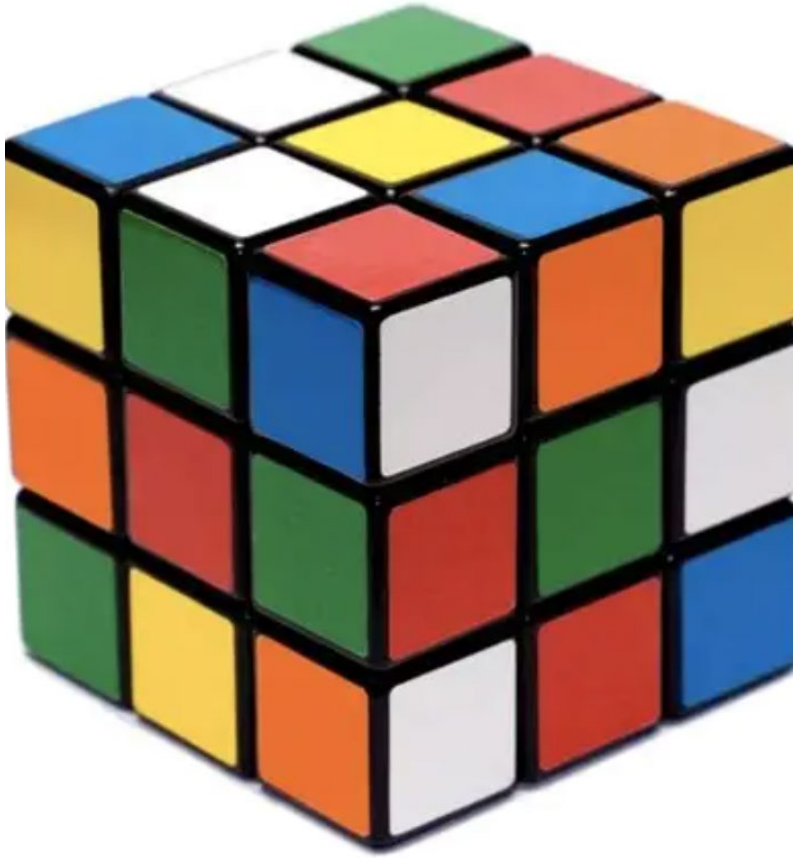

The Pelvic Pain Puzzle

Melissa R. Roscher, MD, FAAPMR

Orthopedic Update

November 8, 2025

Bodiography

Allegheny Health Network

Disclosures

- None

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Objectives

- Discuss the overlapping pain generators in the low back and pelvis that can affect female athletes
- Discuss back pain in the pregnant and post-partum athlete
- Address some myths related to the female athlete and back/pelvis pain

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Location, Location, Location

