


PELVIC FLOOR PHYSICAL THERAPY

PFM • PELVIC GIRDLE • FASCIAL ANATOMY

Ciel Yogis, DPT




OBJECTIVES:

- Understand basic anatomy of supportive fascia
 - Understand the anatomy and function of the pelvic girdle and the sacroiliac joint
 - Be able to palpate external fascia for diagnostic purposes and perform beginning fascial mobilization techniques in clinic
 - Be able to palpate and identify structural and muscular imbalances in the pelvic girdle through movement and physical testing
- 



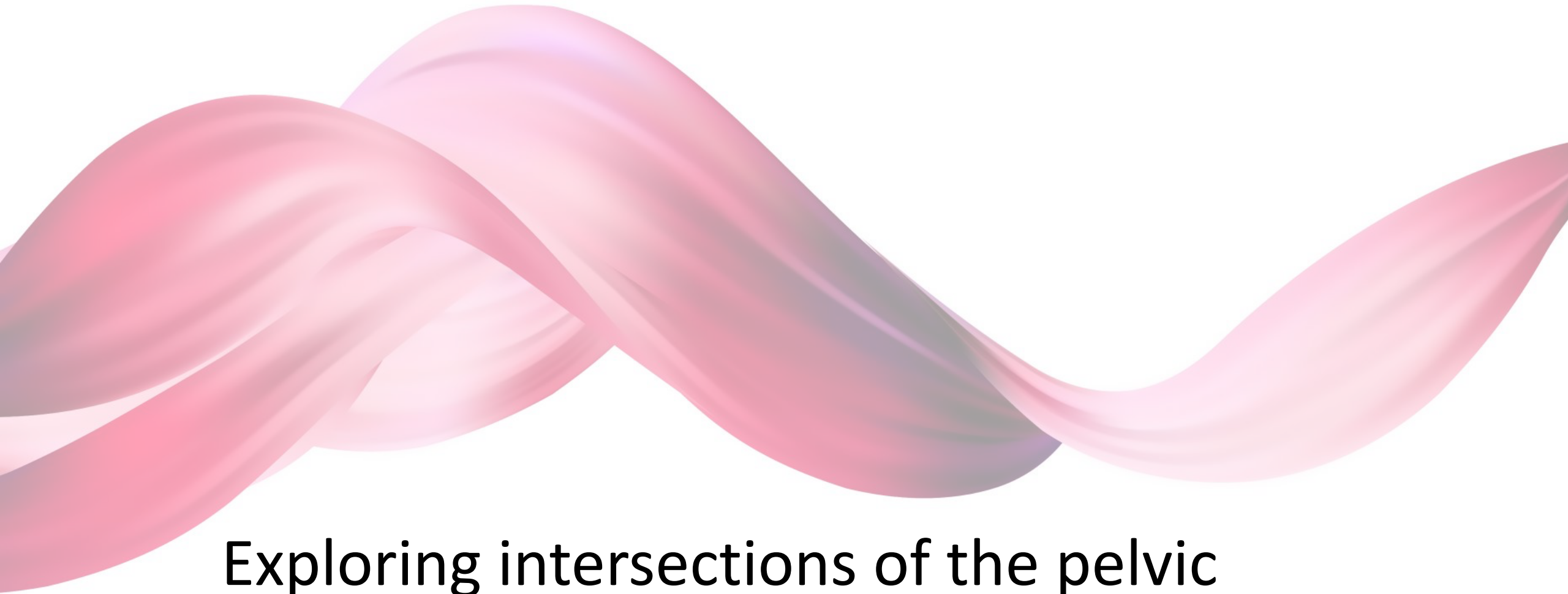
OBJECTIVES:

- Be able to treat simple innominate and sij instability cases with hands-on and exercise techniques
 - Correctly identify if the SIJ/PS is involved in your patient's pelvic floor or pelvic pain syndrome, and help form a plan of care
 - Discern which patients may benefit from seeing a pfm pt in tandem with your treatments
- 



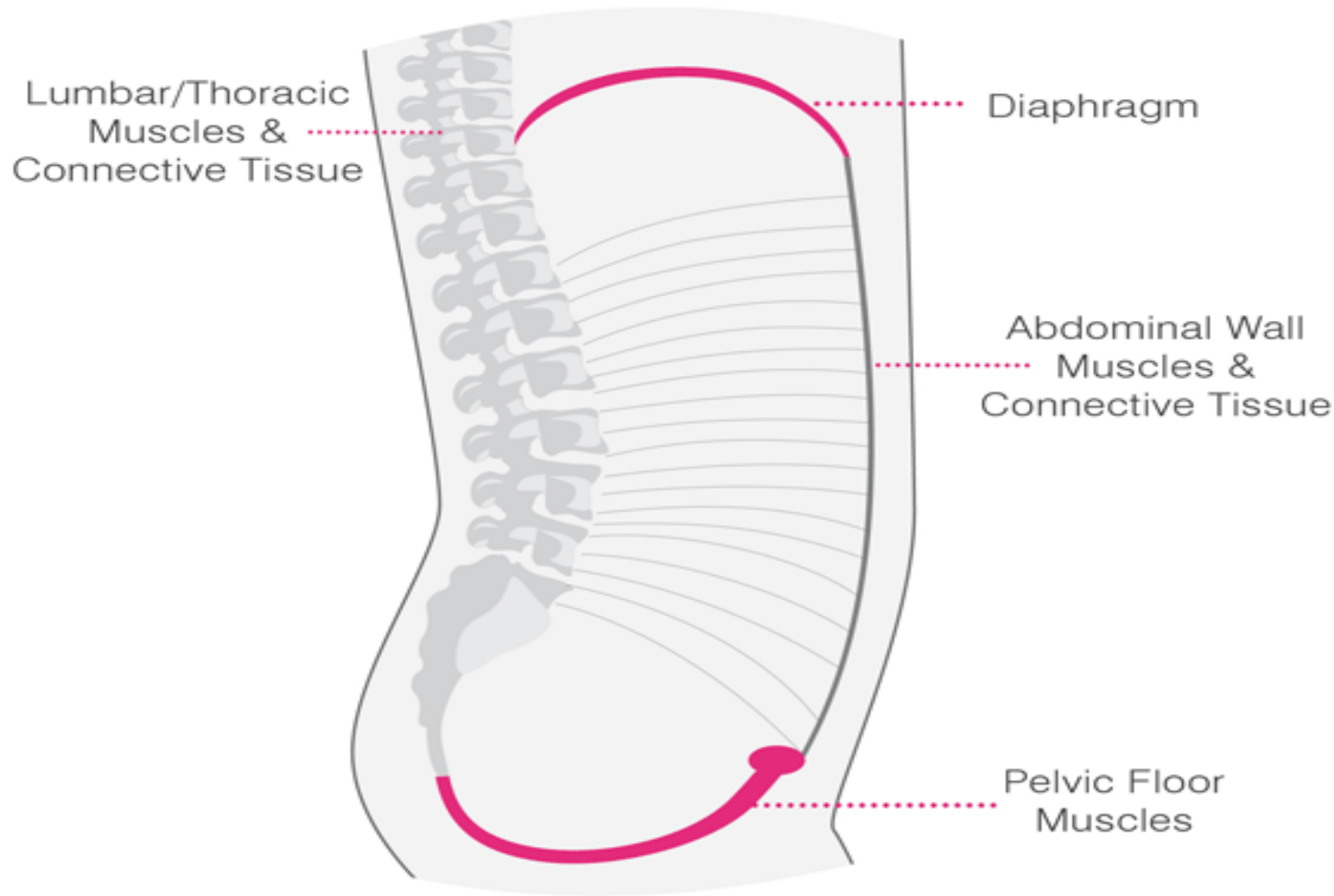
From Pilates to pelvic floor

- Ciel Yogis, DPT, PT
- Pelvic Health Physical Therapist, UCSF Medical Center
- Pilates, MELT Method
- Stecco Fascial Manipulation, levels 1-3



Exploring intersections of the pelvic girdle, the deep core, and the pelvic floor

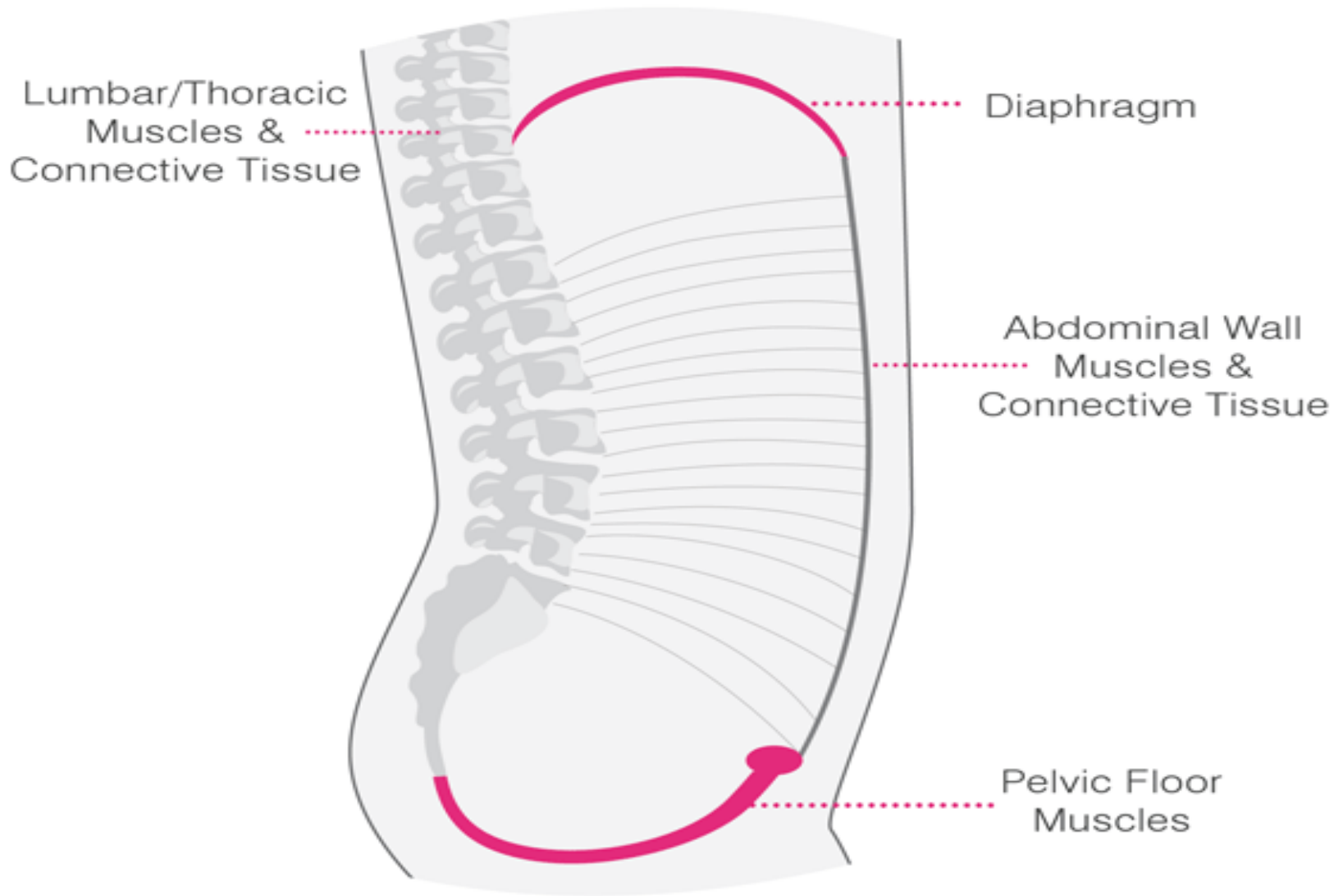
Literature, Anatomy, Clinical Relevance



Core canister

- The transversus abdominis, internal oblique, diaphragm, and pelvic floor form part of the abdominal cavity's muscular boundaries
- These muscles work together in a coordinated pattern to produce and control intraabdominal pressure (IAP)
- Alterations in motor control that involve this musculature have been reported in subjects with lumbar segmental instability, resulting in disruption to respiration. (O'Sullivan, et al. 2002)

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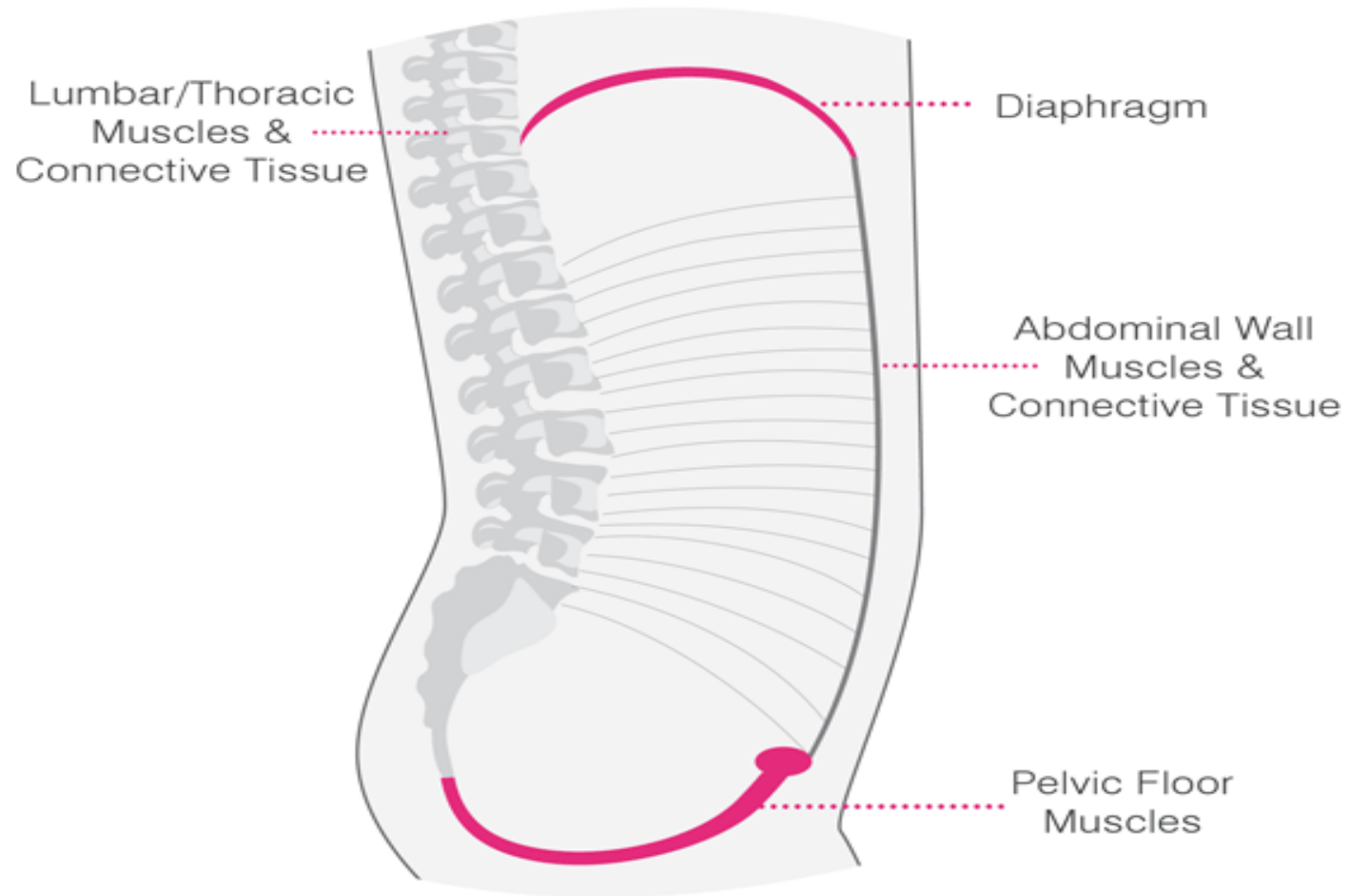
Core canister

- There are fascial connections between the posterior diaphragm and the retroperitoneal wall; this encompasses the aortic system, psoas, QL, phrenic-esophageal, and the ligaments of the kidneys
- Intersections of the deep C/S fascia reach the pubis via the fascia transversalis... covering the epimysium of TA muscle, arriving at linea alba, reaching the inguinal and pubic regions (Bordoni, Zanier. 2013)

