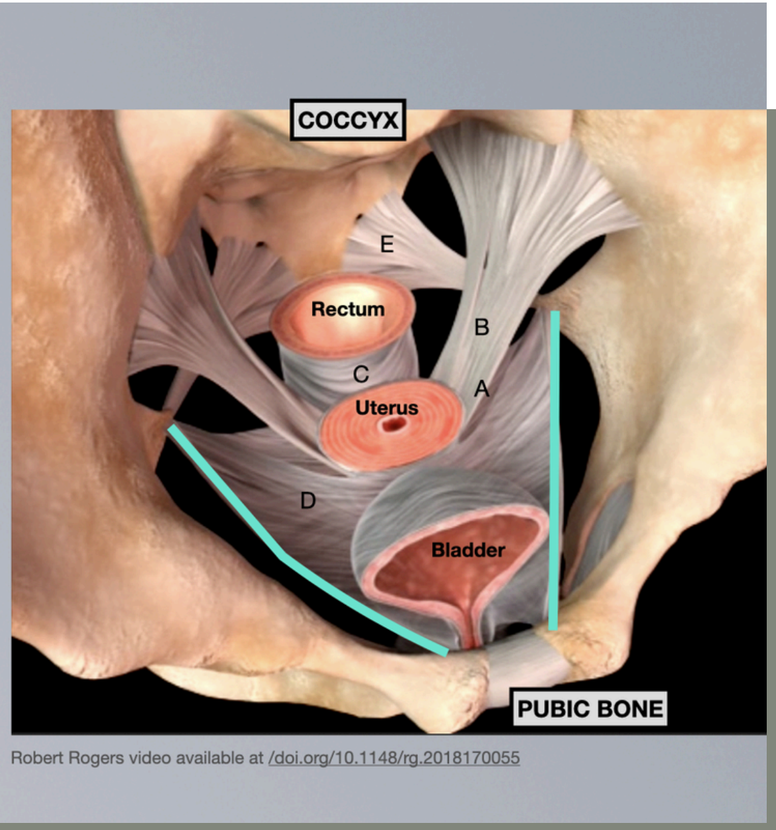
* Damage may lead to the development of uterine prolapse and enterocele.

D. Pubocervical fascia#

Damage may lead to the development of cystocele.

E. Sacrospinous ligament

Arcus tendineus (green)



Robert Rogers video available at /doi.org/10.1148/rg.2018170055

Figure (1) A. Miranda da Silva, European Society of Radiology, 2022

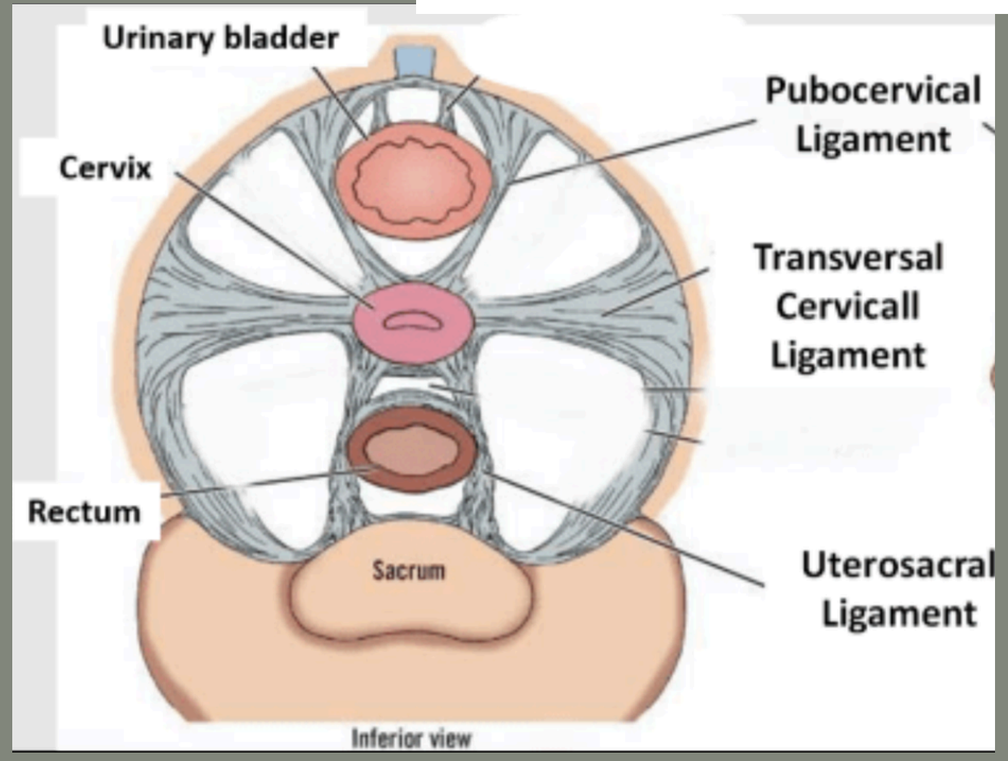
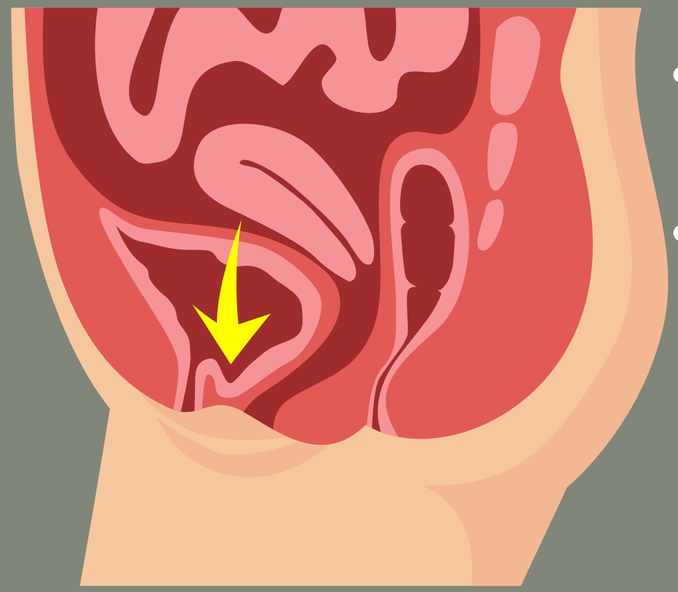