- Misdiagnosis
  organ pain m
  causing disab

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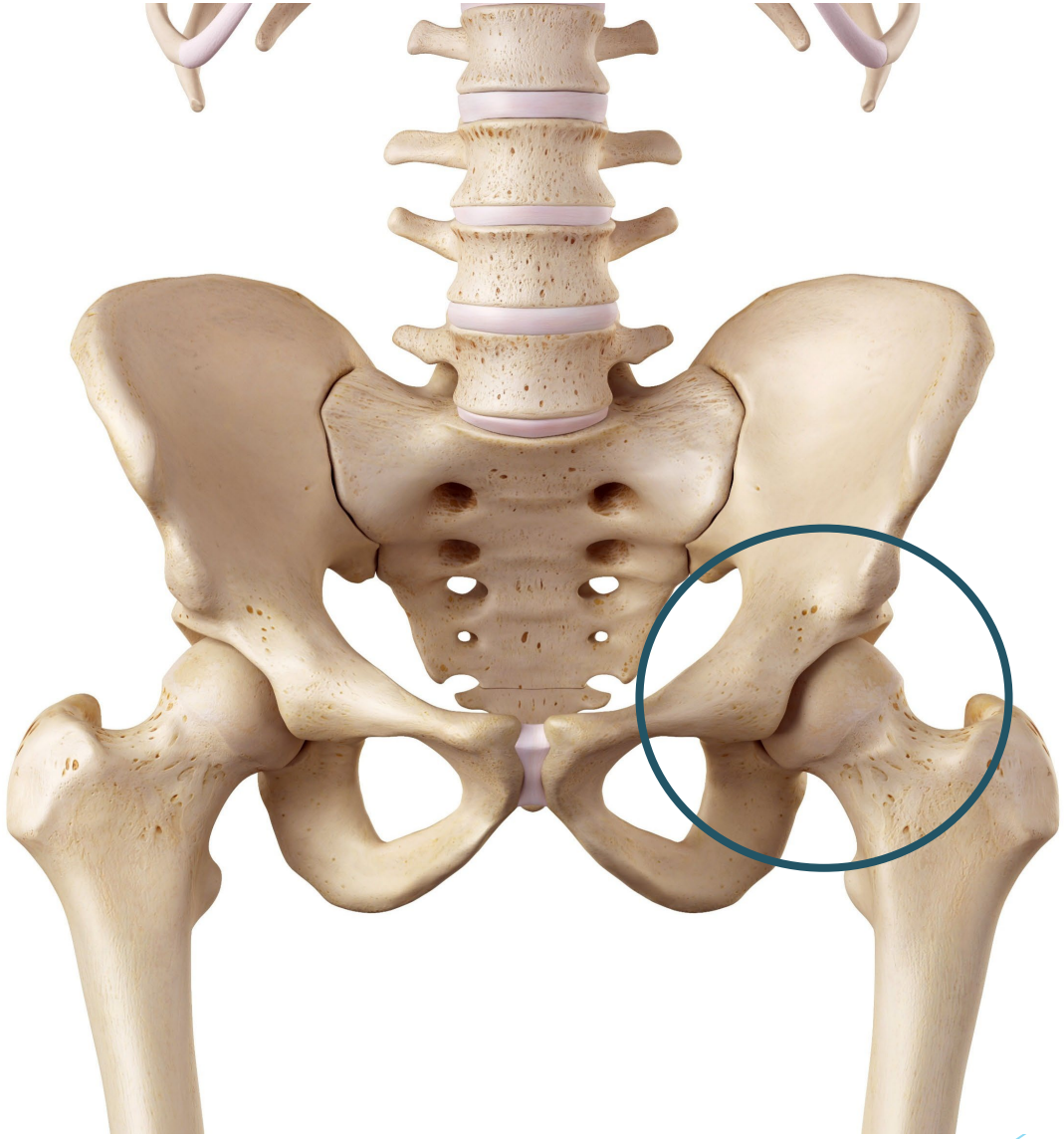