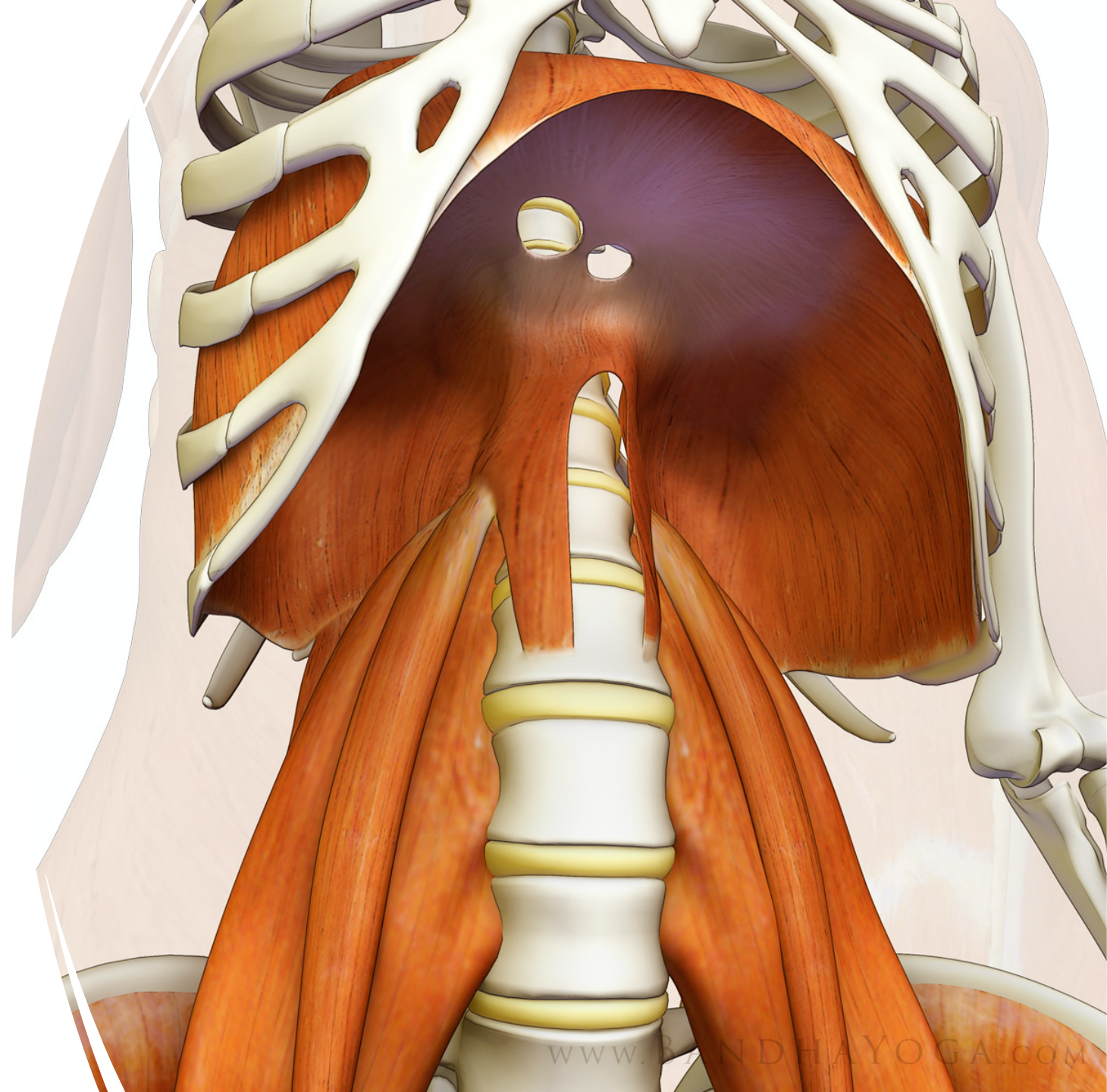
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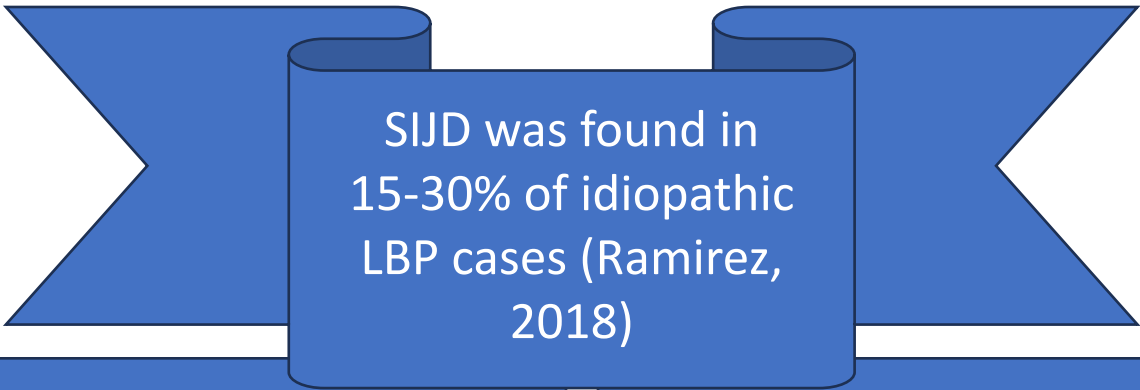
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The diaphragm muscle extends from the trigeminal system to the pelvic floor, passing from the thoracic diaphragm to the floor of the mouth



The Diaphragm





SIJD was found in
15-30% of idiopathic
LBP cases (Ramirez,
2018)

...when the muscles do not slide properly within the connective sheet, resulting in problems with the contractile pressures between the diaphragm and the subdiaphragmatic and perineal muscles, we can logically assume that the *fascia plays an indirect role in pathologic physiology.*

It is important to remember that the transversus abdominis muscle, along with the respiratory diaphragm and the pelvic floor, plays a significant role in the stability of the sacroiliac joint.

(Bordoni, Zanier. 2013)



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Original article

Changes in pelvic floor and diaphragm kinematics and respiratory patterns in subjects with sacroiliac joint pain following a motor learning intervention: A case series

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Received 24 May 2005; received in revised form 16 February 2006; accepted 2 June 2006

Altered Motor Control Strategies in Subjects With Sacroiliac Joint Pain During the Active Straight-Leg-Raise Test

Peter B. O'Sullivan, PhD, Darren J. Beales, MManipTher, Julie A. Beetham, MManipTher, Jillian Cripps, MManipTher, Felicitas Graf, MManipTher, Ivan B. Lin, MManipTher, Beatrice Tucker, MSc, and Anita Avery, MSc

Case series design,
investigating effects of NMR
on aberrant PFM and
diaphragm patterns in
patients with SIJ pain,
during the ASLR test

Altered kinematics of the
diaphragm and PFM were
observed in pts with SIJ
during ASLR

Altered kinematics of
diaphragm and PFM during
ASLR are associated with
this disruption of respiration
pattern

Adding force closure via
manual compression
through ilia normalizes
these altered/compensatory
motor control strategies

Clinically speaking....

In pelvic health, the external lumbar/hip and pelvic girdle (i.e., sacroiliac joint or pubic symphysis) pain, external (vulvar, neural) and internal (vaginal) pelvic floor pain are common patient complaints. (Tanaka et al. 2023)

Clinically speaking....

Does treatment of PFMD, involving pain and altered tone, help to reduce lumbopelvic/SIJ pain?

Increasing evidence that the PFM plays a roll in lumbar control (Hodges PW, et al. 2007)

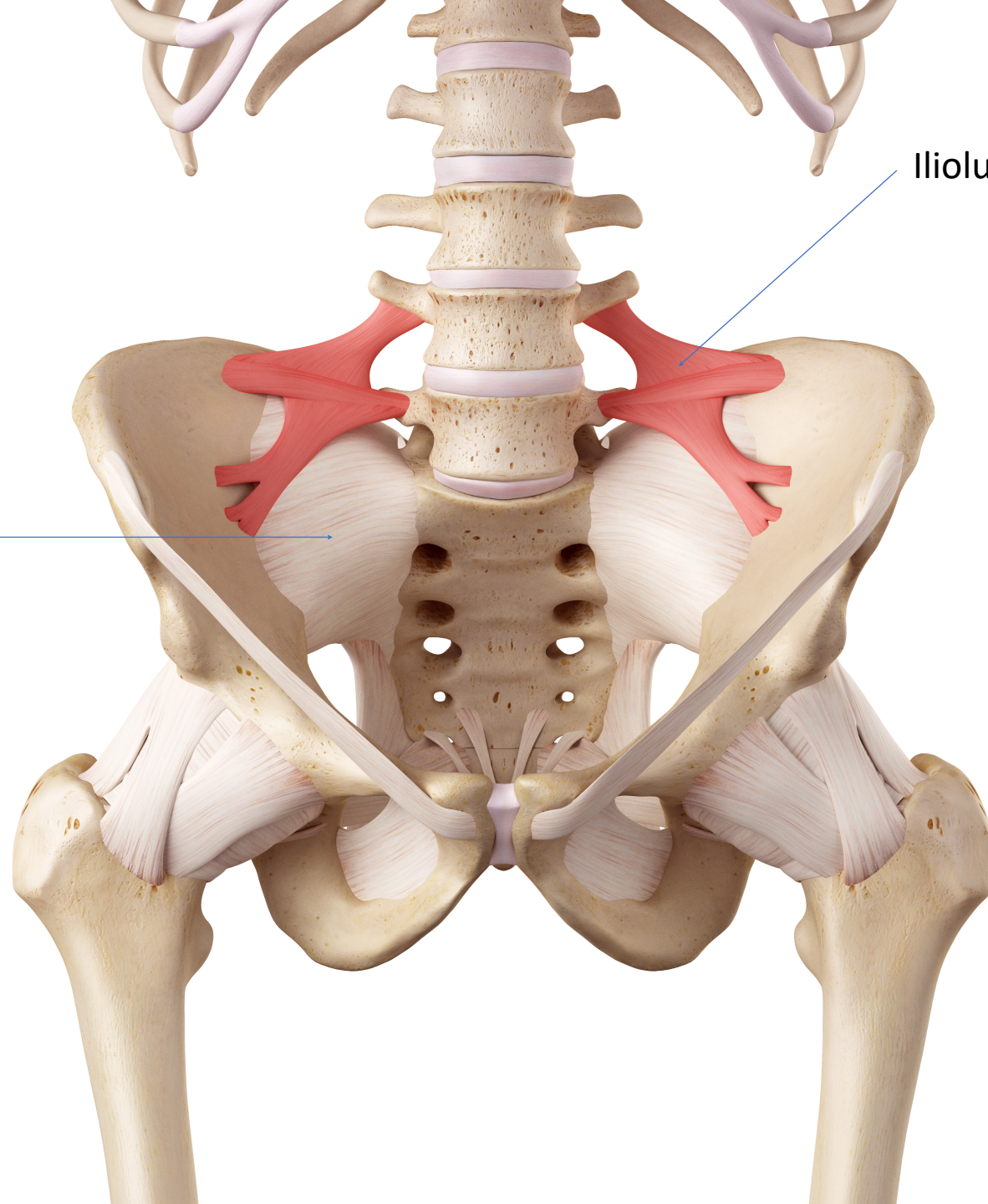
PFM contraction elevates intra-abdominal pressure and elicits a co-activation of the transversus abdominis muscle, which controls the lumbar spine

(Lee, AY., et al. 2016)

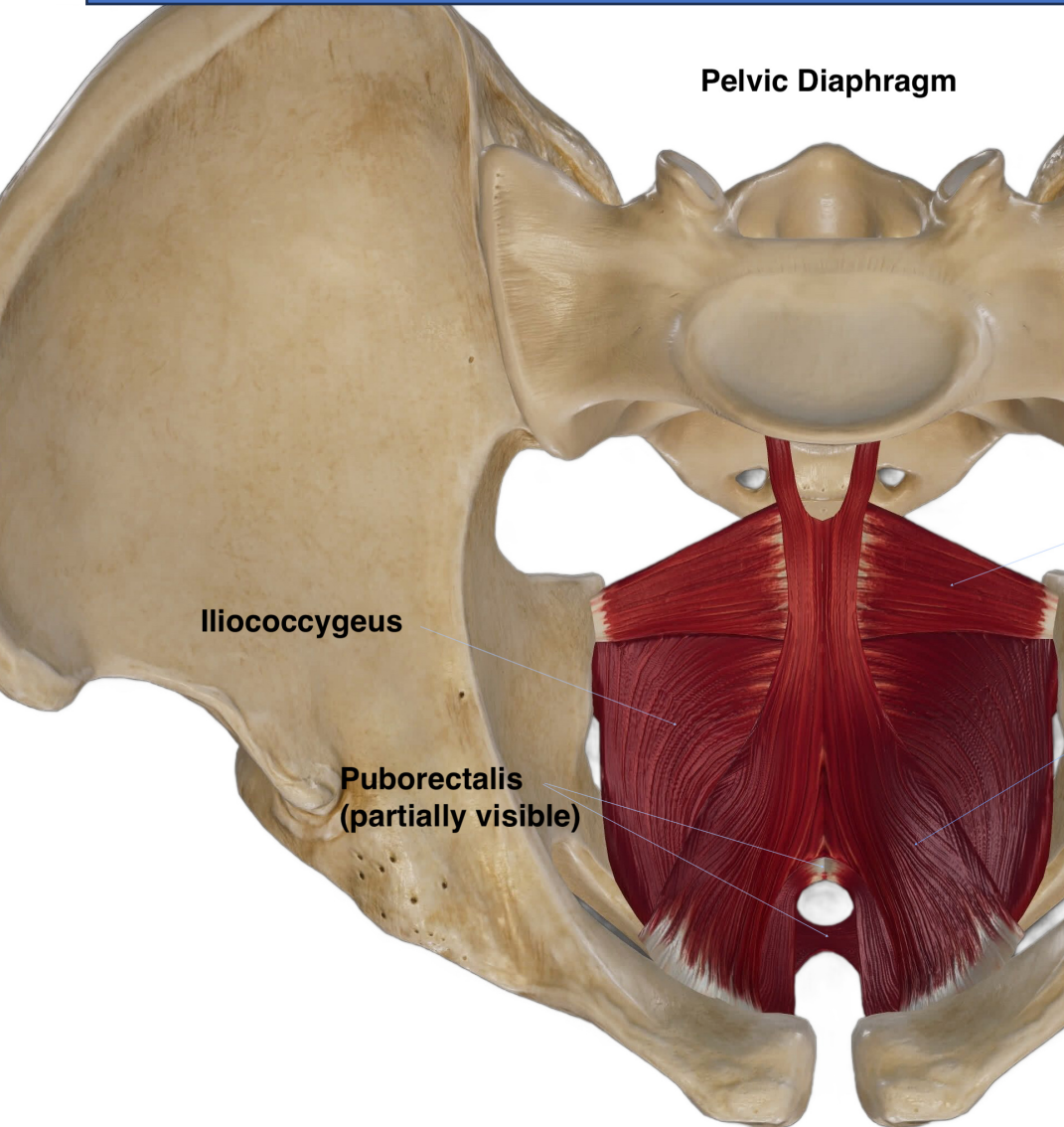
PFM contraction stiffens the sacroiliac joint in women, likely through increased tension of the interosseous and the iliolumbar ligaments (Pel JJM, et al. 2008)

Anterior Sacroiliac

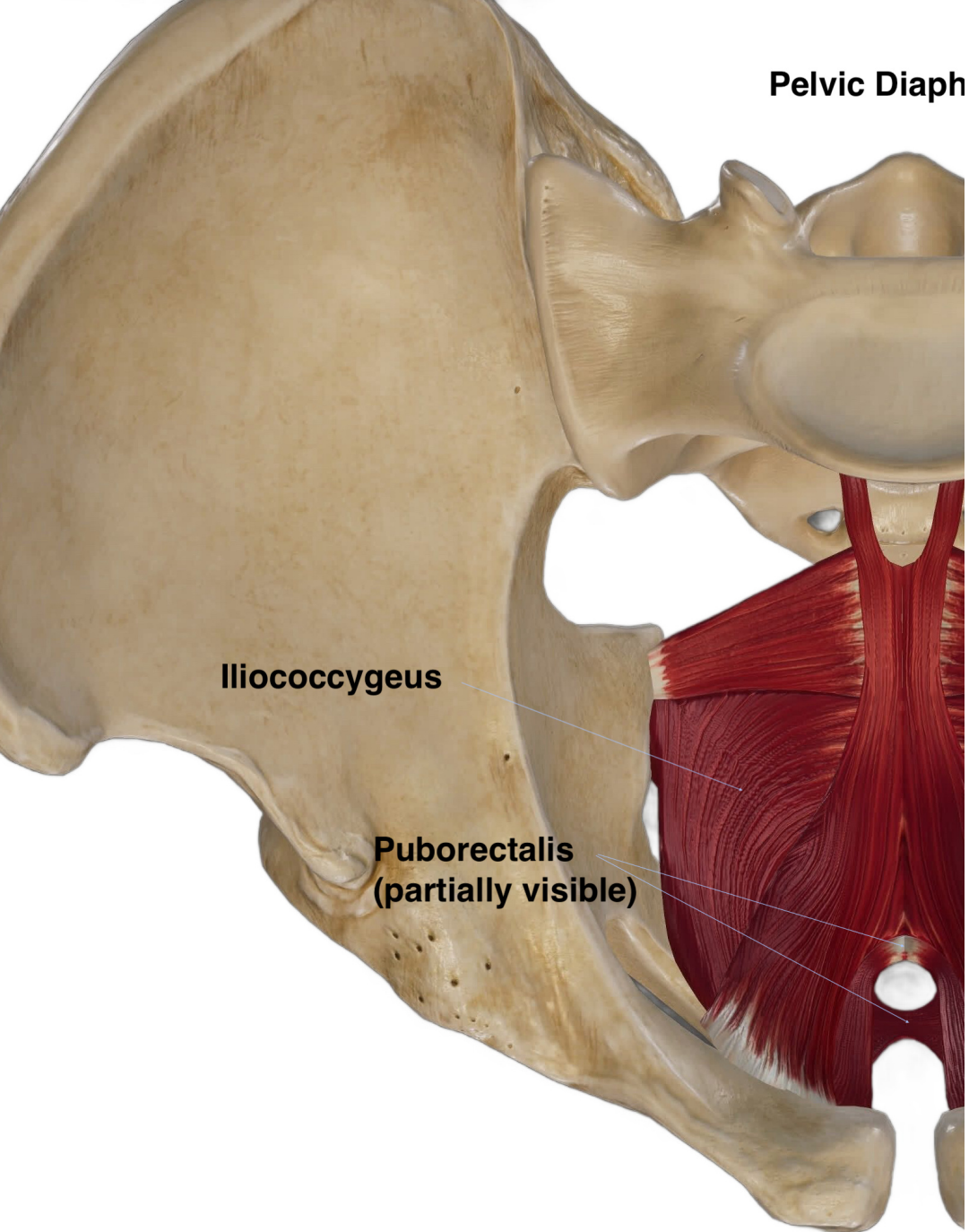
Iliolumbar ligament



PFM: Driver or Passenger?