Figure (2) https://www.physio-pedia.com/index.php?curid=30323

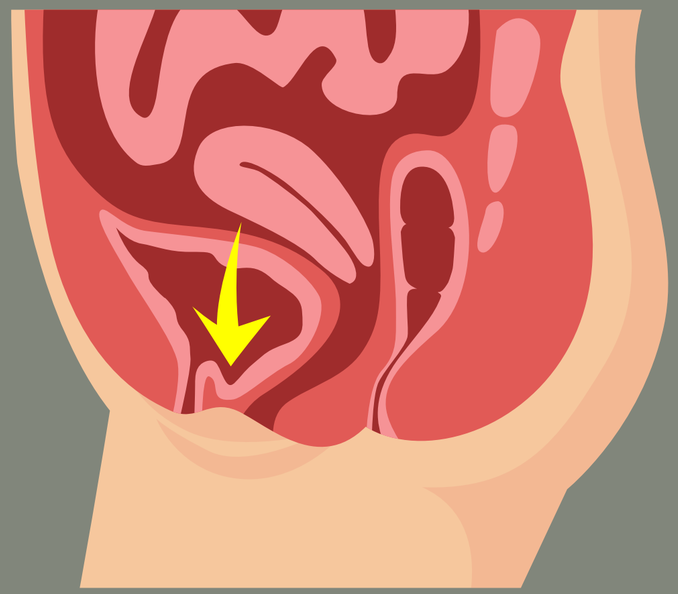
Common Athlete Pelvic Complaints:
Pelvic Organ Prolapse- Prevalence



- POP prevalence in athletes ranges from 0–23%, highest in Olympic weightlifters and powerlifters (1)
- Up to 23% of female runners report POP symptoms during running (2)
- Prevalence rates of POP in sports vary widely for symptomatic POP, partly due to inconsistent definitions of what constitutes POP (1)
    - Stage I prolapse does not meet the threshold for clinical POP (3)
- Parity remains the strongest risk factor (1)

1. Bø K, et al. International Urogynecology Journal. 2023.
2. Resende APM, et al. International Urogynecology Journal. 2026.
3. Collins SA, et al. International Urogynecology Journal. 2021.

Common Athlete Pelvic Complaints:
Pelvic Organ Prolapse- Symptoms



Athletes report:

- Vaginal heaviness, pressure, or bulge, often noticed only during exercise, not at rest (1)
- Dragging pain in the lower abdomen (2)
- Urinary leakage with exertion (stress urinary incontinence) (3)
- Need to splint (digitally reduce prolapse) to void or defecate (4)
- Symptoms worsen with prolonged standing, gravity-dependent positions, and high-impact activity

1. Resende APM, et al. International Urogynecology Journal. 2026.
2. Arbieto ERM, et al. Sports Health. 2025.
3. Baessler K, et al. The Cochrane Database of Systematic Reviews. 2026.
4. ACOG Practice Bulletin, Number 214. Obstetrics and Gynecology. 2019.

Common Athlete Pelvic Complaints:
Pelvic Organ Prolapse- Treatment

Figure 1)https://www.coopersurgical.com/healthcare-providers/milex-pessaries-portfolio/

- PFPT to improve pressure mechanics, strength, endurance, and coordination (1)
- Activity modification: Breathing strategies (exhale on exertion), avoid Valsalva, graduated return to high-impact activity
- Pessary: first-line nonsurgical treatment; up to 92% of women can be successfully fitted; pessary + PFMT superior to PFMT alone (2)
- Lifestyle: Treat constipation, avoid chronic straining/bearing down.
- Surgical (if conservative measures fail)

1. Hagen S, et al. The Cochrane Database of Systematic Reviews. 2011.
2. ACOG Practice Bulletin, Number 214. Obstetrics and Gynecology. 2019.

Common Athlete Pelvic Complaints:
Painful Intercourse (Dyspareunia)

Prevalence in Athletes:

- Dyspareunia affects ~10–20% of women in the general population (1)
- Rates are significantly higher in athletes:
  - **63.5% in track and field athletes** (2)
  - 48.7% in CrossFit athletes (3)

1. Hill DA, et al. American Family Physician. 2021.
2. Bosch-Donate E, et al. Scientific Reports. 2024.
3. Pisani GK, et al. International Urogynecology Journal. 2021.