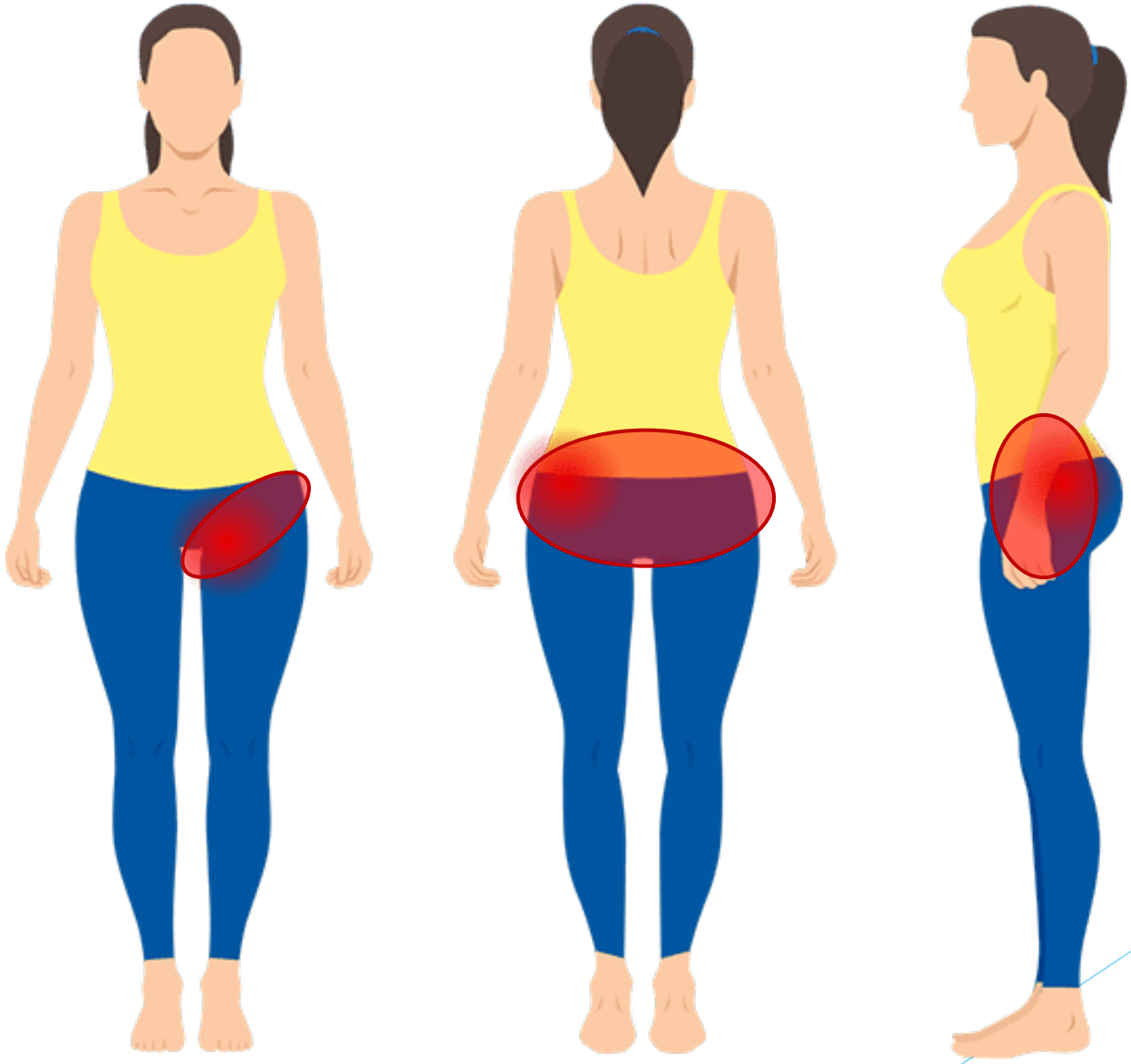

https://www.coreorthosports.com/how-to-identify-the-severity-of-your-hip-pain/

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