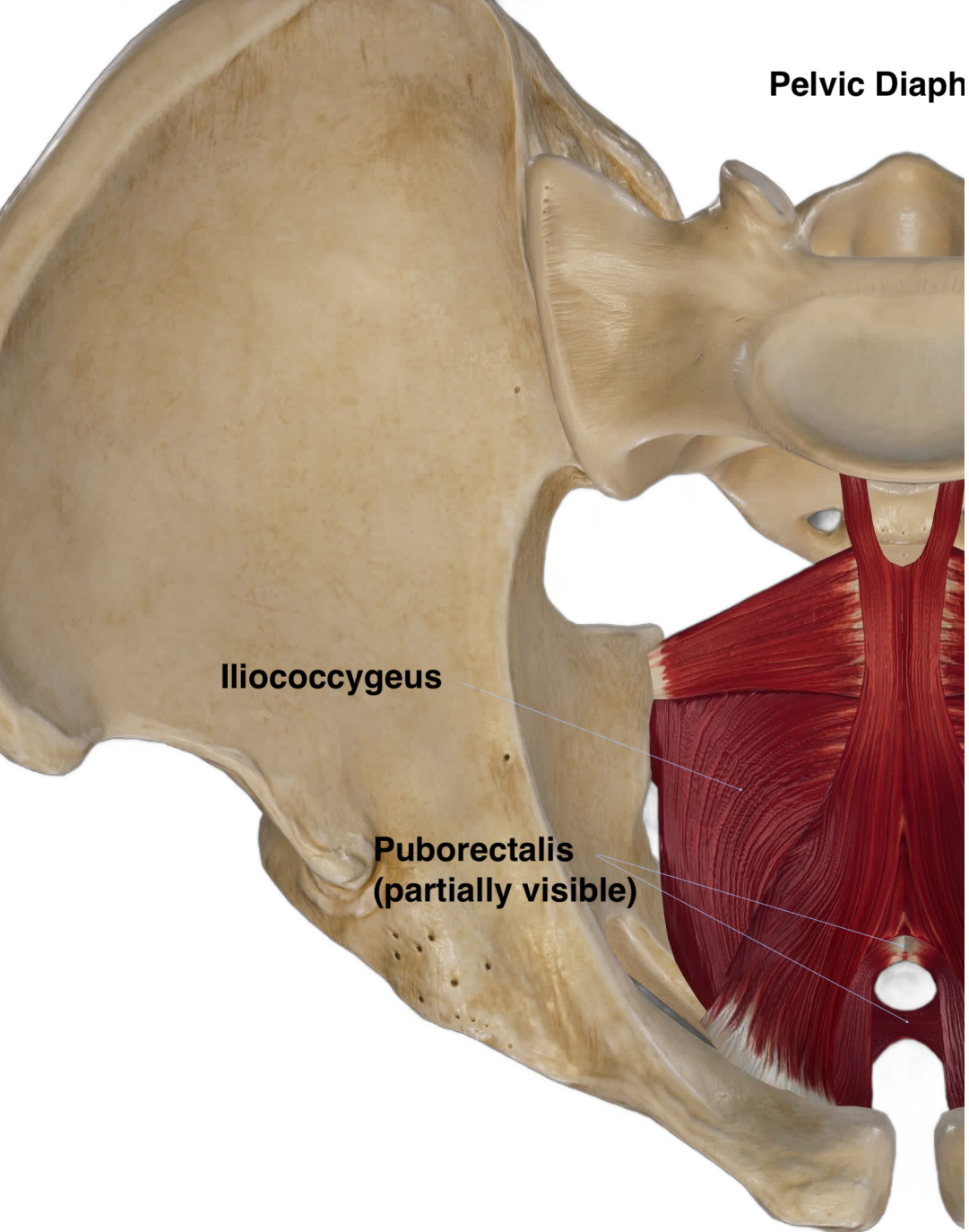


- The pelvic floor contributes to the management of intra-abdominal pressure (IAP) to support the transfer loads during movement (Bi X, Zhao, et al. 2013; Arab AM, et al. 2010)
- The internal pelvic floor may increase its own activity and function in order to compensate for any external musculoskeletal pain and or mechanical stressors (Tanaka, J.D, et al. 2023)



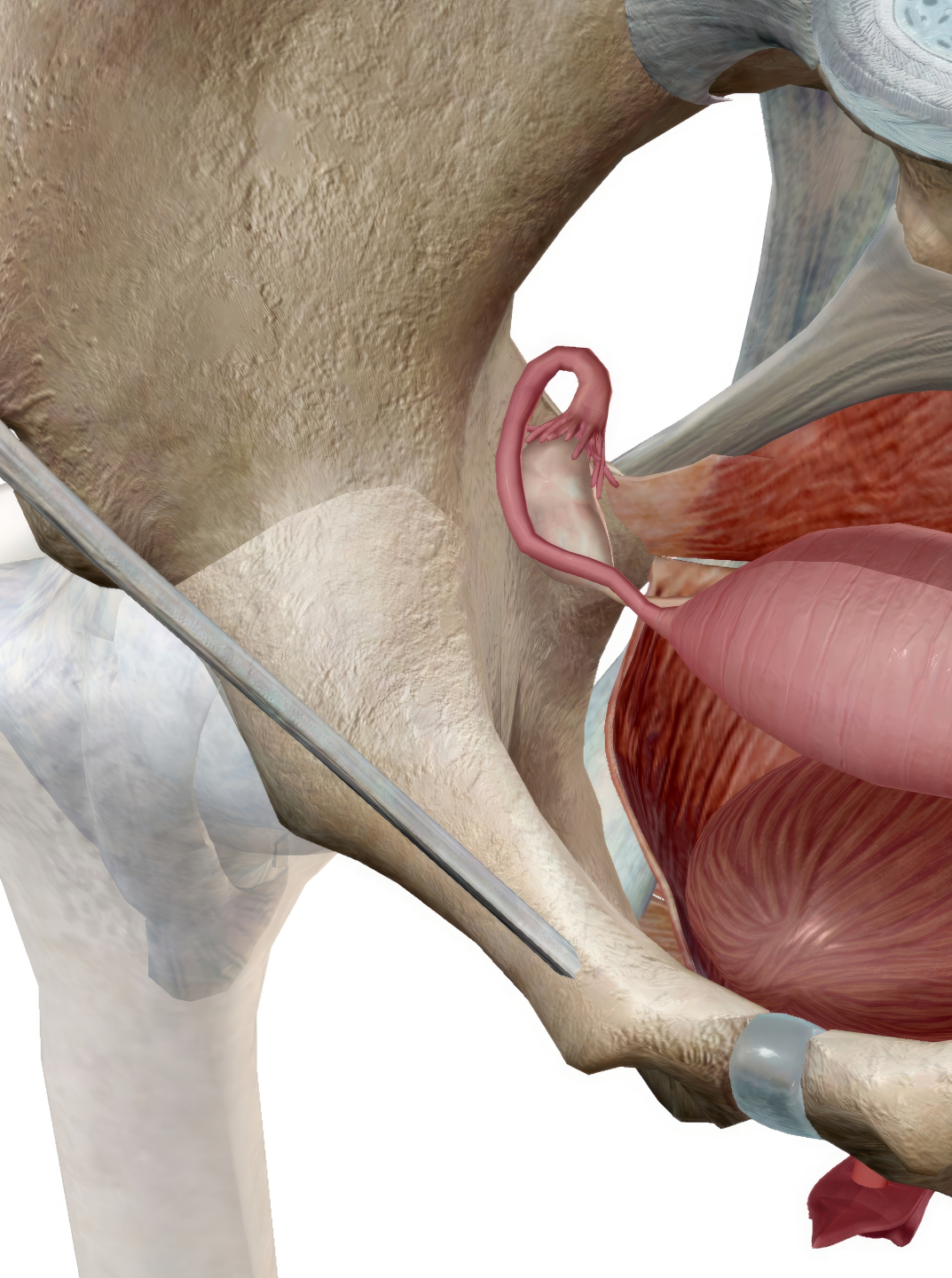
PFM: driver or passenger?

- Hypertonicity/overactivity/dysfunction leads to strain and over time leads to myofascial pain in the internal pelvic floor (AM, et al. 2010)



PFM: Driver or Passenger?

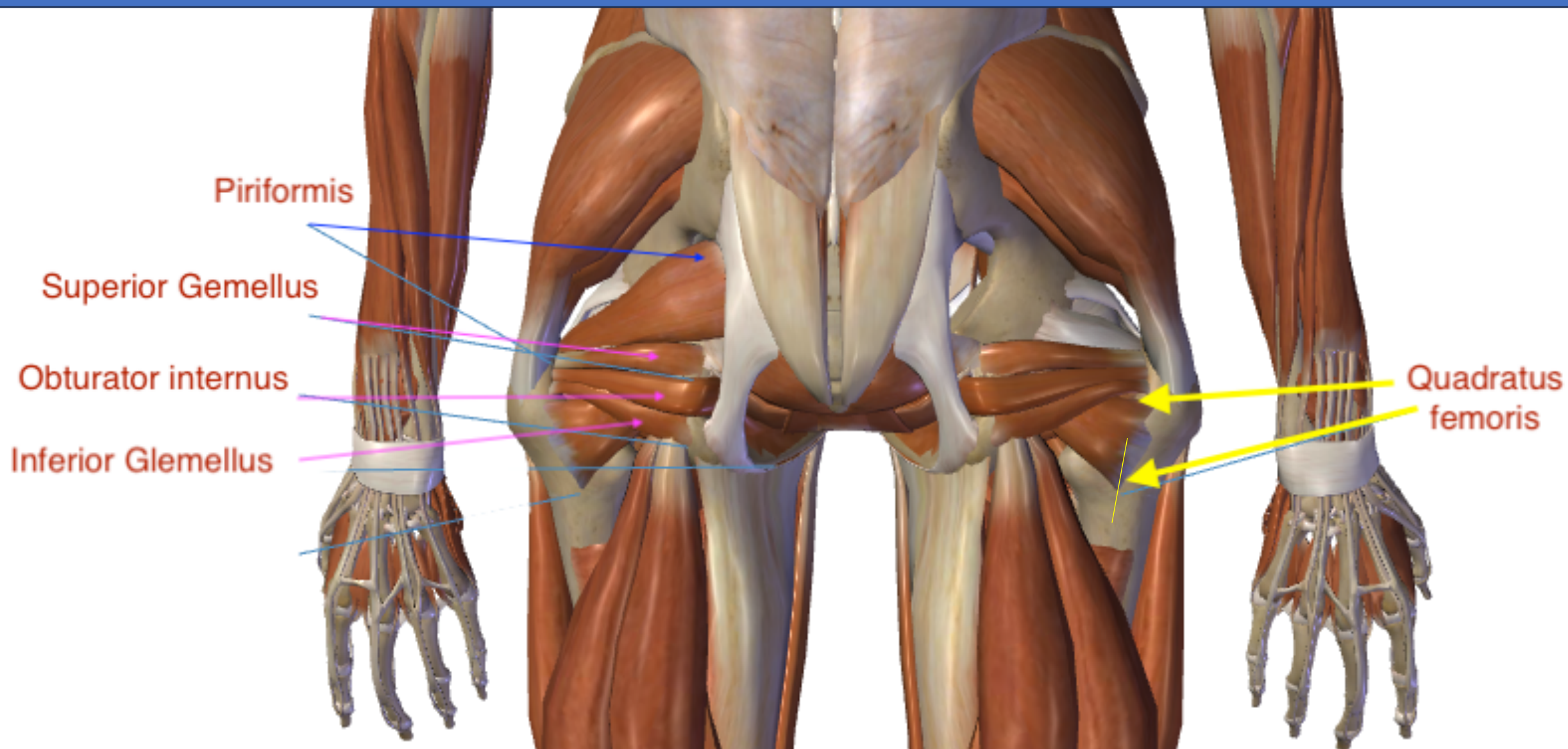
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PFM: driver or passenger?

- LBP has been shown to be a risk factor for urinary incontinence, with up to 95% of patients with lumbopelvic conditions presenting with pelvic floor muscle dysfunction (Smith, MD, et al. 2006)
- Myofascial pelvic pain can be an unrecognized component of chronic pelvic pain, with up to 67% of patients with chronic pelvic pain reporting myofascial pelvic pain upon examination (Frank FT, Sawsan As-Sanie, JFS. 2011)

The deep 6: hip stability and coordination with PFM



The deep 6: hip stability and coordination with PFM

- PGOGOQ's: "ROTATOR CUFF OF THE HIP"
- STABILIZATION OF THE FEMORAL JOINT: KEEPS THE FEMUR SEATED PROPERLY FOR OPTIMAL GLIDE AND ROLL
- ASSISTS IN FEEDBACK TO-FROM THE PFM, AND IN TURN, THE CORE, FOR PROPRIOCEPTION AND BALANCE