Common Athlete Pelvic Complaints:
Painful Intercourse (Dyspareunia)- Susceptibility

Why are athletes more susceptible?

- Athletes chronically recruit pelvic floor muscles (PFM) during high-impact and high-intra-abdominal-pressure activities → can lead to PFM hypertonicity (1)
- May be subconsciously chronically contracting the levator ani and introital muscles (2)
- High-tone pelvic floor dysfunction is a hallmark cause of dyspareunia

1. Till SR, et al. American Journal of Obstetrics and Gynecology. 2026.
2. ACOG Practice Bulletin. Obstetrics and Gynecology. 2019.

Common Athlete Pelvic Complaints:
Painful Intercourse (Dyspareunia)

- Persistent pelvic muscle dysfunction can lead to visceral symptoms (urgency, constipation) (1)
- And vice versa; endometriosis or IBS can drive pelvic muscle hypertonicity and dyspareunia (1)

1. Lamvu G, et al. The Journal of the American Medical Association. 2021.

Common Athlete Pelvic Complaints:
Painful Intercourse (Dyspareunia)- Causes

- Hypertonic PFM, trigger points, vaginismus (1)
- Vulvodynia / Provoked vestibulodynia
    - (positive cotton swab test @ vestibule, focal erythema) (2)
- Hypoestrogenism
    - RED-S/hypothalamic amenorrhea (1)
    - OCP-related (3)
- Endometriosis (1)
- lumbopelvic dysfunction:
    - SIJ, hip pathology (4)

1. Hill DA, et al. American Family Physician. 2021.
2. Till SR, et al. American Journal of Obstetrics and Gynecology. 2026.
3. Serati M, et al. European Journal of Obstetrics, Gynecology, and Reproductive Biology. 2015.
4. Lamvu G, et al. The Journal of the American Medical Association. 2021.

Common Athlete Pelvic Complaints:

Painful Intercourse (Dyspareunia)- What DO's can do:

- Screen for dyspareunia (1)
- Perform cotton swab test and single-digit vaginal exam (2)
- Rule out/treat causes (endometriosis, infection, atrophy, dermatoses) (2)
- Leverage osteopathic manipulative treatment (OMT) for lumbopelvic somatic dysfunction that may contribute to PFM hypertonicity (3)
- Prescribe adjunctive pharmacotherapy when indicated (topical lidocaine, vaginal estrogen, TCAs, gabapentin) (2)
- Refer to OB/GYN and Pelvic Floor PT (4)

1. Bosch-Donate E, et al. Scientific Reports. 2024.
2. Hill DA, et al. American Family Physician. 2021.
3. Lamvu G, et al. The Journal of the American Medical Association. 2021.
4. Female Sexual Dysfunction. ACOG Guideline. Obstetrics and Gynecology. 2019.

Common Athlete Pelvic Complaints:

Painful Intercourse (Dyspareunia)- What Pelvic Floor PT's can do:

- Specialized internal assessment and treatment of PFM dysfunction
- Down-training of hypertonic PFM
- Sport-specific rehabilitation and return-to-activity/goal programming
- Coordination with DO for comprehensive musculoskeletal care (1)

1.Female Sexual Dysfunction. ACOG Guideline. Obstetrics and Gynecology. 2019.

Common Athlete Pelvic Complaints:

Painful Periods

- 3-6 months of compliant empiric therapy (NSAIDs ± hormonal treatment), the clinician should investigate for secondary causes (1)(2)
- Red flags that should prompt earlier investigation:
  - severe dysmenorrhea immediately after menarche
  - progressively worsening pain, acyclic/mid-cycle pain, dyspareunia, dyschezia, family history of endometriosis or PCOS
  - missed school/sport participation

1. McKenna KA, et al. American Family Physician. 2021.
2. Ferries-Rowe E, et al. Obstetrics and Gynecology. 2020.
3. ACOG Committee Opinion No. 760. Obstetrics and Gynecology. 2018.
4. Geri D. Hewitt, et al. American College of Obstetricians and Gynecologists. 2018.

Common Athlete Pelvic Complaints:

Painful Periods

- Workup: menstrual history, pelvic exam, ultrasonography; evaluate for GI, urologic, musculoskeletal, and psychosocial etiologies
- Refer to OB/GYN if workup is unrevealing but symptoms persist (1)
- Referral to PFPT is effective, low-risk adjunct.
    - Refer early when dysmenorrhea coexists with PFD, fails medical management, or the athlete prefers non-pharmacologic approaches. (2)

1. McKenna KA, et al. American Family Physician. 2021.
2. Meisenheimer ES, et al. American Family Physician. 2025.

Endometriosis diagnosis

- Endometriosis should be suspected with (1)
  - Chronic pelvic pain
  - Dysmenorrhea affecting daily activities (missing school/work)
  - Deep dyspareunia
  - Period-related GI symptoms (especially painful bowel movements)
  - Period-related urinary symptoms (dysuria, hematuria)
  - Infertility
  - Family history of endometriosis (7-10× increased risk in first-degree relatives) (2)
- A high-quality transvaginal ultrasound can identify (3)
  - endometriomas
  - deep infiltrating disease
  - adenomyosis
- MRI may be useful if ultrasound is inconclusive

1. Edi R, et al. American Family Physician. 2022.
2. Geri D. Hewitt, et al. American College of Obstetricians and Gynecologists (2018). 2018.
3. As-Sanie S, et al. The Journal of the American Medical Association. 2025.