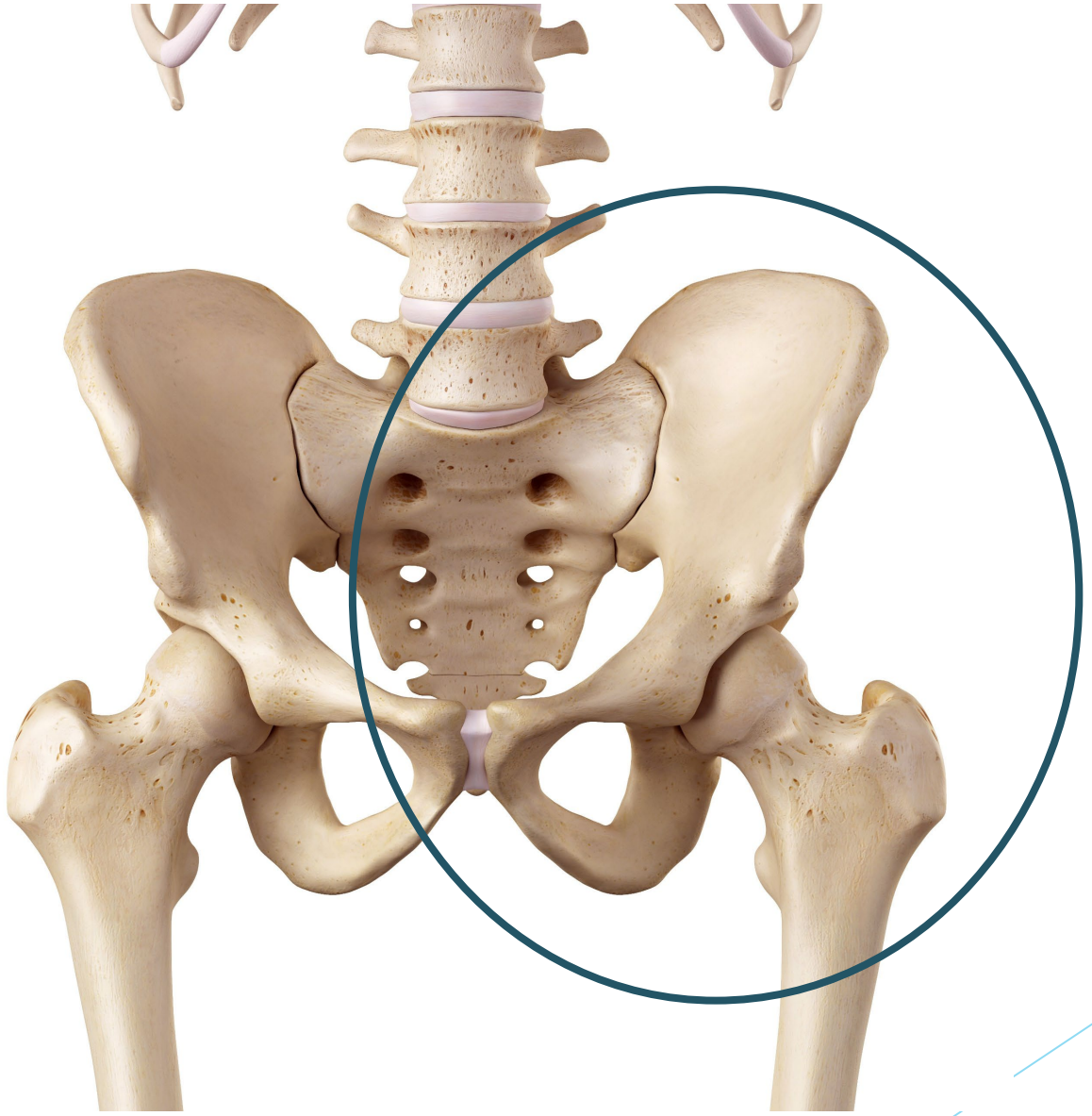

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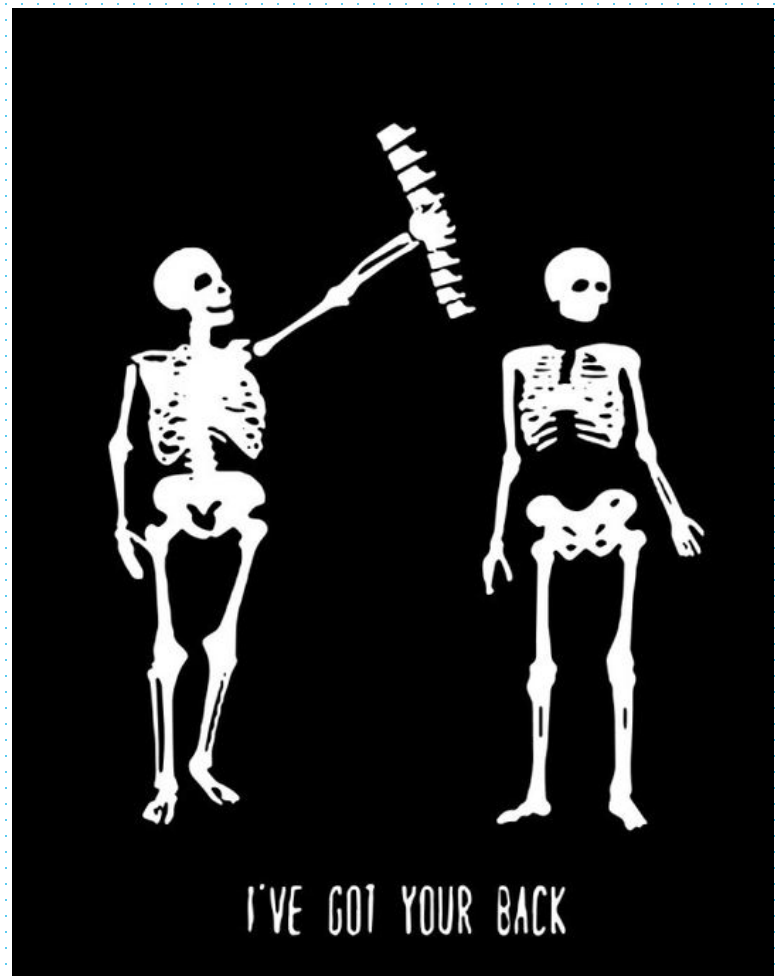