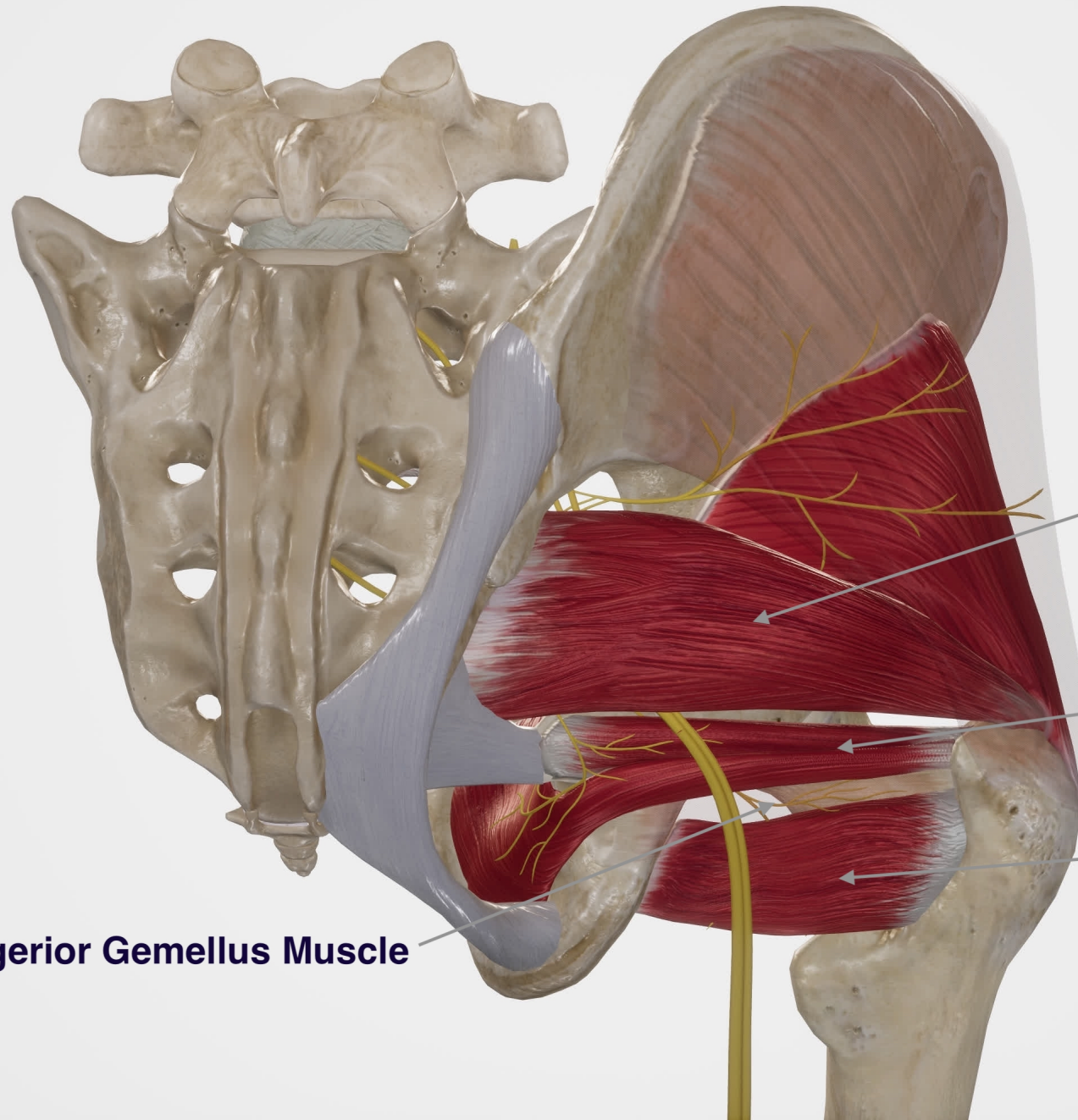
Obturator Internus

Piriformis

Obturator Internus

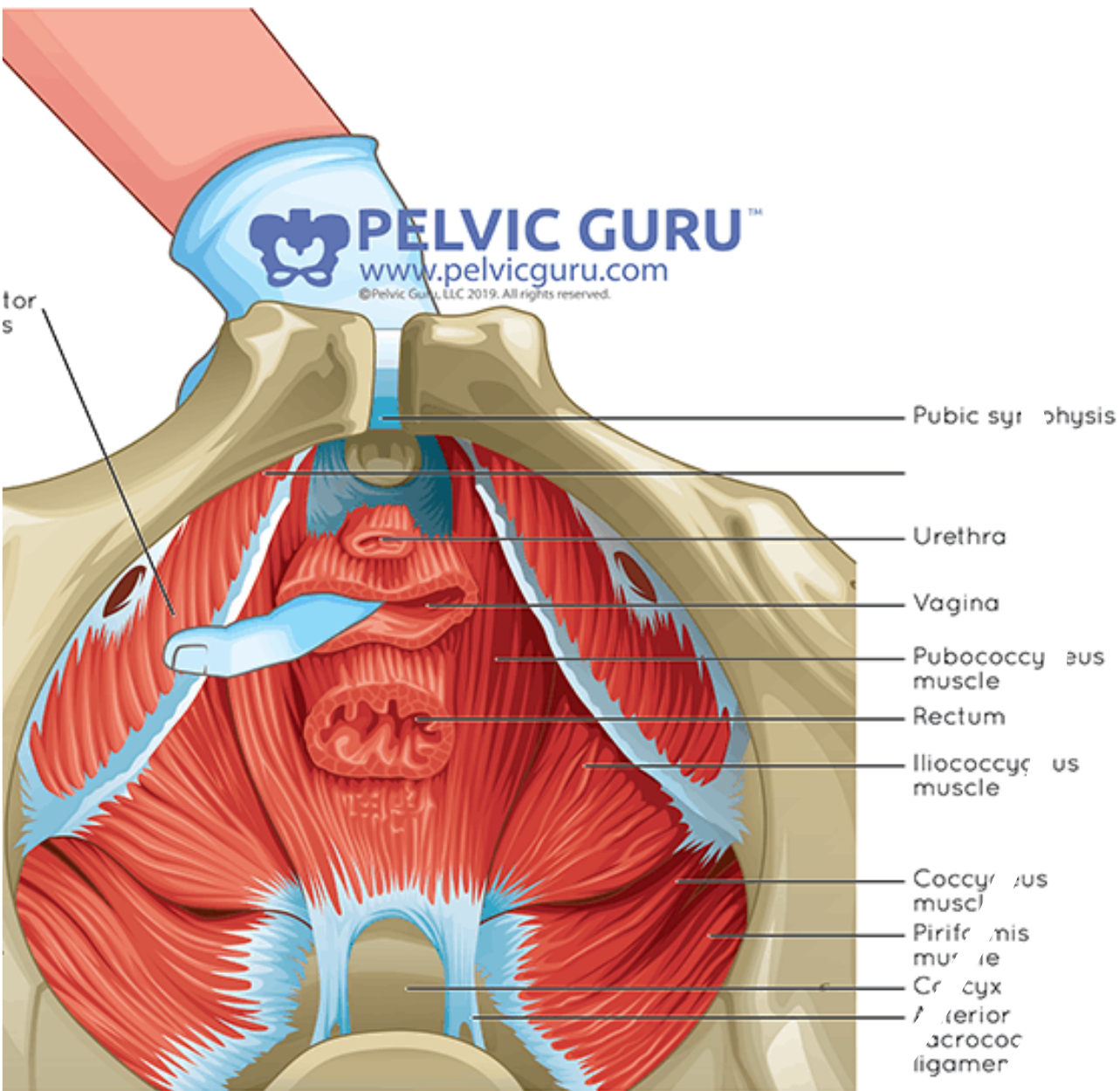
Quadratus Femoris

Not shown: Ingerior Gemellus Muscle



Key facts about the obturator internus muscle

| | |
|--------------|--|
| Origin | Posterior surface of the obturator membrane; bony boundaries of the obturator foramen |
| Insertion | Medial surface of greater trochanter of femur |
| Action | External rotation of extended thigh; Abduction of flexed thigh; Stabilization of hip joint |
| Innervation | Nerve to obturator internus (L5 and S1) |
| Blood supply | Obturator artery; internal pudendal artery |



SIGNIFICANCE OF OI: in clinic

HIP ER STRENGTH, MOBILITY, STABILITY
 ATTACHMENT OF LEVATOR ANI = INTERNAL AND EXTERNAL TRIGGER POINTS PRESENT
 MULTIPLE WAYS TO EFFECT STRENGTH AND FUNCTION

IF ORTHOPEDIC HIP PAIN IS NOT RESPONDING TO TRADITIONAL TREATMENT, REFER TO PELVIC PT

More than just the lateral wall...

Recent cadaver studies show that the levator (LA) ani moves in conjunction with OI

Dynamic movement of OI (thickness ~ 16mm) is thought to act on LA with a thickness of ~ 3mm through the obturator fascia, *creating the foundation for LA function and support of the pelvic viscera*

Dissections show the connective tissue of the obturator fascia also plays a key role between the OI and LA, *possibly creating a field of the LA to exert its function*

More than just the lateral wall...

The LA provides **vital support for the pelvic organs** and in B/B functions¹

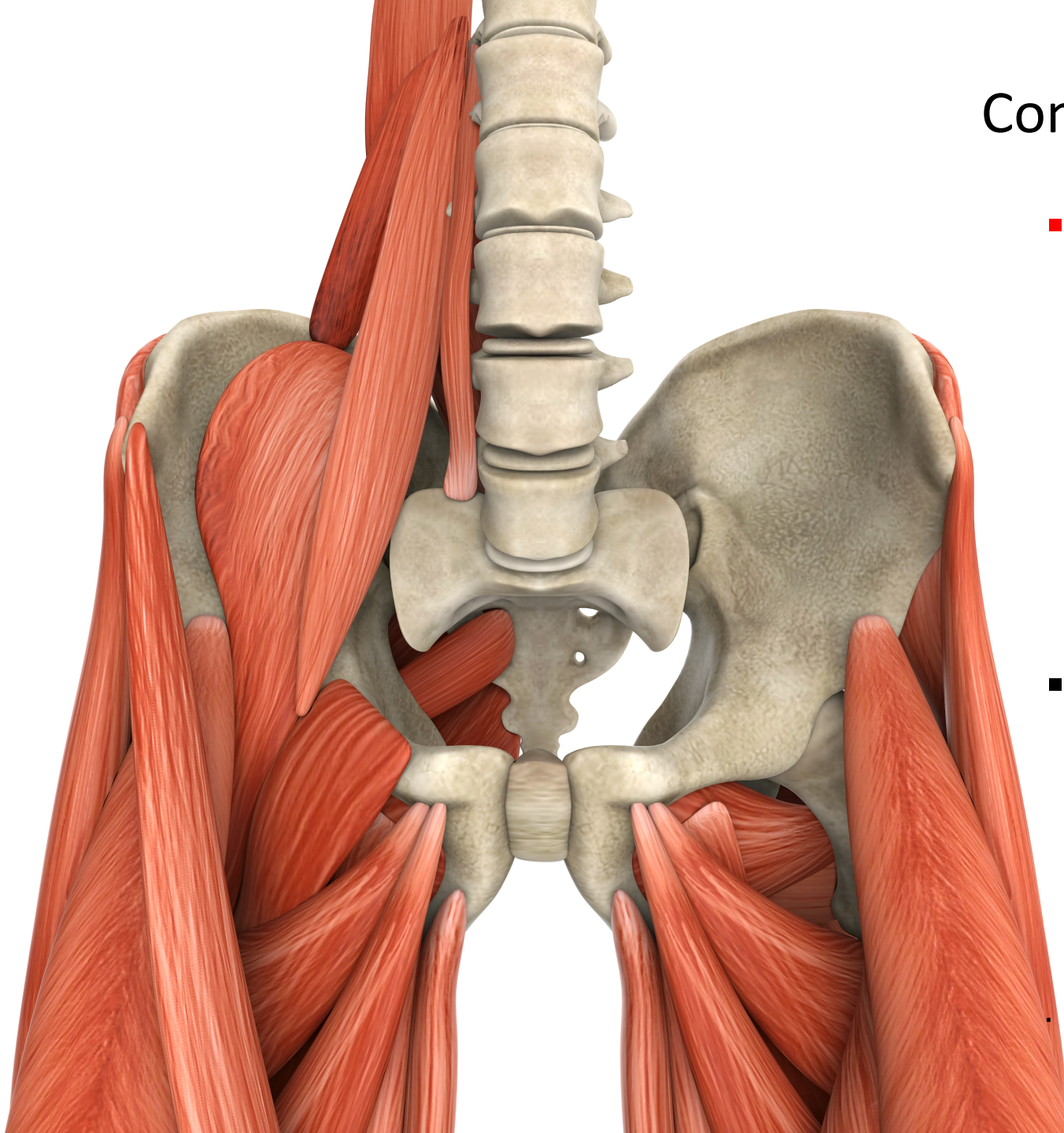
Further anatomic studies have shown that the anterior portion of the LA “slings” both in front and behind the anal canal, and that ***its striated fibers are continuous with the urethral sphincter***²

Helps to solidify why patients with UI may benefit from hip ER strengthening, as well as why the squatting position is helpful for constipation³



Connective tissue &
treatments

Where our specialties
intersect!



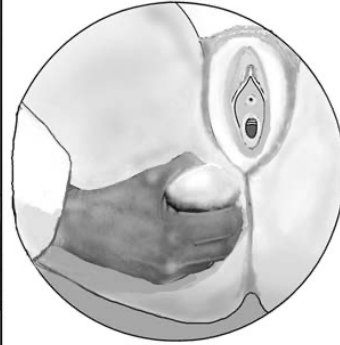
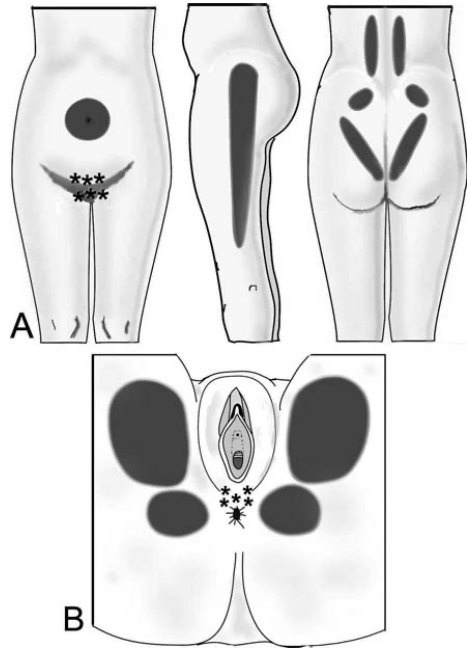
Connecting the dots...

- In 2003, Fitzgerald et al. published a two-part journal submission called “rehabilitation of the short pelvic floor” , suggesting a pattern of myofascial and connective tissue abnormalities should be considered by clinicians as clinical genitourinary syndromes
- Among patients presenting for pelvic floor rehabilitation, it is important to specifically evaluate the iliopsoas, the gluteal muscles, quadratus lumborum, obturator internus and piriformis for abnormalities.



Connecting the dots...

Several urogynecologic syndromes are associated with the clinical finding of a short, painful, tender and weak pelvic floor and a variety of connective tissue abnormalities.



Short pelvic floor: Soft tissue mobilization

- “[We] find that connective tissue characteristics are best assessed by methodically palpating the subcutaneous tissue of the abdominal wall, lower back, buttock, vulva and thighs ” (Fitzgerald et al 2003, part I-II with images)

Anatomical theatres: Padua, 1594

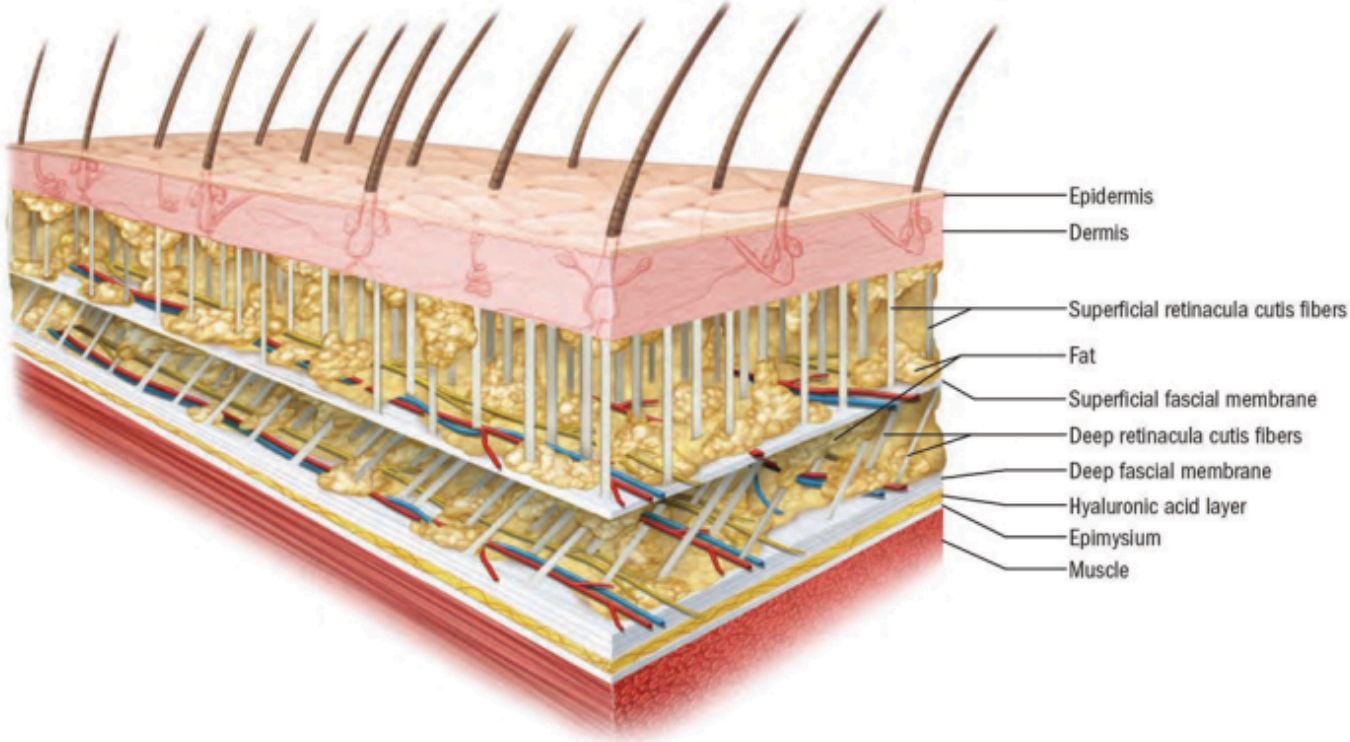
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ANATOMICAL TERMINOLOGY SUGGESTS THAT THE TERM FASCIA COULD BE USED TO INDICATE A SHEATH, SHEET, OR OTHER DISSECTABLE CONNECTIVE TISSUE AGGREGATIONS

Stecco, a FMI lecture, 2016.

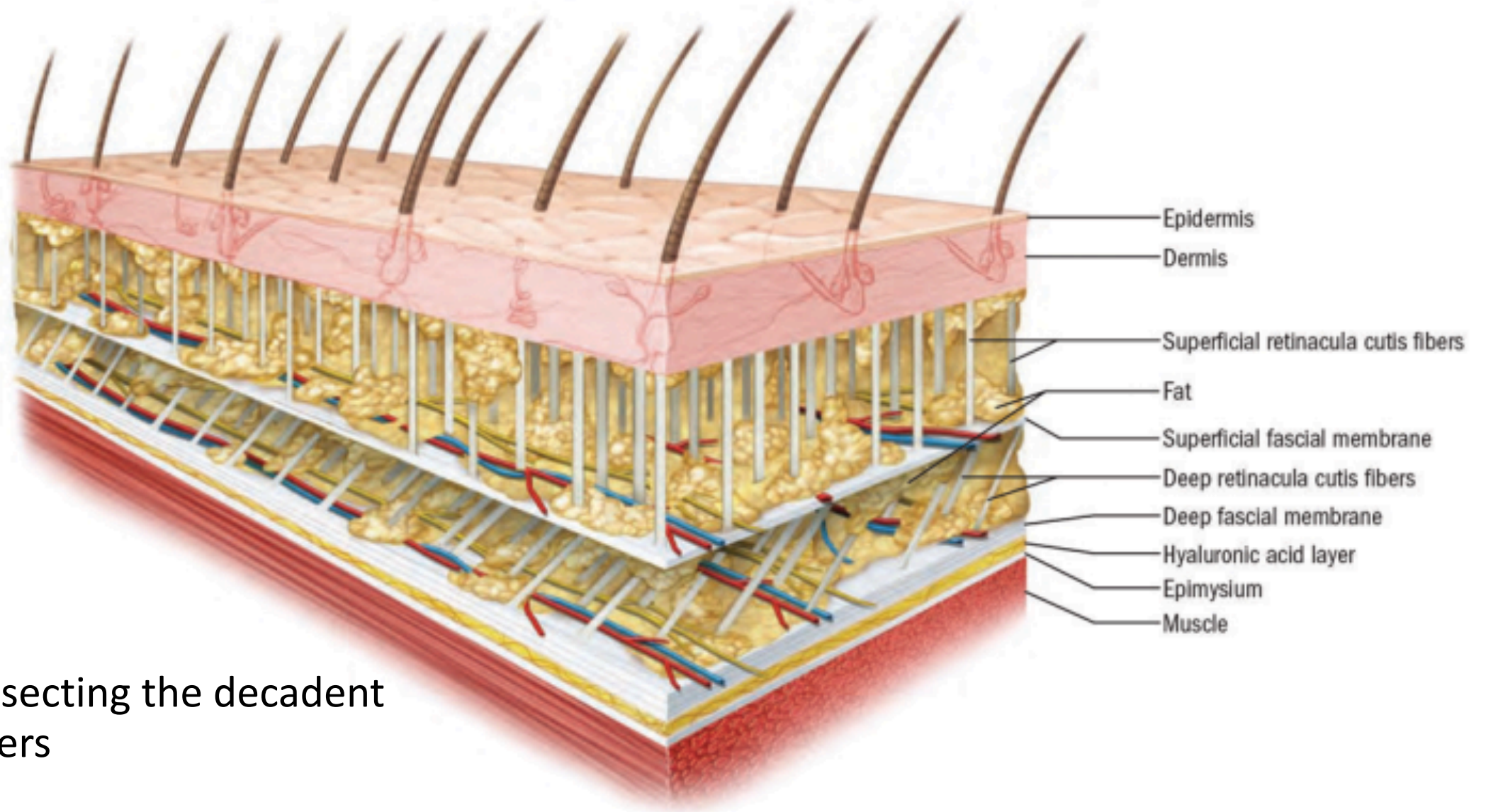


Dissecting the decadent layers



▲ FIGURE 2. CROSS-SECTION FROM THE SKIN TO THE MUSCULATURE, SHOWING FASCIAL MEMBRANES AND RETINACULA CUTIS FIBERS.