Endometriosis

- The Average diagnostic delay: **5–12 years** (1)
- Most patients see 3+ clinicians before diagnosis (1)

1. As-Sanie S, et al. The Journal of the American Medical Association. 2025.

Endometriosis

- Conservative Rehabilitation options:
  - Pelvic Floor Therapy (1)
  - Acupuncture (2)
  - lifestyle interventions (3)
    - exercise
    - mind-body practices (especially yoga)
    - anti-inflammatory diet (4)

1. Rodríguez-Ruiz Á, et al. Journal of Clinical Medicine. 2025.
2. Edi R, et al. American Family Physician. 2022.
3. Zheng X, et al. Journal of Pain Research. 2025.
4. Lalla AT, et al. Current Opinion in Obstetrics & Gynecology. 2024.

ACOG 2026 Endometriosis update

- A clinical diagnosis can be made based on:
  - Symptoms
  - Exam Findings
  - Imaging
  - Response to treatment
- **Surgery is no longer required for Dx**
- Importance:
  - Historically, diagnosis took average 7–10 years (and required laparoscopy & biopsy) (1)

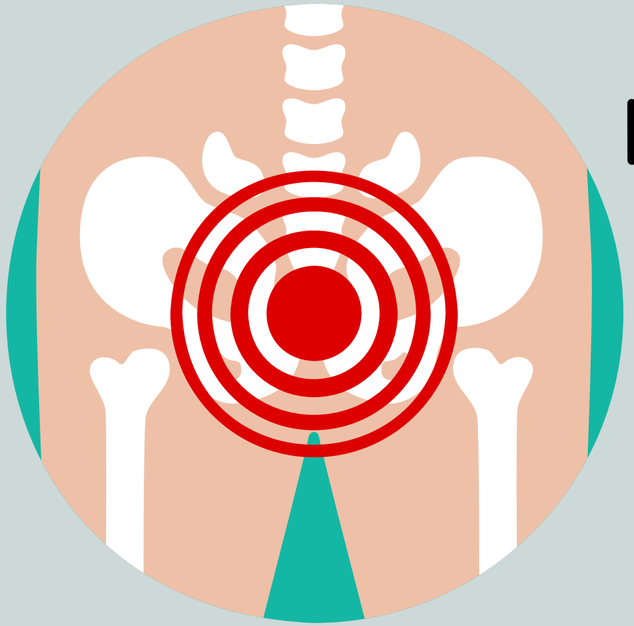
1..Diagnosis of Endometriosis. Obstetrics and Gynecology. 2026.

When to Refer to GYN: Menstrual Pain with Suspected Endometriosis

- Suspected deep infiltrating endometriosis involving bowel, bladder, or ureter (requires MRI) (1)
- Inadequate response to empiric therapy after 3–6 months of first-line hormonal treatment with NSAIDs (1)
- Large ovarian endometriomas or complex adnexal masses on imaging (2)
- Severe, debilitating symptoms affecting function & daily activities (3)
- Adolescents with persistent dysmenorrhea despite hormonal therapy and NSAIDs (3)
- At any point in management based on patient preference and clinical judgment (4)

1) Edi R, et al. American Family Physician. 2022.
2) As-Sanie S, et al. The Journal of the American Medical Association. 2025.
3) Geri D. Hewitt, et al. American College of Obstetricians and Gynecologists. 2018.
4) McKenna KA, et al. American Family Physician. 2021.

Common Athlete Pelvic Complaints:
Pelvic Floor Dysfunction as a Mimic, Cause, or Co-Existing Condition?

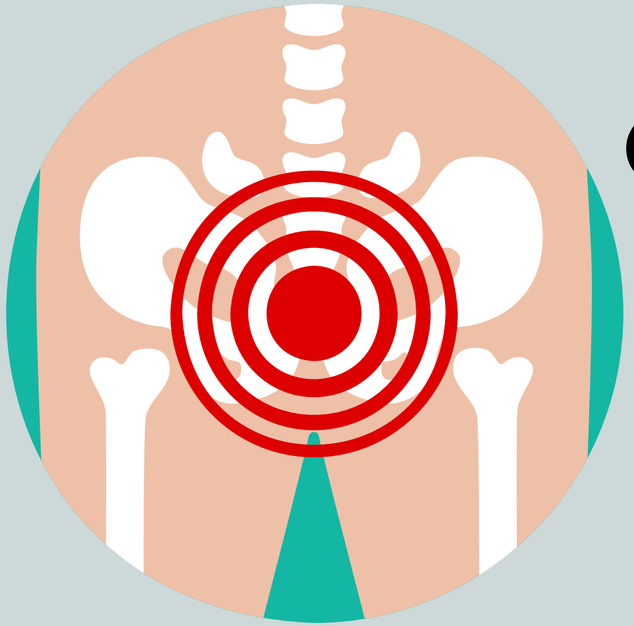


Mimicry:

- Viscerosomatic convergence: Persistent pelvic floor muscle dysfunction can present as hip, groin, or low back pain (1)
- PFD symptoms overlap with adductor tendinopathy, hip pathology, and inguinal issues

1. Bisciotti GN et al. The Journal of Sports Medicine and Physical Fitness. 2022

Common Athlete Pelvic Complaints:
Pelvic Floor Dysfunction as a Mimic, Cause, or Co-Existing Condition?