MYTH: Sports with hyper extension such as dance or gymnastics increase the risk of scoliosis

BONUS MYTH: Scoliosis is a contraindication to such sports

TRUTH: …

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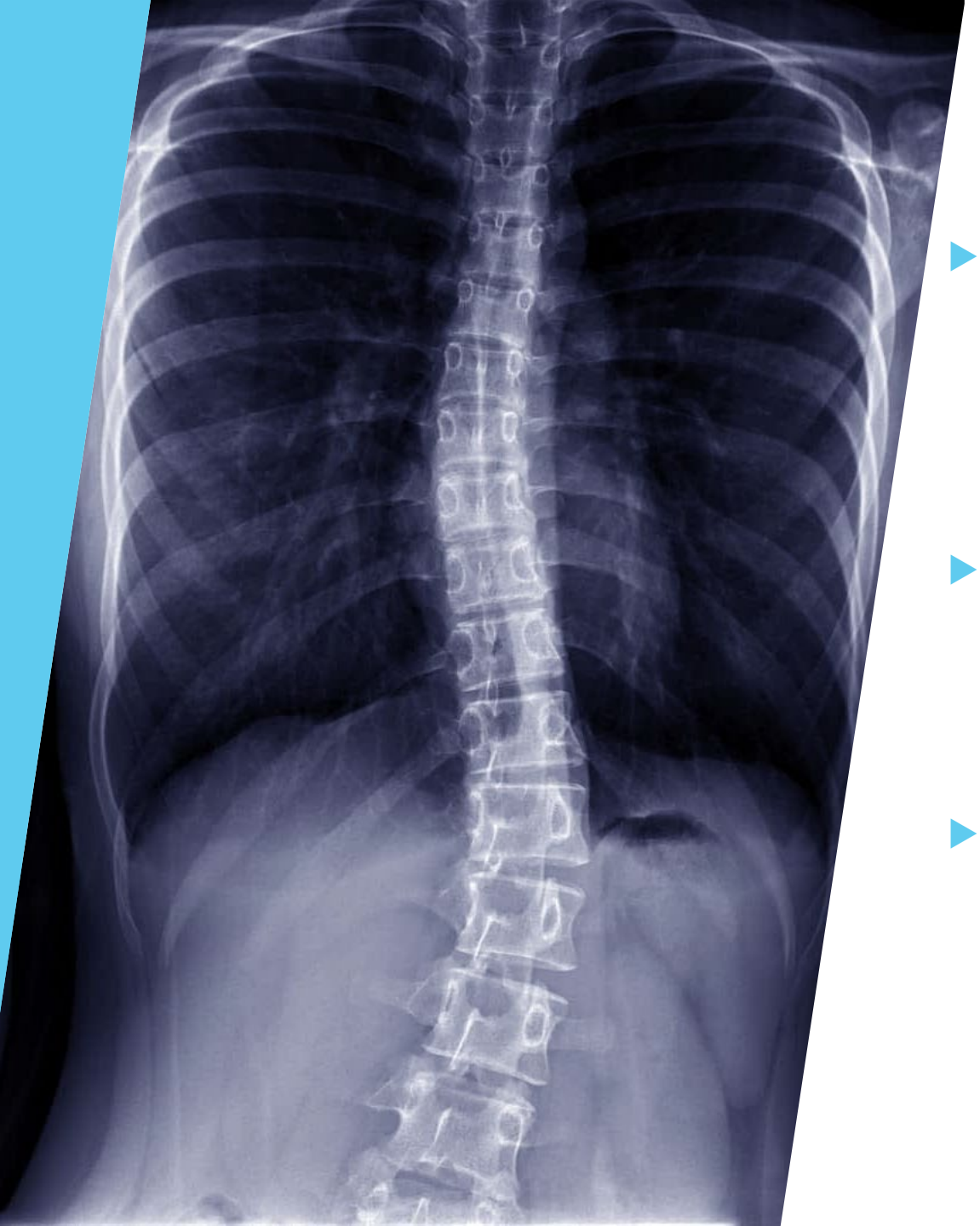