ILLUSTRATED BY GIOVANNI RIMASTI. (MODELED FROM AN ILLUSTRATION BY STECCO.)



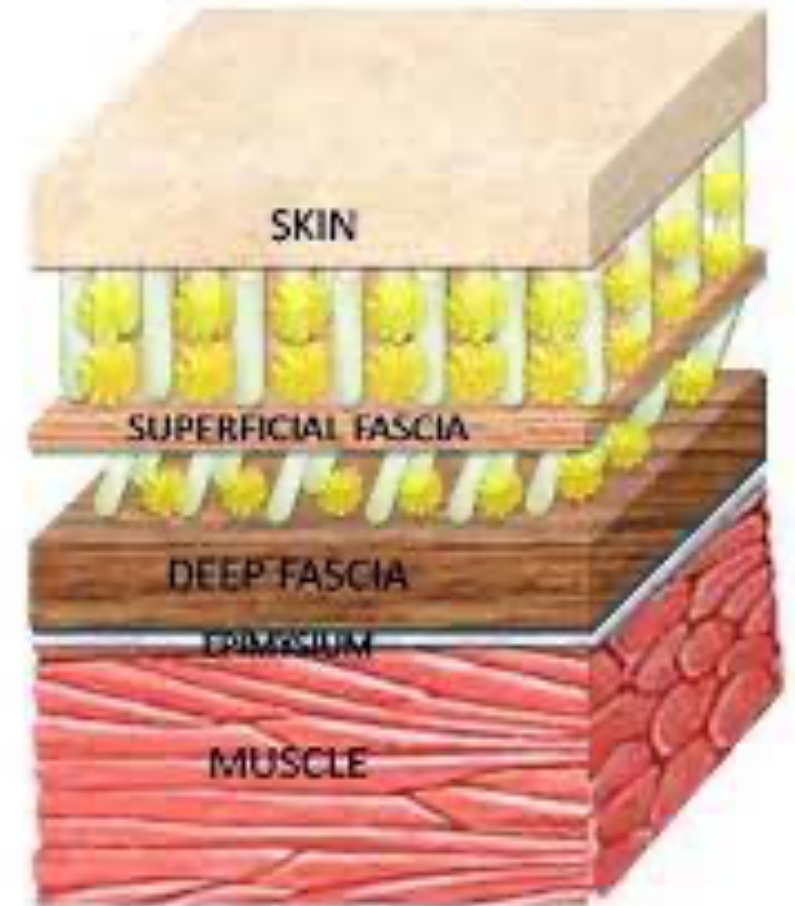
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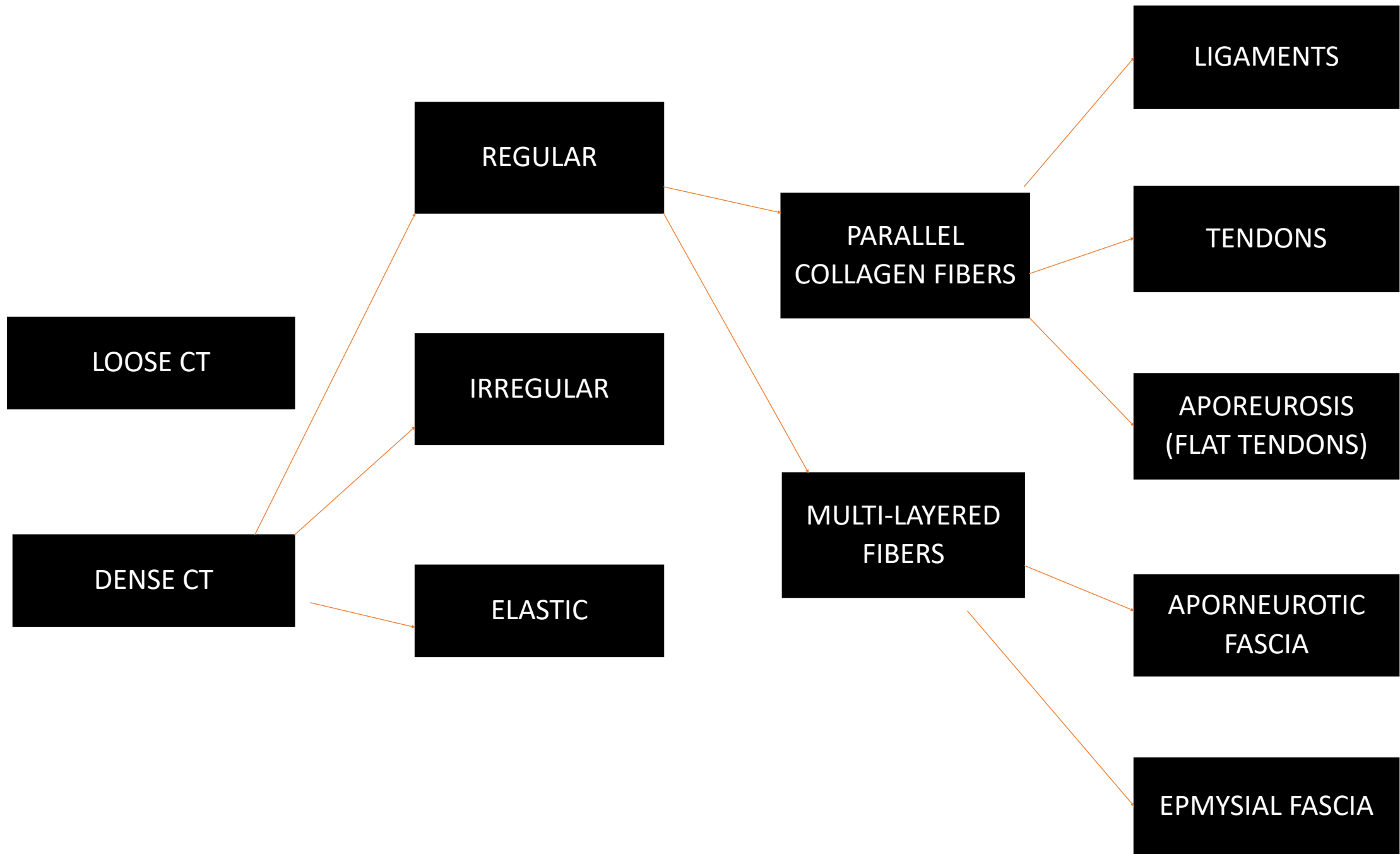
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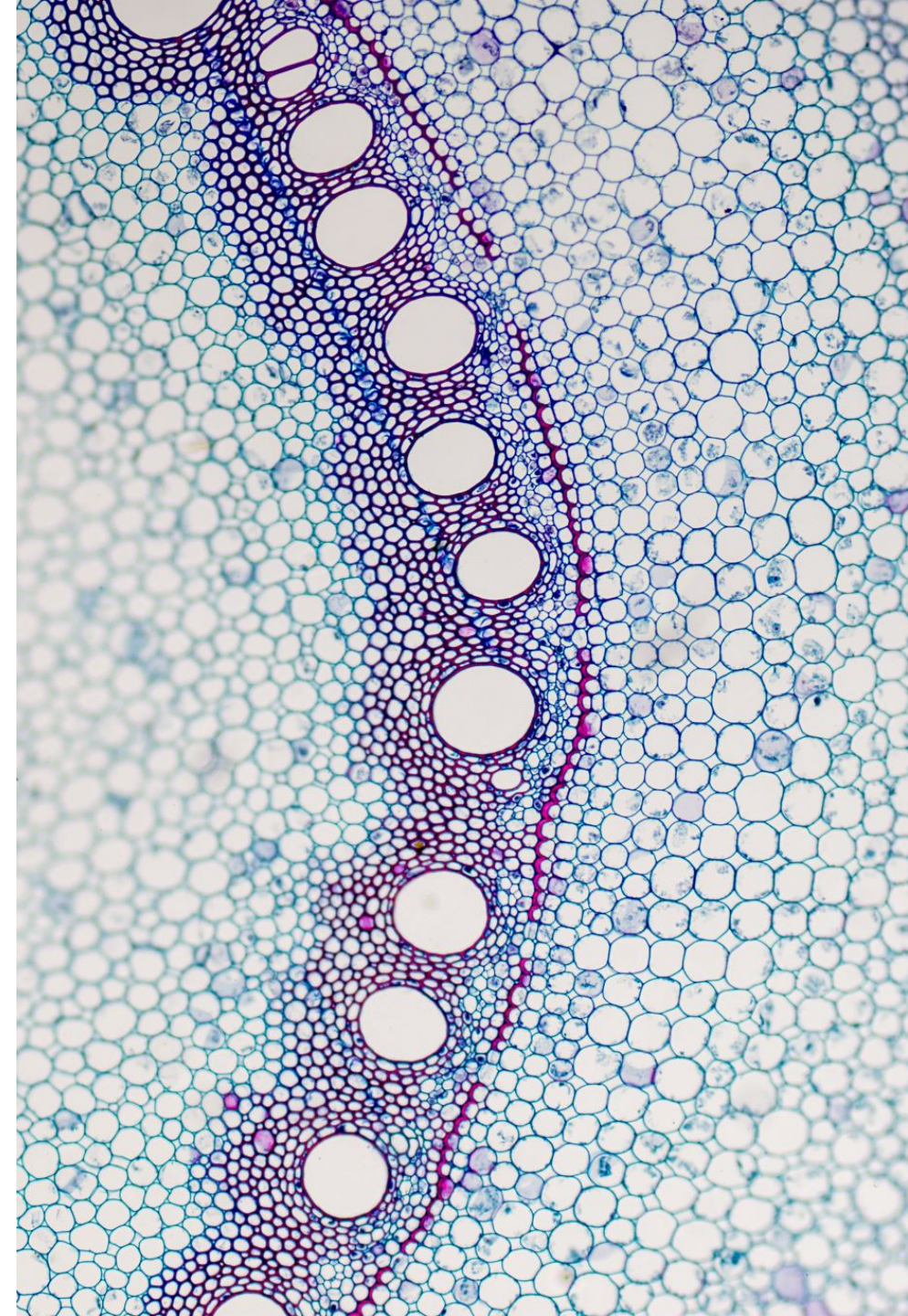
BREAKING IT DOWN: BENEATH THE SKIN

- RETINACULA CUTIS = ANCHORAGE OF SKIN TO UNDERLYING *SUPERFICIAL AND DEEP FASCIA*: VERTICAL/OBLIQUE SEPTA CONNECT THE SUPERFICIAL FASCIA TO THE SKIN 3-D, AND TO THE DEEP FASCIA FORMING A NETWORK BETWEEN THE FAT LOBULES
- HYALURONIC ACID LAYER: ALLOWS THE EXTRACELLULAR MATRIX TO GLIDE... BETWEEN THE DEEP FASCIAL MEMBRANE AND THE EPIMYSIUM/MYOFASCIA





- **Superficial fascia** lies beneath the epidermis and corium and *adheres via ligamentous folds into the deep fascia*. [It] may play a role in the integrity of the skin, in thermal regulation, metabolism and the protection of vessels and nerves and in participating in the perceptive system. Stecco and Stecco, 2009
- **Deep fascia** envelops the muscles and their aponeurosis up to where it is inserted into the bone. Schleip et al., 2012
- **The *deep fascia and muscles work together*** like a transmission belt between two adjacent joints and also between synergic muscle groups. Luomala, Tuulia et al. 2013.



MUSCULAR FASCIA: DEEP FASCIA

FOR THE TERM DEEP FASCIA, WE INTEND ANY DENSE FIBROUS SHEATH THAT INTERPENETRATES AND SURROUNDS THE MUSCLES, BONES, NERVES, AND BLOOD VESSELS OF THE BODY, BINDING ALL THESE STRUCTURES TOGETHER INTO A FIRM COMPACT MASS.
STECCO, ET AL. 2013

MUSCULAR FASCIA: APONEUROTIC AND EPIMYSIAL

- **Aponeurotic fascia: well-defined fibrous sheath (~ 1mm), separated from the underlying muscles and able to transmit muscular forces over varied distances.**
- **Some of the most notable structures: the fascia lata, the crural fascia, brachial/antebrachial fascia, the rectus sheath, thoracolumbar fascia**

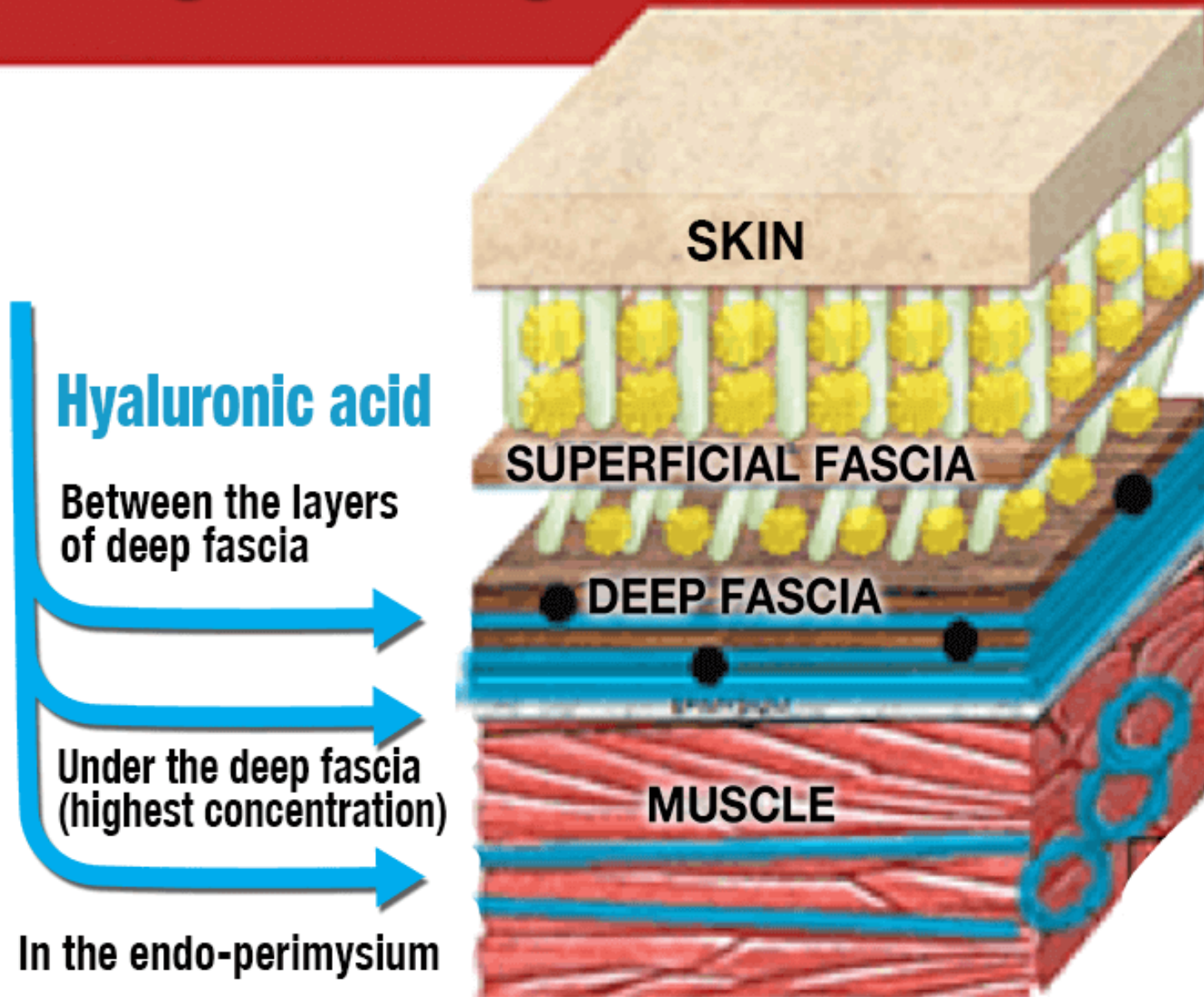
MUSCULAR FASCIA: APONEUROTIC AND EPIMYSIAL

- **Limbs and trunk: same macroscopic and histological structure, but differ biomechanically:**
 - Limbs: connect to the underlying muscles only by myofascial expansions (think long stockings or gloves), most evident at the joints: the muscles are “freely sliding” due to loose connective tissue separating them from the epimysium.
 - Trunk: the aponeurotic fascia is a flat tendon for the adjoining muscles (rectus and TLF) = inserts completely into the AP fascia

Hyaluronic acid: fascial lube

- “[HA] is ubiquitous, but is particularly abundant in soft connective tissues, in tissues undergoing rapid growth and development, in fertilization, during embryogenesis, whenever repair and regeneration are occurring, during cell migration, cancer initiation and malignant progression “ (Stecco, c. et al. 2011)
- “If the tissues are not free to slide over each other, a mechanometabolic dysfunction will be created, **starting from densification of the tissues up to an alteration of the extracellular matrix** . If the extracellular matrix alters the mechanical environment, the change will induce a non-physiological lymphatic vascular morphogenesis.” (Boroni, B. 2020)
(Stecco, c .et al. 2011)

Region of Highest HA Concentration

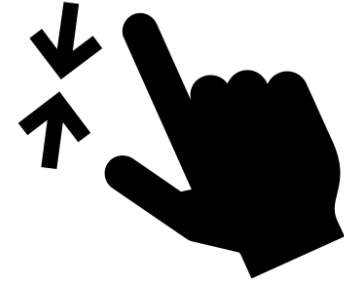


<https://www.structurabodytherapies.com/topics/facial-tissue/>



Chris Centeno, M.D.