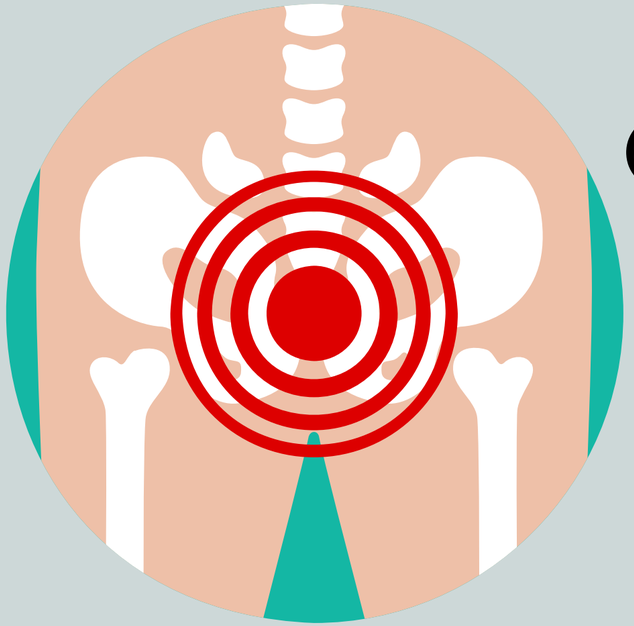


Causal:

- Pelvic floor contributes to lumbopelvic stability as part of the core muscle system (1, 2)
- Dysfunction alters trunk muscle control and pelvic girdle stability (1, 2)

1. Ugur Tosun B, et al. International Urogynecology Journal. 2023
2. Quaghebeur J et al. European Journal of Obstetrics, Gynecology, and Reproductive Biology. 2021

Common Athlete Pelvic Complaints:
Pelvic Floor Dysfunction as a Mimic, Cause, or Co-Existing Condition?

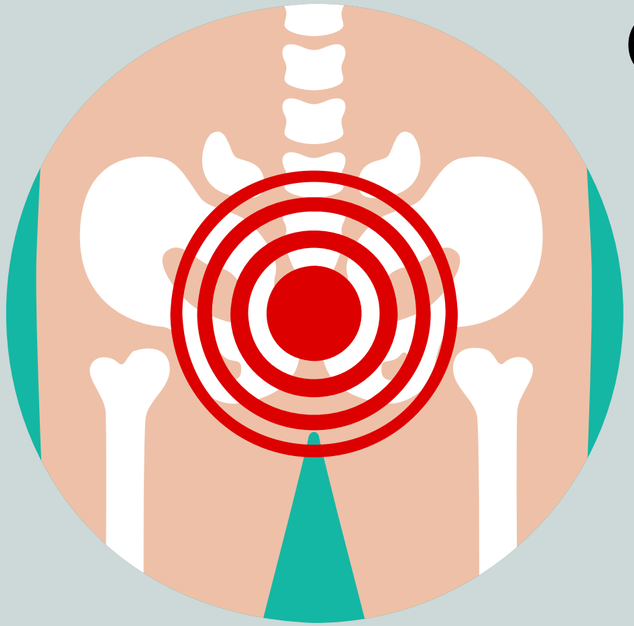


Co-Existing:

- 71% of women with lumbopelvic pain have pelvic floor muscle tenderness (1)
- 66% have pelvic floor weakness (1)
- Bidirectional relationship: presence of one condition predisposes to development of the other (2)

1. Dufour S. et al. Musculoskeletal Science & Practice, 2018
2. Welk B. et al. Neurourology and Urodynamics, 2020

Common Athlete Pelvic Complaints:
Pelvic Floor Dysfunction as a Mimic, Cause, or Co-Existing Condition?



Clinical Pearls:

- Consider PFD in differential for chronic groin/hip/SIJ pain, especially when symptoms are resistant to conservative MSK treatment
- Pelvic floor muscle examination should be part of assessment for women with lumbar, hip, or pelvic girdle pain (1)
- Most patients do not spontaneously report vaginal pelvic floor pain despite its presence (1)

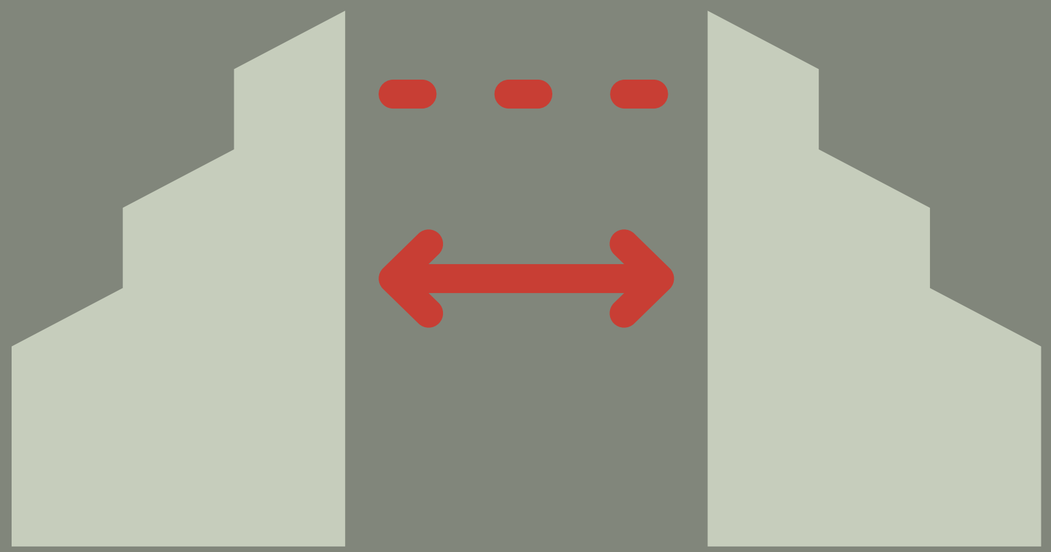
1. Dune TJ et al. International Urogynecology Journal. 2023.