Scoliosis

- Higher prevalence of scoliosis in dancers
  - Hypermobile individuals often self-select sports like dance
  - Appropriate MSK and nutritional training can decrease the incidence of pain or injury
- Bracing
  - Curves between 25-45 degrees in the skeletally immature
  - Compliance may be an issue
- Schroth method physical therapy
  - Focus on muscular alignment, breathing techniques, and posture
  - Statistically significant improvement in cobb angle, QOL, compared to basic core stabilization exercises

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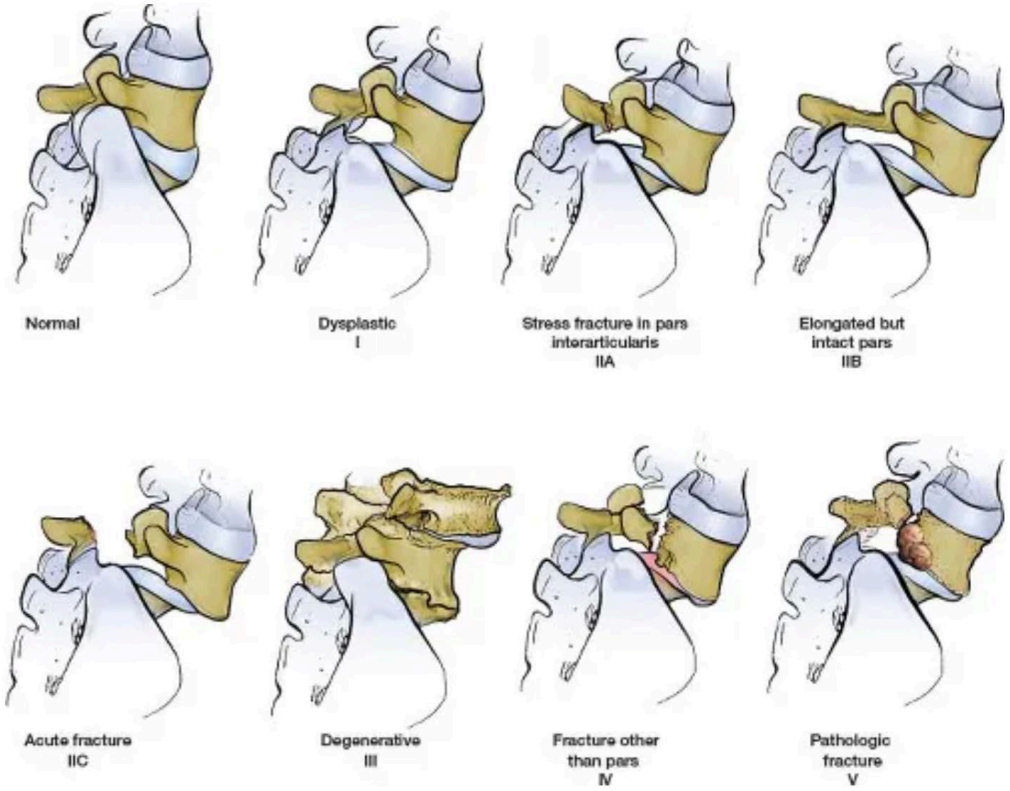
SpondyloLYSIS