Fascia assessment: A bit of a pinch



- **Quality of tissue movement:** Level of adherence, tenderness, texture, ie.: "gritty, sandy, bubbly, slick or smooth"
- **Tenderness to palpation:** scar tissue, trigger points, adherence and referral patterns
- **Self care:** providing HEP with massage stick, TRP ball, foam roller, MFD cups, stretching, neural mobs
- **Response to mobilization /test-retest:** asking the patient to repeat painful motions demonstrated at start of session to observe ROM and/or sensation changes



Confident hands-on palpation to assess quality of fascial mobility in relationship to your patient's pain



Anatomy and education for the patient: building trust and confidence, especially with pelvic/sexual health



SKIN ROLLING

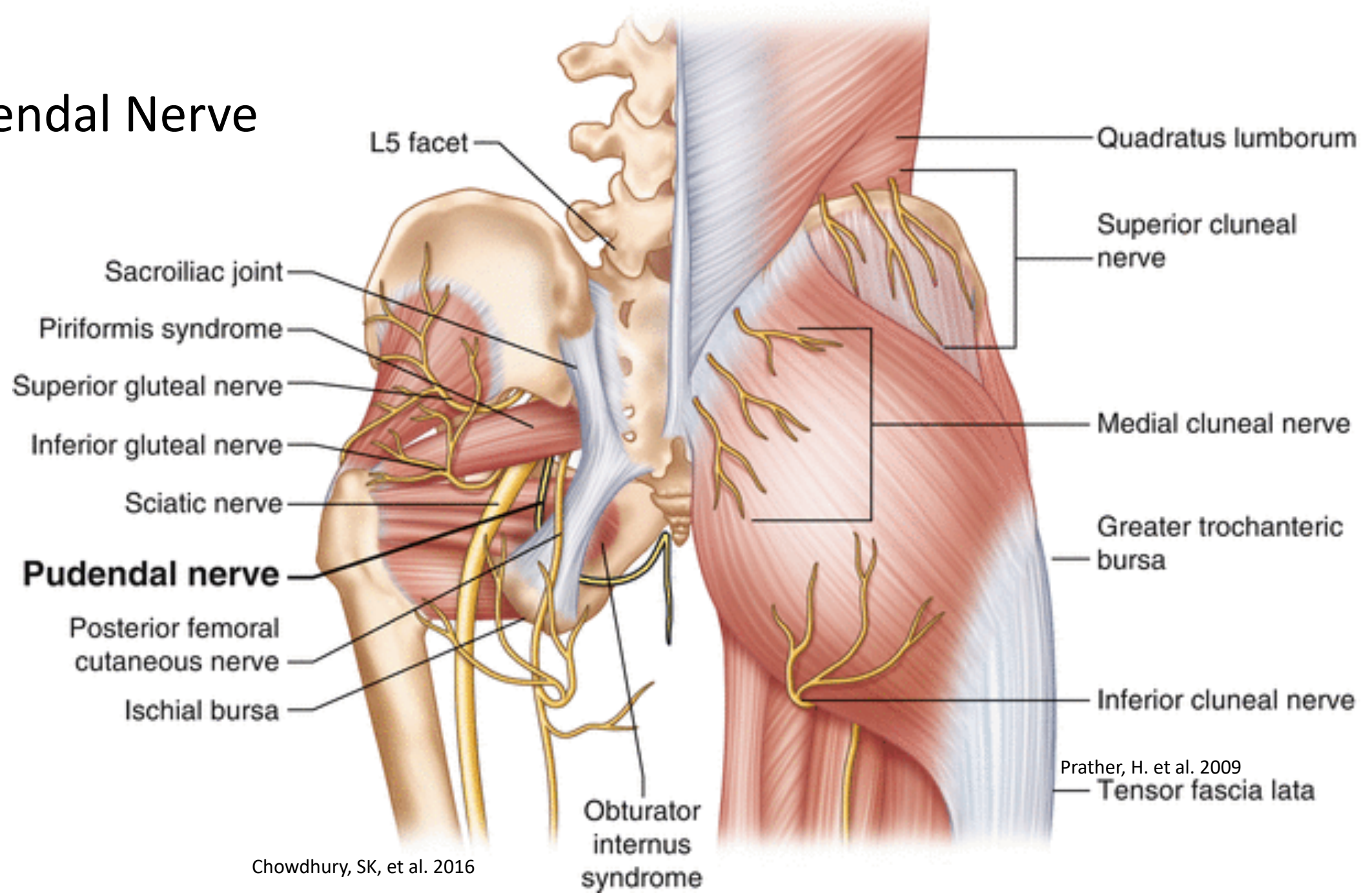
- BEFORE APPLYING EMOLLIENT: TEST THE DIRECTION OF RESTRICTION WITH SUPERFICIAL GLIDE
- SMALL AMOUNT OF LOTION APPLIED TO AREA
- START TO “PINCH AND LIFT” IN CHOSEN DIRECTION
- USING THUMBS TO “ARC” THE TISSUE, THE FINGER WILL “INCH” THEIR WAY FORWARD, “DRAGGING” THE SUPERFICIAL FASCIA ACROSS THE ZONE
- THUMBS ARE “STATIC,” LIKE A PLOW PULLING ACROSS A FIELD



Structures to assess

- ANTERIOR: SUPINE
 - Abdominal wall
 - Adductors: distal to origin
 - Bony Pelvis:
 - Ischial ramus
 - Ischial tuberosity
 - Alcock's canal
 - Deep buttocks
 - Superficial PFM
- POSTERIOR: PRONE/SIDE LYING
 - Lumbar paraspinals, QL
 - Gluteals
 - Hamstring distally over ischial tuberosity
 - Sacrum/coccyx

Pudendal Nerve



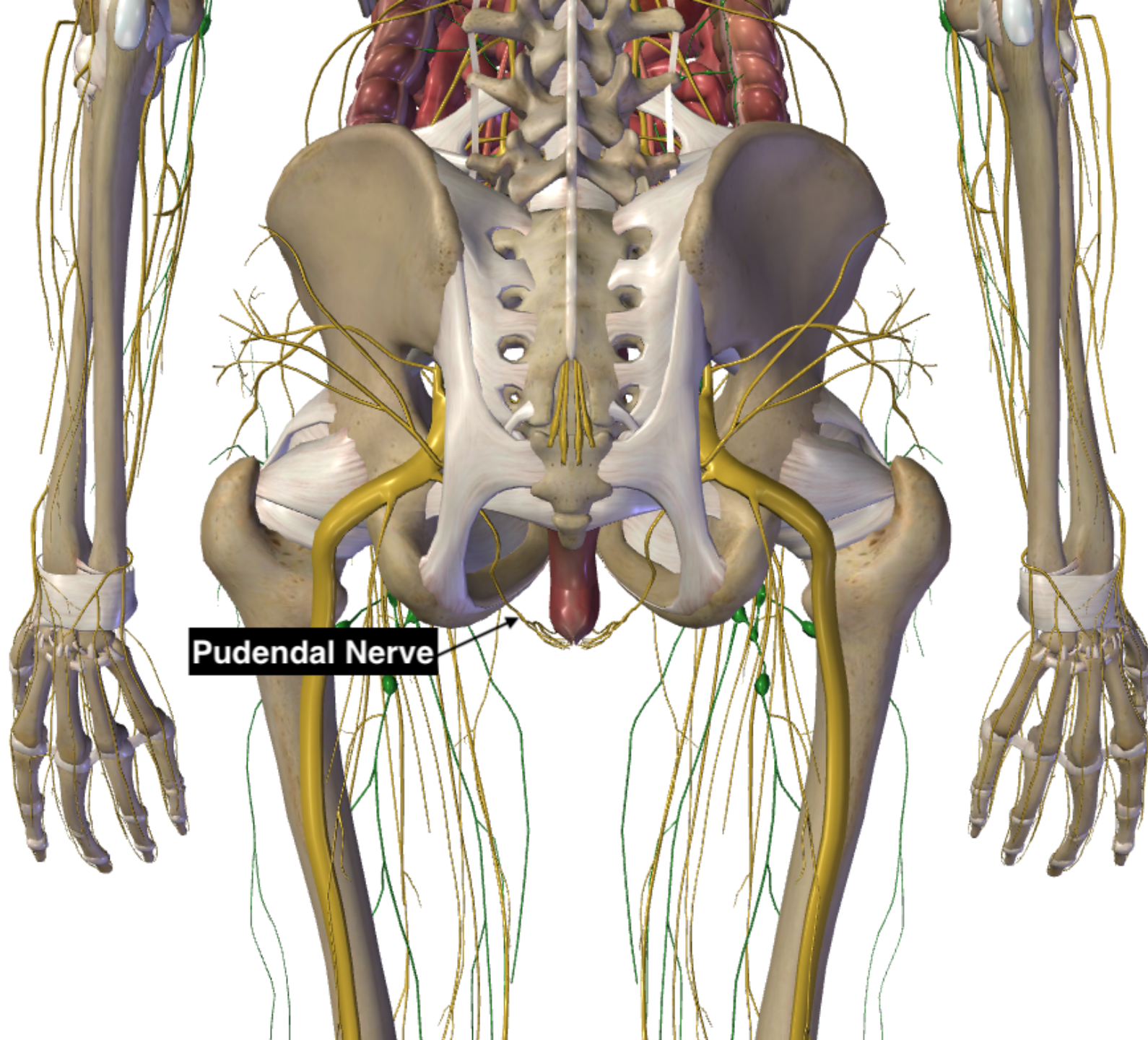
Chowdhury, SK, et al. 2016

Prather, H. et al. 2009

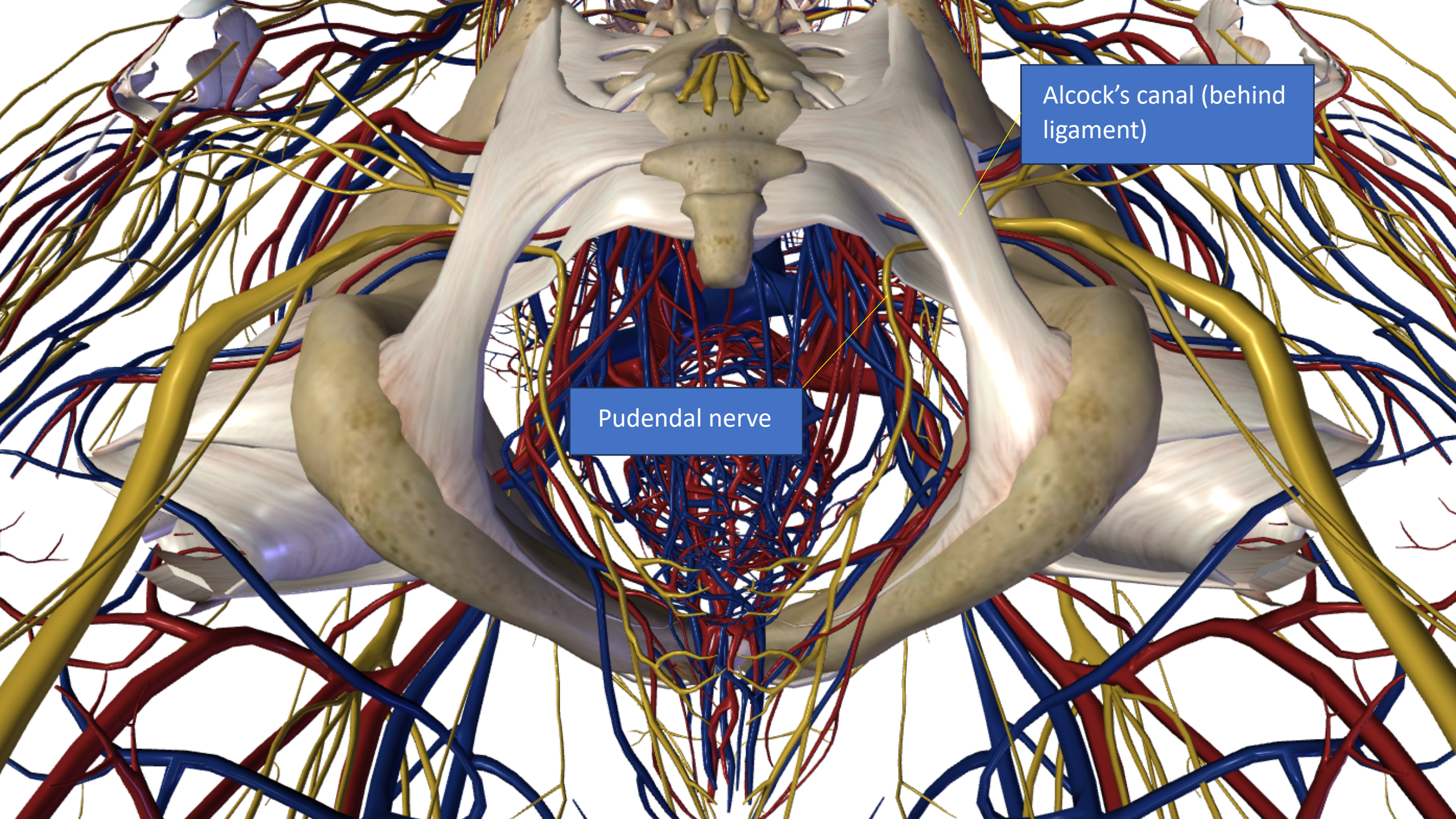


Pudendal Nerve Mobilization

- “If a tissue affected and penetrated by the nerve path creates problems in the sliding of the nerve, the nervorum nerves will perceive this difficulty, turning into potential vehicles of nociceptive stimuli “ (Topp, KS, Boyd BS. 2012)



Pudendal Nerve



Alcock's canal (behind ligament)