“Common does NOT = normal”

But wait, if these issues are so common, does that mean I've missed things in my patients??

Yes. That is very likely. If we don't ask, patients may not think to disclose these sensitive issues

The practice gap:



- Under-screened
- Underreported
- Undertreated
- athletes normalize/hide symptoms
- PCPs often unsure what PFPT actually does

How can we screen?

Checked 3 or more? PFD is likely, refer to PFPT

Cozean screening tool

Instructions: Check all that apply.

- ◯ 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

So I’m supposed to refer to a Pelvic Floor PT, what is that exactly?

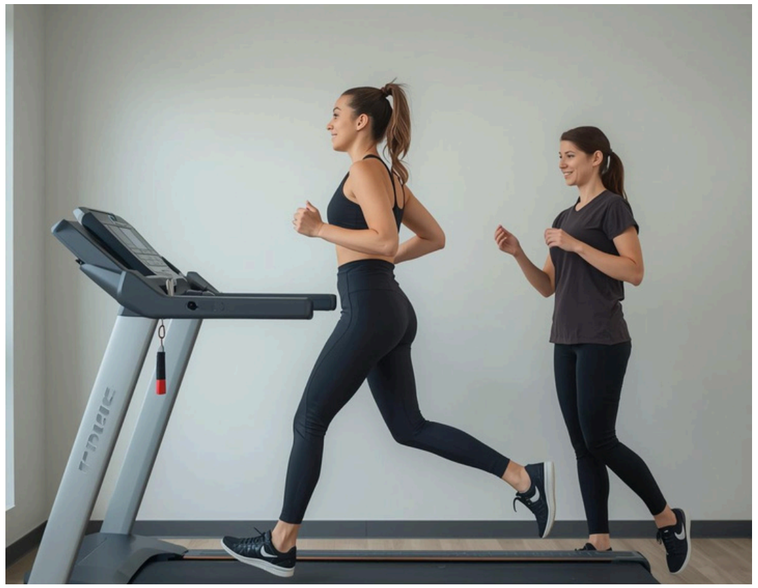
Outpatient Orthopedic Physical Therapists with extra training in pelvic floor, hormones, digestion, pregnancy/postpartum, nutrition, and trauma.

So I refer them to a Pelvic Floor PT, What happens there?

- Subjective
- Objective:
  - movement screen
  - special MSK tests prn
  - mobility/PROM prn
  - internal exam if indicated & consented
- Tell the patient the findings
- Plan of Care & HEP

Management strategies:

- PFMT is first-line treatment for PFD (1)
- PFMT interventions typically involve 8–12 weeks of supervised training with home practice. (2)
- Treatment protocols should include:
  - Supervised PFMT with proper technique instruction
  - Home-based practice programs
  - Integration of pelvic floor activation during sport-specific movements
  - Education about PFD risk factors and symptoms
  - Pressure management training (3)

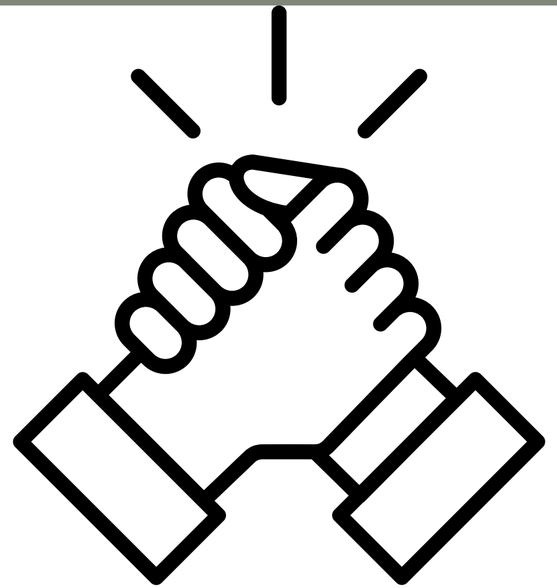


1. Rodríguez-Longobardo C et al. Sports Health. 2024
2. Romero-Franco N et al. Physiotherapy. 2021
3. Dl Benedetto A et al. The Journal of Sports Medicine and Physical Fitness. 2026

What do I tell my patient a Pelvic Floor PT does?

- They’re a specialized PT who evaluates how your pelvic floor, hips, core, and breathing mechanics are functioning together.
- It’s not just internal work or Kegels.
- They will help identify whether your symptoms are caused by poor pressure management, overactivity, weakness, or impaired biomechanics or coordination.

How DO's have a uniquely positioned role in pelvic health



Story time...