- Fractures of the vertebrae
- Most often in extension sports (dance, gymnastics)
  - Also seen in unilateral sports like lacrosse, field hockey, tennis, golf
- Most common cause for LBP in adolescent athletes although often asymptomatic
- Often bracing not indicated, but relative rest 6+ weeks

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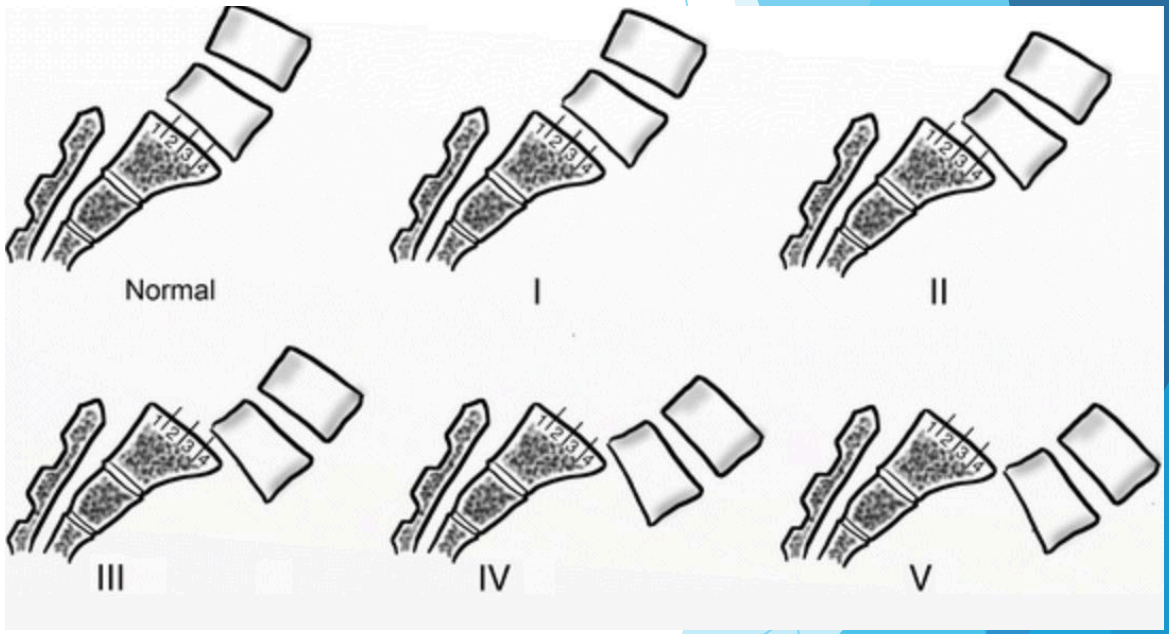
SpondyloLISTHESIS

- Present with back pain, flexion bias, possible radiculopathy
- Asymptomatic – conservative management
- Low grade, symptomatic – up to 6 months PT
  - Failed PT, acute pain – TLSO, injections, nerve blocks
- Failed non-op or multiple levels involved – surgical consultation
  - 90% surgical success rate
  - Return to contact sport is controversial