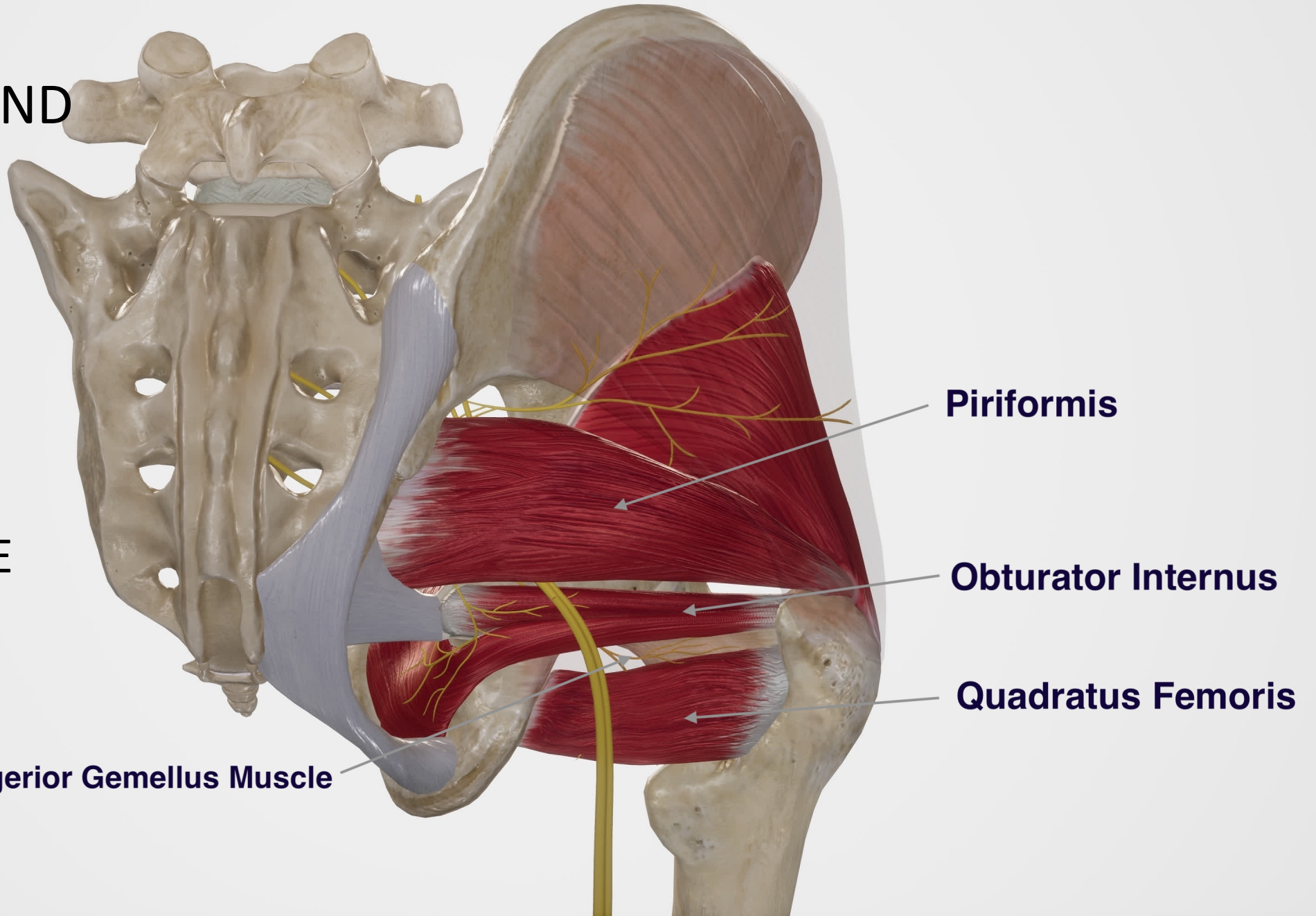
Pudendal nerve

Alcock's Video

- Click [HERE](#) to watch

EXTERNAL OI PALPATION AND TREATMENT

- SUPINE
- SIDE LYING
- INTERNAL
- NERVE GLIDE



Piriformis

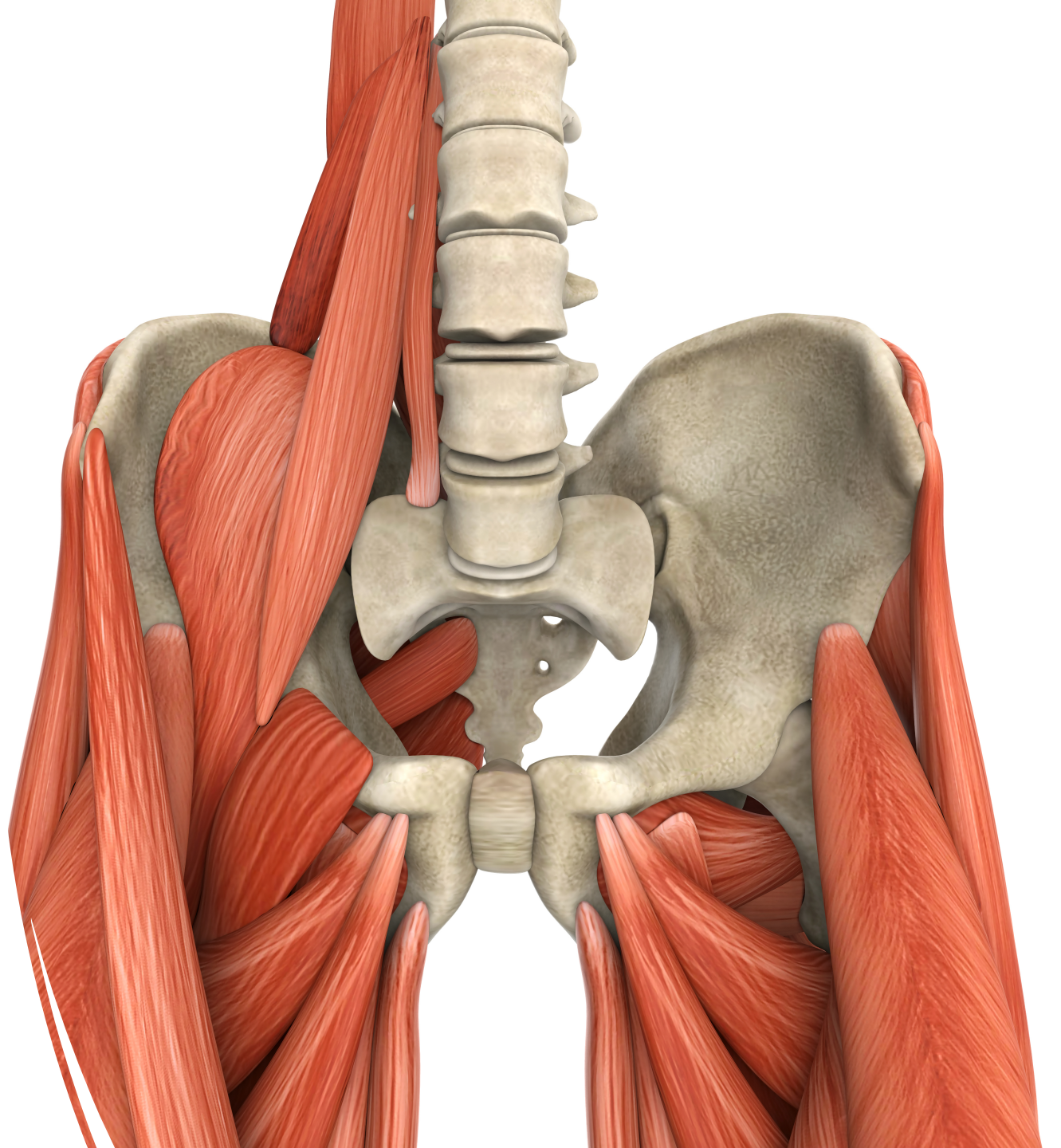
Obturator Internus

Quadratus Femoris

Not shown: Ingerior Gemellus Muscle

Iliopsoas

- Superficial fascia
- TRP
- Myofascial release



Movement screening for pelvic girdle dysfunction

Ambulation, posture, quality of spinal motion, functional motion, special tests, palpation



MEASUREMENTS

Joint assessment in passive and active range of motion

MMT: muscle strength

Neuro screen: dermatome/myotome, light/dull, pinpoint, vibration, CNS

Neural tension

Special tests for each joint or impairment

Fascial assessment

PFM PT MANUAL EXAM

1. Palpation and range of motion: 2 POSITIONS (STAND/SUPINE, SIDE)
2. Joint mobilization (SCREEN JOINTS ABOVE AND BELOW)
3. Soft tissue assessment: INITIAL fascial assessment, CHECK MOBILITY AND LEVEL OF TOLERANCE

PFM PT MANUAL EXAM

4. Pelvic floor assessment

- a. external observation of breathing, kegel/RELAXATION
- b. external soft tissue exam: palpation of the dermal layers and bony landmarks on the superficial layer of PFM
- c. visual assessment tissue quality : observation of kegel contraction externally
- d. q-tip test/light touch test (FOR VULVAR PAIN/GSM, ATROPHY SX)
- e. internal exam by pfm layer, each hemi-pelvis, with patient permission

Objective: SIJ Special Tests and PFM exam

- Confirmation of lumbar, hip and pelvic girdle pain
 - Determined by 1 or more positive MSK tests performed in a cluster: pain w/ AROM of hip or L/S, FABER test, SIJD tests, TTP of PG bony pelvis, ASLR
- Confirmation of PFMD with external/transvaginal digital palpation of all 3 layers of the PFM, bilaterally:
 - External palpation of BS, TP, ISC
 - Intravaginal palpation of levator ani; OI palpation assessed with active resistance of hip ER
 - Sacral sensation and PFM contraction assessment for both concentric and eccentric control
 - (Tanaka, et al. 2023)

PT assessment: subjective intake

S.I.N.S.

- Symptoms: What are your symptoms? Location? Quality of pain/distress/discomfort
- Intensity: on a scale of 1/10, what is your primary symptoms (P1) like at this moment? What is it's best and worst numerical rating?
- Nature: Acute/chronic? Intermittent/constant? Sharp, dull, ache, numb, radiating, unchanging with mechanical stress? Unremitting?
- Severity: When the symptoms come on, how long do they take to resolve? What are able/unable to do during this time?

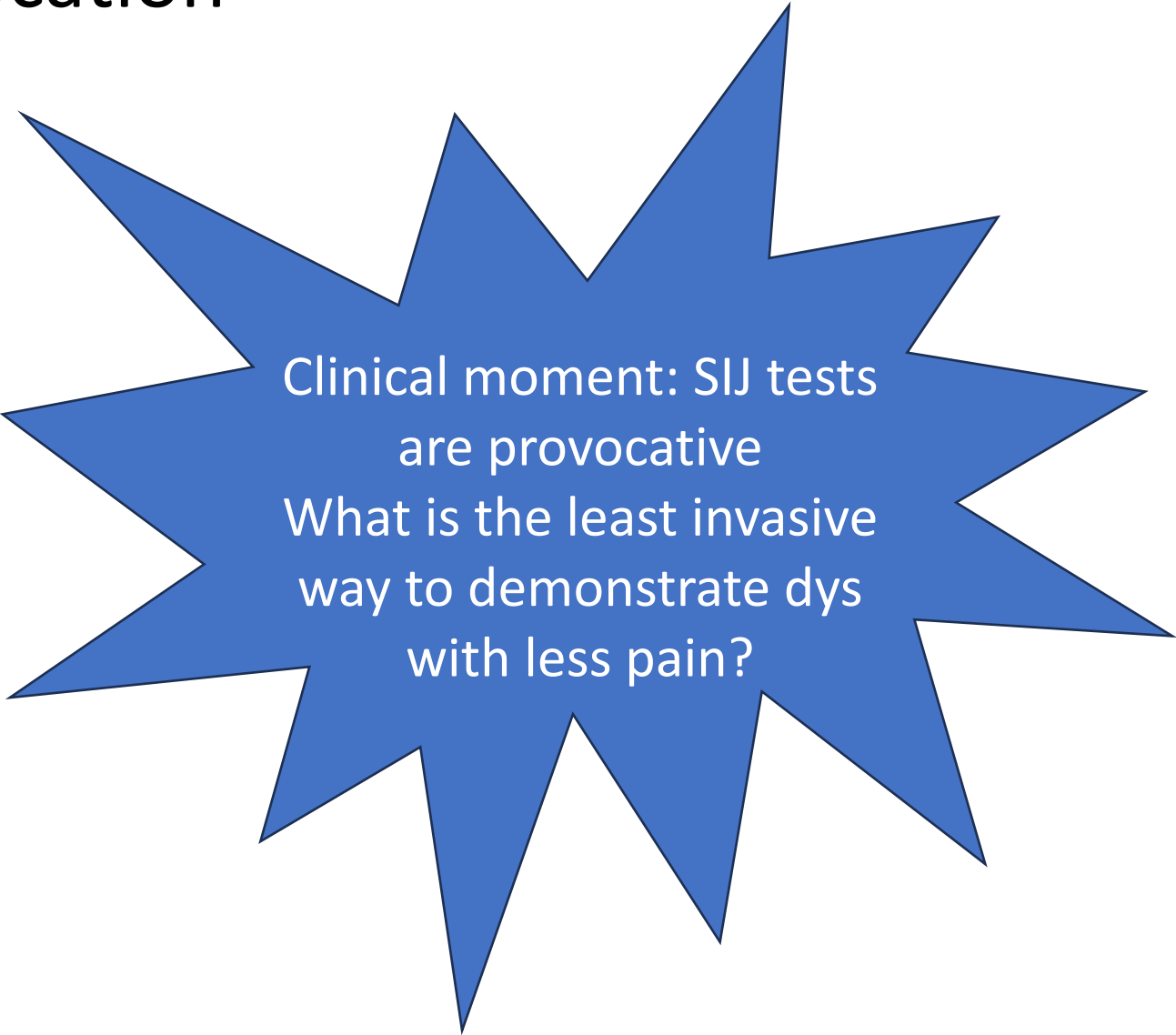
Demonstrates “apparent leg length difference” that can result from SIJ dysfunction

- Patient is in supine, start in hook lying
- Have them elevate hips a few inches and reset to ensure pelvic is even
- Gently distract both legs inferiorly and encircle your index and thumb around the base of the medial malleoli
- If one innominate bone is rotated posteriorly or anteriorly, you may see that the malleoli are not even; one leg will look longer than the other
- Ask your patient to sit up straight (assist them if they can not activate their abs well enough, have lumbar or coccyx pain)
- With patient in “long sit” position, remeasure the distal malleoli again. The apparent LLD should diminish as the patient’s shift innominate rotates to become even in sitting

Supine to long-sit: apparent Ild

- This test is helpful for very provocative patients who have high irritability; however, an extremely sensitive pt may not tolerate supine
- It provides information about obliquity, and puts them in a position for interventions
- Muscle energy technique for adjusting innominate rotation
- Form closure exercises: hip abd/add, TA activation

SIJ/PG provocation tests

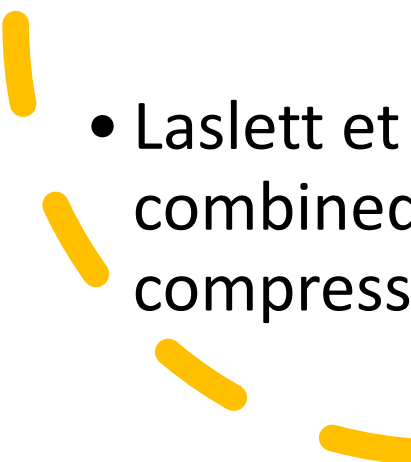


Clinical moment: SIJ tests
are provocative
What is the least invasive
way to demonstrate dys
with less pain?

| VALIDATED SIJ CLUSTER TESTS | DESCRIPTION (+ FINDINGS) |
|-----------------------------|---|
| DISTRACTION | Supine. PT applies posterior-lateral directed pressure to bilateral ASIS (reproduces pain) |
| COMPRESSION | Side lying. PT compresses pelvis w/ pressure over the iliac crest to compress opposite iliac crest (reproduces symptoms) |
| THIGH THRUST | Supine. PT places hip in 90 deg flex and adduction; then applies directed force through femur at varied angles of abd/add (reproduces pain) |
| SACRAL THRUST | Prone. PT applies an anterior directed thrust over the sacrum (reproduces pain) |
| GAENSLEN'S | Supine. Both legs extended. PT passively takes test leg into full knee flexion; opposite hip remains in extension. Overpressure is applied to flexed extremity. (reproduces pain) |

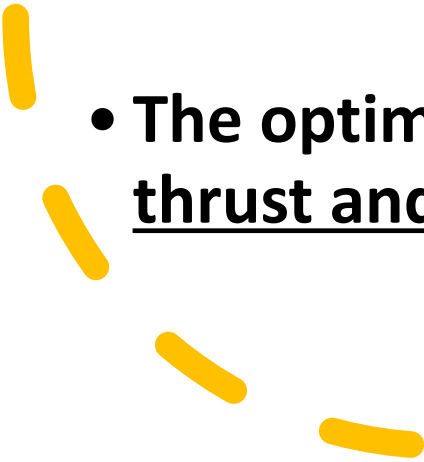


IF YOU BRING IT ON, BE SURE YOU CAN REDUCE & STABILIZE IT

- Levanigie's study in 1999 developed a TIC for identifying SIJ dysfunction with the following tests: standing flexion test, sitting PSIS palpation, supine long sitting test, and prone knee flexion test. Poor interrater reliability.
 - Laslett et al. assessed diagnostic utility of the McKenzie evaluation combined with the following SIJ tests: distraction, thigh thrust, Gaenslen, compression, and sacral thrust. Laslett et al. 2003
- 




IF YOU BRING IT ON, BE SURE YOU CAN REDUCE & STABILIZE IT

- A follow-up study by Laslett et al demonstrated that the Gaenslen's test did not contribute positively when tests were combined and may be omitted from the diagnostic process without compromising diagnostic confidence.
 - **The optimal rule was to perform the distraction, compression, thigh thrust and sacral thrust tests but stopping when there are 2 positives.**
- 



IF YOU BRING IT ON, BE SURE YOU CAN REDUCE & STABILIZE IT

- The literature recommends a cluster of tests to verify SIJ dysfunction vs LBP
 - McKenzie Method is a less provocative means of differentiating SIJ from discogenic origins by using spine direction of preference
- 

Mckenzie method

- Direction of preference:
- Based on the concept of disc deformity with spine motion: the patient will have reduced pain in the direction that reduces the bulging disc away from the spinal nerve resulting in **centralization** of the radicular symptoms
- If the pt's symptoms worsen, this will create **peripheralization**
- Mann, Steven J., et al. 2023

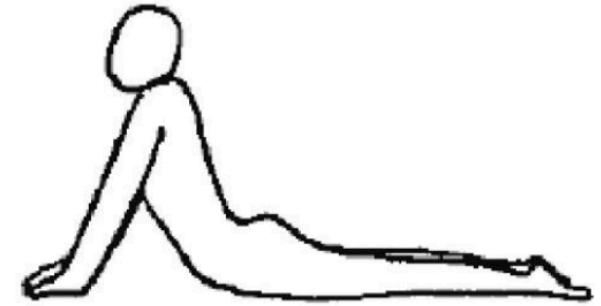
Mckenzie method



Exercise 1



Exercise 2



Exercise 3



Exercise 4



Exercise 5



Exercise 6



LAB 2: MOVEMENT screen

Lab: Objective exam

- Observation of basic motion
 - Ambulation: quality, stride, ease/speed
 - Seated posture: kyphosis, lordosis, forward head, crossed legs, leaning
 - Sit to stand: ease, method (UE?)
 - Spine mobility: flex, ext, SB, rotation
 - Palpation and Mobility screen: assessment of bony pelvis in standing
 - ASIS, symmetry, waist-arm space, shoulder height, foot posture
 - Iliac crest, PSIS: TTP, SIJ symmetry of motion bilaterally with fwd flex
 - Gluteal tissue, femoral bursa, femoral stance: IR, knee valgus, pronation/supination?
 - March test, Stork test, SLS: Trandelenberg
 - Plantar flexion strength (heel lifts)

Lab: Objective exam

- Manual Muscle Testing (MMT): seated
 - Hip flexion
 - Knee extension/flexion
 - Hip rotation: IR/ER
 - Dorsiflexion/1st toe extension
 - Prone hip extension
 - Side lying: hip abduction/adduction

Sacroiliac special tests:

Compression test: side lying position: clinician's hands are placed over the upper part of the iliac crest, pressing toward the floor.

The movement causes forward pressure on the sacrum. An increased feeling of pressure in the sacroiliac joints indicates a possible sacroiliac lesion and /or a sprain of the posterior sacroiliac ligaments.