- 24-year-old nulliparous F c/o severe superficial dyspareunia and inability to tolerate penetration since sexual debut.
- Seen by gynecology multiple times over 3 years; only speculum exam & pap smear encouraged, patient declined
- In pelvic floor PT, unable to progress comfortably despite dilator work; restricted clitoral hood mobility raised concern for tissue restriction and redness at introitus.
- PT referred back to GYN for targeted external vulvar reassessment...

Story time...

Ayson, N., Starling, S. (2020)

- **Hidden septate hymen** discovered, only visible with end range hip flexion & ER
- Underwent partial hymenectomy
- Pt is now progressing well but has had severe trauma d/t h/o pain at introitus and is working through vaginismus d/t years of pain.

External Vulvar exam

Ringel NE, et al. American Family Physician. 2020.

Clinical Examination findings suggesting Vulvovaginal Hypoestrogenism

- Thin, pale, and reddened vulvar epithelium (1)
- Loss of vaginal rugae (smooth vaginal walls)
- Introital narrowing and decreased tissue elasticity
- Resorption of the labia minora
- Shrinking of the clitoral prepuce
- Tissue fragility with easy bleeding on examination

1) Ringel NE, et al. American Family Physician. 2020.

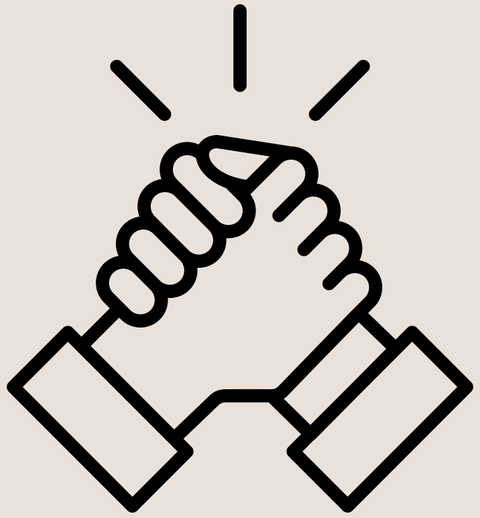
But wait, I thought that was just a post-menopausal issue?

- Hypoestrogenic states can occur in premenopause, including: (1)
  - **breastfeeding (GSL)**
  - hypothalamic amenorrhea
  - taking antiestrogenic medications (SERMs, GnRH agonists, aromatase inhibitors).
- External gynecologic examination may reveal reddened, thin vaginal mucosa in estrogen-deficient patients. (2)

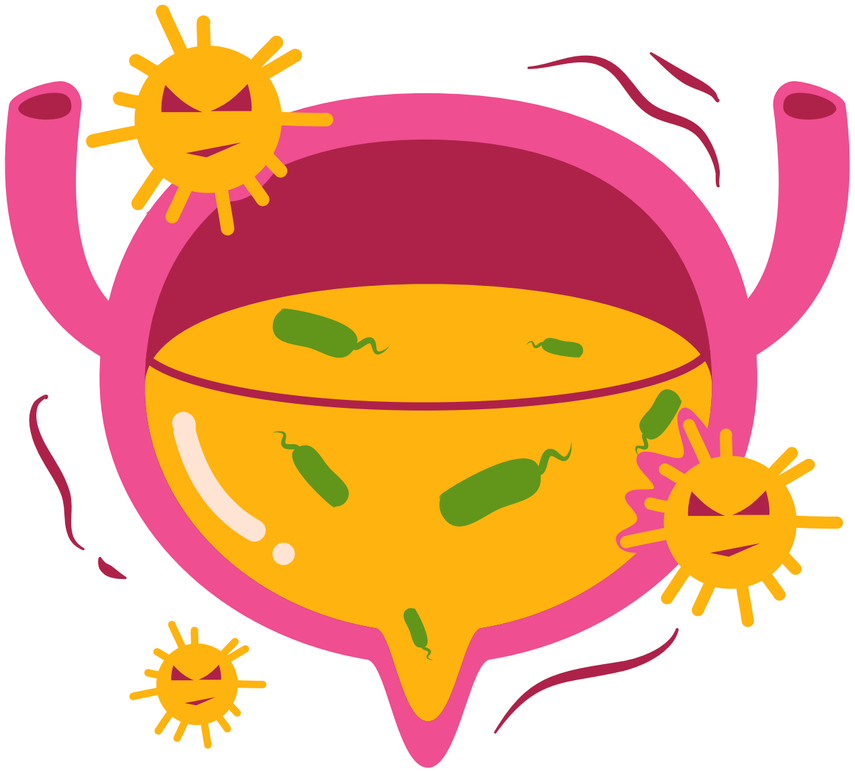
1) Ringel NE, et al. American Family Physician. 2020.
2) Gordon CM, et al.The Journal of Clinical Endocrinology and Metabolism. 2017.

Vulvovaginal exam not something you can or would do?

Not performing a vulvovaginal exam? That's okay, BUT ensure appropriate referral to a trusted OB/GYN and/or pelvic floor PT



Story time...



- 35 y/o F patient c/o intermittent superficial dyspareunia and provoked vestibulodynia that had increased over the past decade, chronic intermittent postcoital UTI's (2-5x/year average).
- On exam: vulvar tissue appeared erythematous, superficial layer 1 muscles were tender to palpation
- She then became pregnant, and 2 weeks postpartum from Cesarean delivery had a severe UTI.
- Prescribed antibiotics and vaginal estrogen
- 2 years post has not had another UTI.