A positive result is indicated by pain or replication of the patient's symptoms

Sacroiliac special tests:

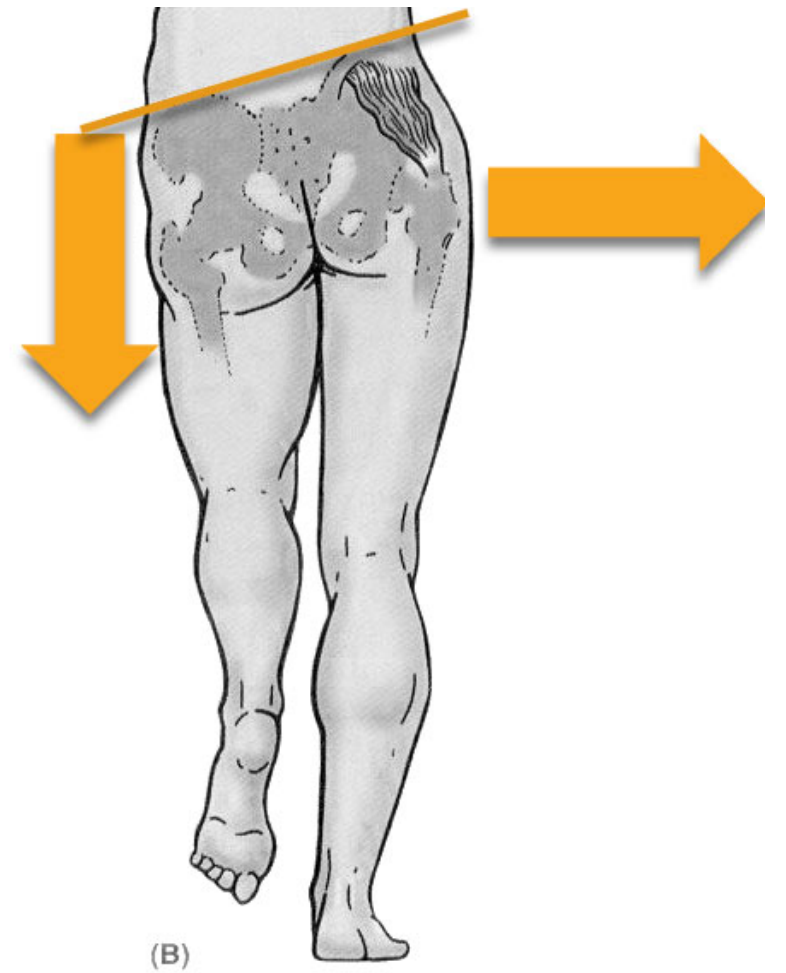
Distraction test

supine position: apply posteriorly directed force to both the anterior superior iliac spines (ASIS)

A test is positive if it reproduces the patient's symptoms. This indicates SIJ dysfunction or a sprain of the anterior sacroiliac ligament

(Magee DJ. 2008)

Glute medius
stability:
Trandelenberg
sign



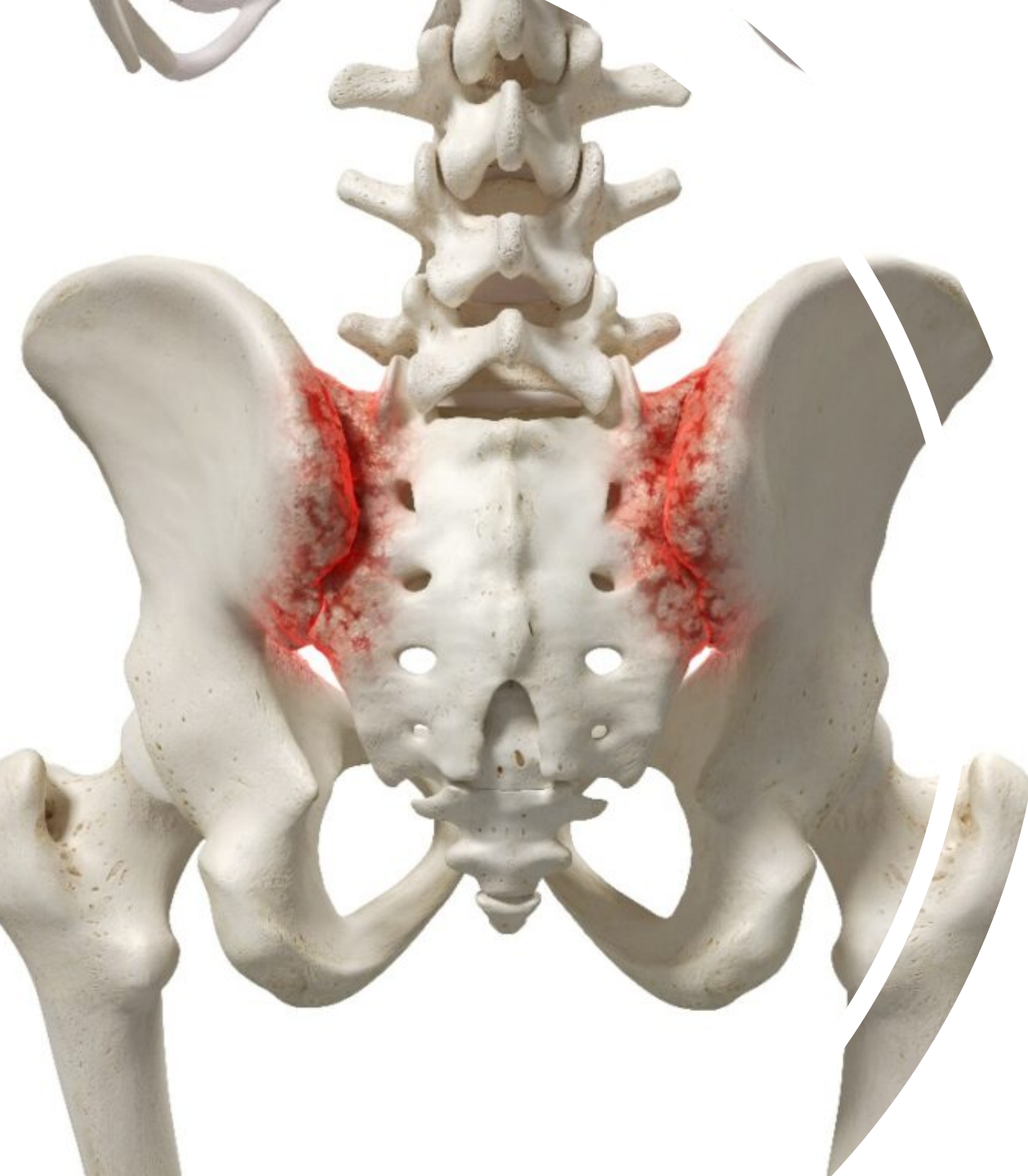
Glute medius stability: Trandelenberg sign

- Standing single leg stance: demonstrates glute medius functional stability
- The glute is weak on the standing side, as you will see the opposite innominate drop
- This test provides real-time strength observation of the pelvis, but also reveals compensations such as spinal torsion, QL shortening, balance impairments
- The position is also a perfect place to help strengthen; start with 10 seconds on each side, build up, using a wall or furniture to support for balance if needed

Sacroiliac special tests

Click here

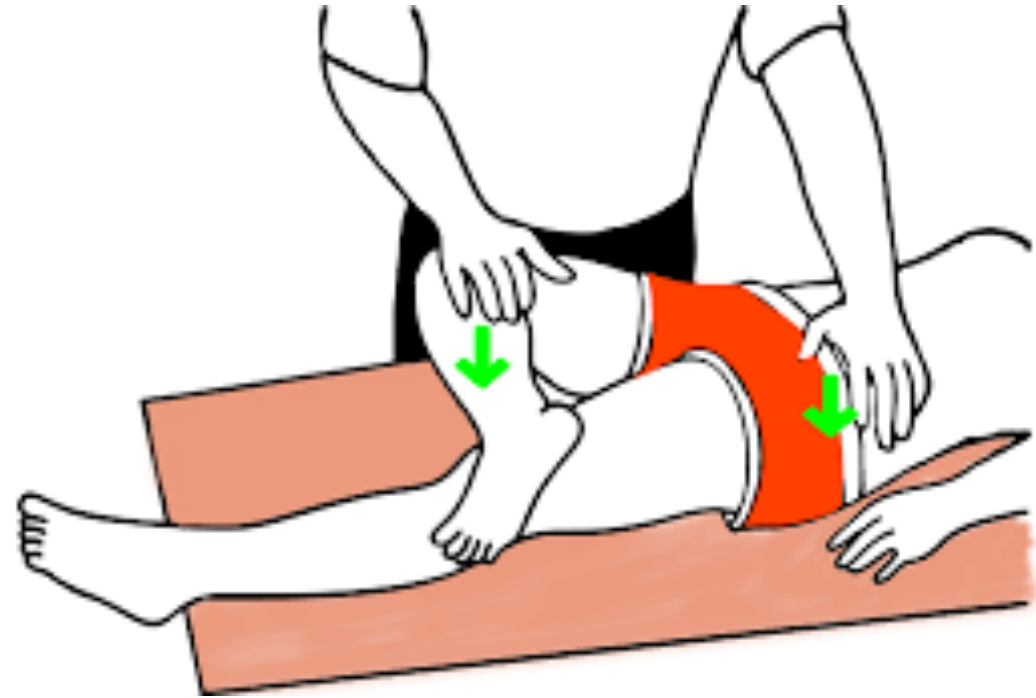




Sacroiliac special tests:

- STORK TEST (Gillet's) Assesses movement of the SIJ between innominate and sacrum through palpation
- Palpate the PSIS in stance and in hip flexion, unilaterally: One thumb one base of iliac spine (PSIS), and the other medical to PSIS (S2)
- Instruct the pt to stand on one leg while lifting the test side into flexion to 90 degrees. Repeat bilaterally.
- Assess quality of each side: the side of palpation should rotate posteriorly, causing the PSIS to drop inferiorly (Magee DJ. 2008)

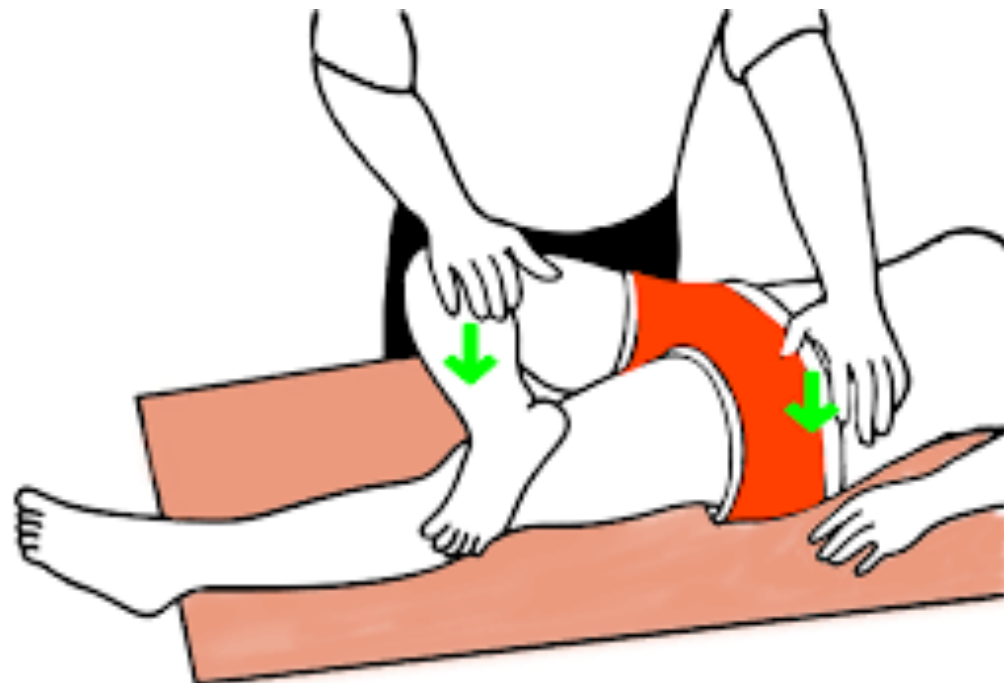
- FABER Test: or “Patrick’s test” can be as a pain provocation test for the sacroiliac joint. [Schneider et al. \(2020\)](#) evaluated this test’s accuracy regarding the diagnosis of a painful sacroiliac joint and found a sensitivity 50% and a specificity of 56%.
- If positive: SIJ pain is provoked; may provoke pubic symphysis pain with increased adductor stretch
- Stabilize opposite innominate

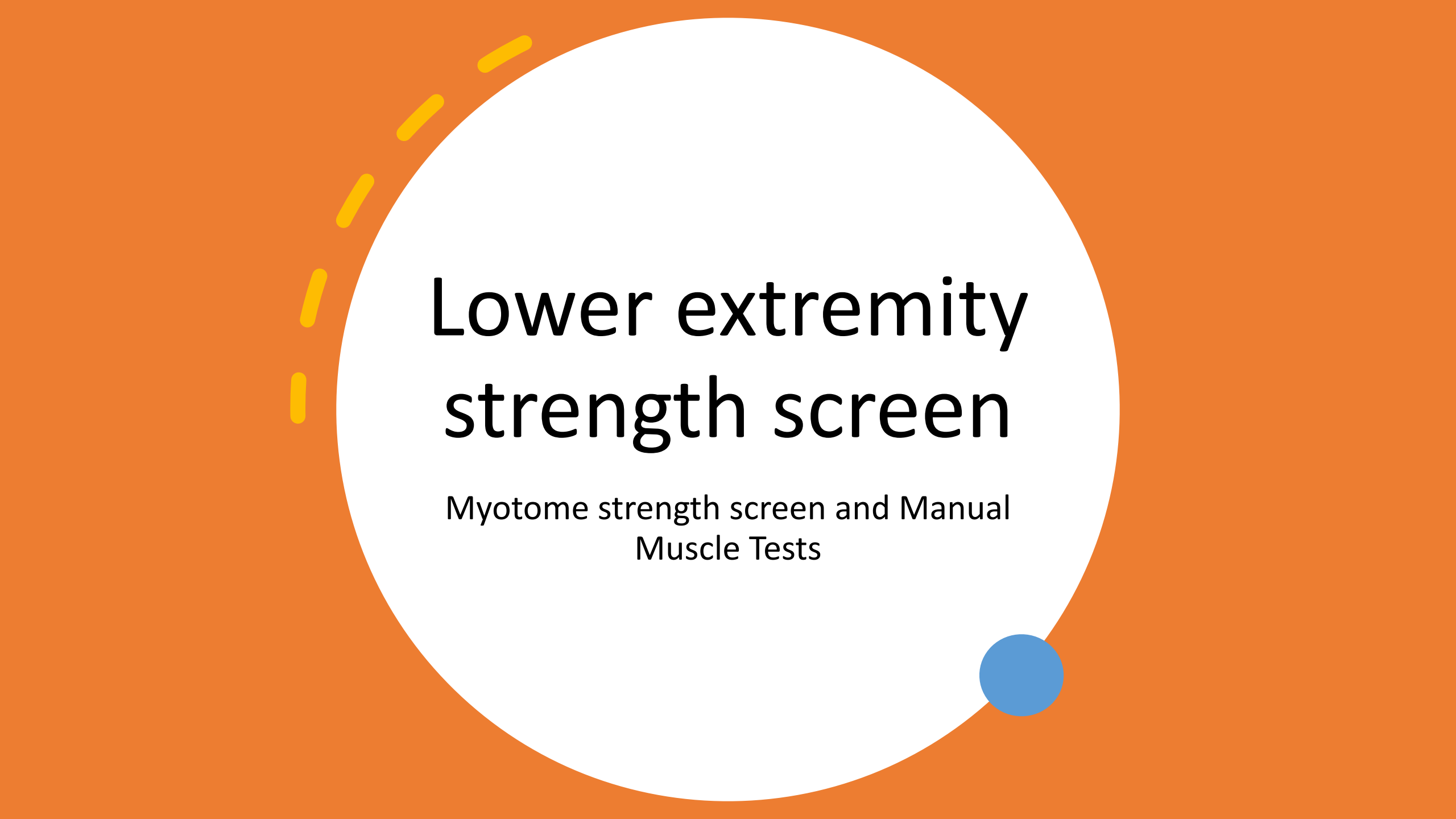


SIJ and ER hip mobility

SIJ and ER hip mobility

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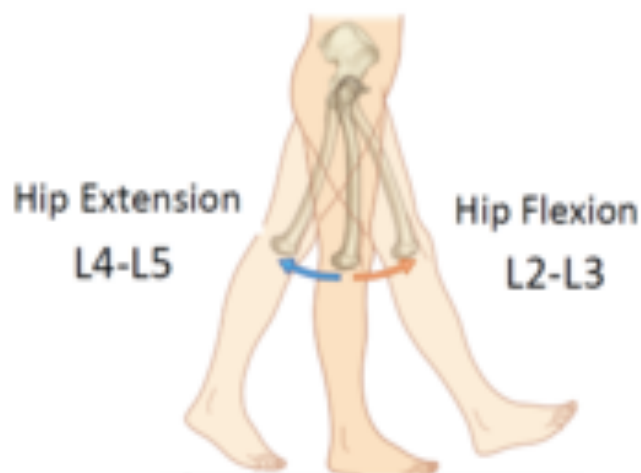


Lower extremity strength screen

Myotome strength screen and Manual
Muscle Tests

Myotomes of the Lower Limb

| | |
|---|-----------------|
| L2-L3 → Lift my knee | Hip Flexion |
| L3-L4 → Kick the door | Knee Extension |
| L4-L5 → Foot points to the sky | Dorsiflexion |
| L4-L5 → I extend my thigh | Hip Extension |
| L5-S1 → I kick my bum | Knee flexion |
| S1-S2 → Stand on my shoes | Plantar flexion |
| L2-3-4 → Modesty closes the door | Hip Adduction |
| L5-S1-2 → The opposite is true | Hip Abduction |
| L4 → The medial side lifts up off the floor | Foot Inversion |
| L5/S1 → lateral side points up to the sun | Foot Eversion |



Myotome testing

<https://www.youtube.com/watch?v=fCYxa-uOLo4>

Muscle energy techniques





Self care: hep

- PELVIC ROCKING
- CLAM SHELL side lying hip ER strength
- SUPINE HIP ABD/ADD W/ RESISTANCE
- MET AND SELF MET
- SEATED AND STANDING PG FORCE CLOSURE EXERCISES
 - THERABAND HIP ABD
 - BRIDGE
 - QUADRIPED
 - CORE



Thank you! That's a wrap!

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1 (Standring & Gray, 2015)

2 (Baramée et al., 2020; Muro et al., 2021); Suriyut et al., 2020)

3 (Muro et al., 2023)