The Postpartum Runner:
The Problem: “Cleared at 6 Weeks”

- “Medically safe” lacks clear definition (1)
- Guidance is vague and non-specific
- No clear pathway for return to running

1. Schulz JM, et al. British Journal of Sports Medicine. 2023.

The Postpartum Runner: Return to Impact Timeline

- 0–3 weeks postpartum: Relative Rest (1)
  - Rest and recovery; pelvic floor exercises can begin immediately
- 3–12 weeks: Low Impact Activity (1)
  - Walking, low-impact exercise; gradual increases; begin strength training
- Run-Readiness Screening
  - BEFORE initiating running
- Walk-run protocol (2)
  - when R2R criteria met (Median time to run: 12 weeks)

1. Schulz JM, et al. British Journal of Sports Medicine. 2023.
2. Christopher SM, et al. British Journal of Sports Medicine. 2024.

The Postpartum Runner: Run-Readiness Screening

Domain 1: Medical Psychological Readiness

- Wound healing complete
- No vaginal bleeding (not associated w/menses)
- No severe abdominal pain or s/s of infection
- Screened for PPD/PPA

Domain 2: Pelvic Floor Symptoms

- No SUI with daily activities, L/C/S
- No sensation of vaginal heaviness/bulging
- No pelvic or perineal pain
- Can contract and relax PFM
- No significant DRA and/or functional limitation

1. Deering RE, et al. British Journal of Sports Medicine. 2024.

The Postpartum Runner: Run-Readiness Screening

Domain 3: Physical Capacity — Strength & Load

- ☐ Walk 30 minutes continuously without pain, heaviness, or leaking
- ☐ Single-leg balance — 10 secs each side
- ☐ Single-leg squat — 10 reps each side
- ☐ Single-leg calf raise — 20 reps each side
- ☐ Single-leg bridge — 20 reps each side
- ☐ Running man (standing single-leg hip flexion/extension) — 10 res each side
- ☐ Single-leg hop in place — 10 reps each side

1. Deering RE, et al. British Journal of Sports Medicine. 2024.

The Postpartum Runner: Return-to-Run Protocol

(Once Run-Readiness Screening Passed)

- Walk-run intervals: 1 min run/4 min walk
- Progress duration prior to intensity
- Increase volume <10% per week
- If symptoms of PFD arise = step back 1 level
- Strength training throughout
- Modify based on sleep, mental health, lactation, energy availability

1. Deering RE, et al. British Journal of Sports Medicine. 2024.

The Postpartum Runner: When to Refer to PFPT?

- Incontinence during walking, impact activities, or running
- Vaginal heaviness or bulging sensation
- Unable to meet strength benchmarks above
- Persistent lumbopelvic or pelvic girdle pain
- Fear of movement / kinesiophobia
- Diastasis recti with functional limitations

1. Moore IS, et al. British Journal of Sports Medicine. 2021.

Question time

Questions, then 30 min break, then break-out session

BREAK OUT SESSION

Partner up! (switch partners each section)

1. 360 Breathing
2. “Piston Breathing”
3. Pelvic Floor Dysfunction Screening
4. Run-Readiness Screening

BREAK OUT SESSION:
1) 360 Breathing

1. Inhale deeply through your nose, allowing your abdomen to expand. Feel the breath fill your lower ribs, sides, and low back like a 360° circle
2. Calmly exhale out the mouth with a relaxed jaw

BREAK OUT SESSION: Switch partners
2) Piston Breathing- grab a balloon

1. Inhale deeply through your nose, allowing your abdomen to expand. Feel the breath fill your lower ribs, sides, and low back like a 360° circle
2. Begin with a kegel, then activate your low core (like you're zipping up)
3. Actively exhale out your pursed mouth (use closed fist or balloon to increase intra-abdominal pressure)

BREAK OUT SESSION: Switch partners

3) Pelvic Floor Dysfunction Screening

Cozean screening tool

Instructions: Check all that apply.

- ◯ 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

BREAK OUT SESSION: Switch partners
4) Run-Readiness Screening

Domain 1: Medical Psychological Readiness

- Wound healing complete
- No vaginal bleeding (not associated w/menses)
- No severe abdominal pain or s/s of infection
- Screened for PPD/PPA

Domain 2: Pelvic Floor Symptoms

- No SUI with daily activities, L/C/S
- No sensation of vaginal heaviness/bulging
- No pelvic or perineal pain
- Can contract and relax PFM
- No significant DRA and/or functional limitation

BREAK OUT SESSION:
4) Run-Readiness Screening

Domain 3: Physical Capacity – Strength & Load

☑ Walk 30 minutes continuously without pain, heaviness, or leaking

☐ Single-leg balance – 10 secs each side

☐ Single-leg squat – 10 reps each side

☐ Single-leg calf raise – 20 reps each side

☐ Single-leg bridge – 20 res each side

☐ Running man (standing single-leg hip flexion/extension) – 10 res each side

☐ Single-leg hop in place – 10 reps each side

Want these checklists?

The Primary Care Physician's Guide to Return-to-Run Protocol, Pelvic Floor Dysfunction Screening, & Referral

EMPOWERED
Physical Therapy

@empowered_physicaltherapy

www.empowered-physicaltherapy.com

info@empowered-physicaltherapy.com

(425)230-6188