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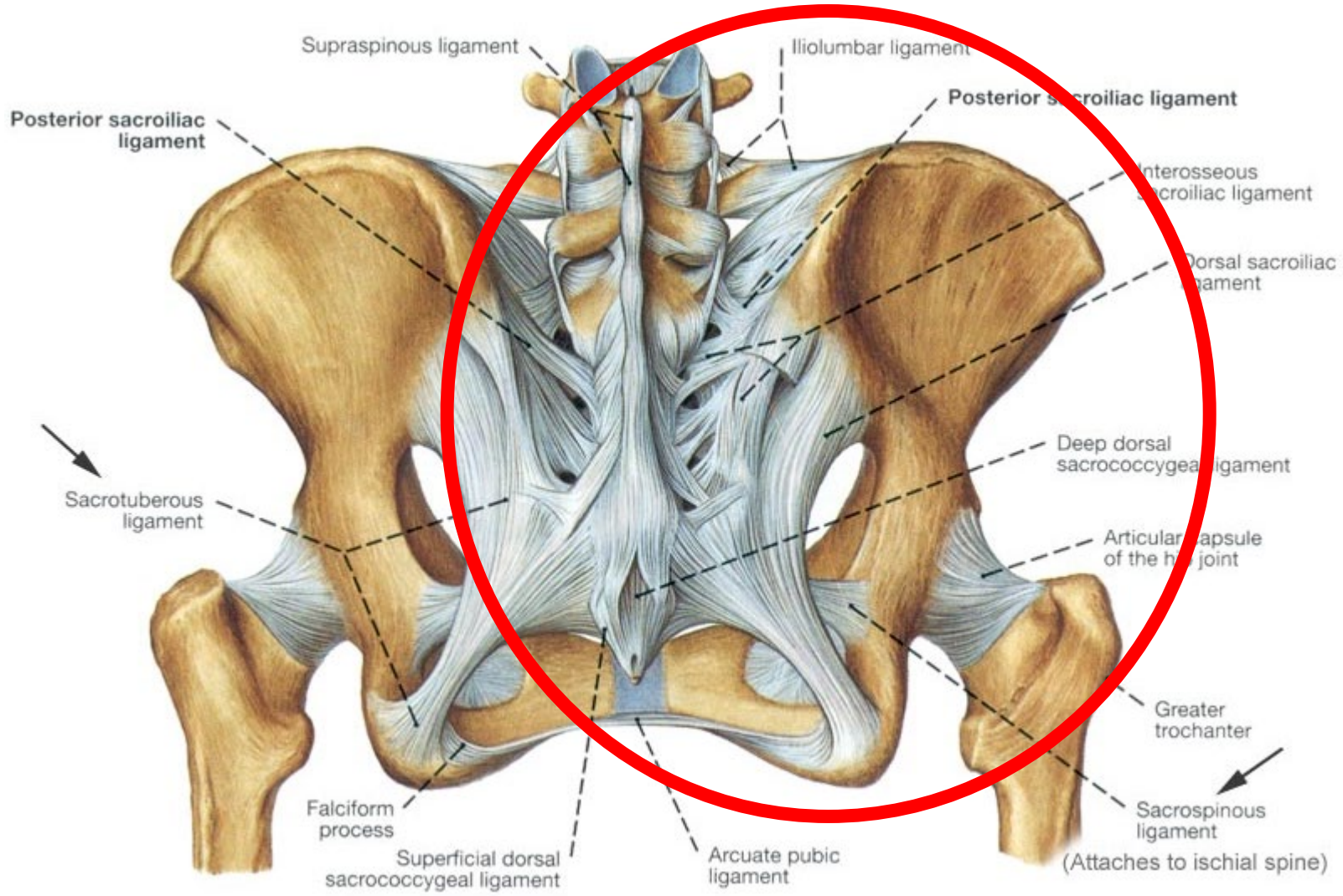
Sacroiliac Joint – The Great Imitator



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Sacroiliac Joint

- Primary presenting complaint:
  - Back pain
  - Buttock pain
  - Posterior leg pain
- May imitate:
  - Lumbar radiculopathy, facet arthropathy
  - Piriformis, ischiofemoral impingement
  - Hamstring tendinitis

- Typical flexion bias and pain with transitional movements
- Fortin Finger sign – pointing to the sacral sulcus
- “I felt a lump” – pointing to the sacral sulcus

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Sacroiliac Joint

- Diarthrodial joint – load transfer from the spine to the lower extremities and vice versa
- Increased likelihood of SI dysfunction:
  - Female
  - Pelvic trauma: falls, surgery, pregnancy
  - Rheumatologic conditions, such as ankylosing spondylitis
  - Spinal pathology – “level below”
  - Hip pathology

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Sacroiliac Joint – Management

Conservative

Relative rest

Antiinflammatories

Rehab, pelvic floor therapy

Osteopathic Manipulation

Joint injections

Fluoroscopy-guided

Ultrasound-guided

Landmark based?

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Coccydynia

- Demographics: women (5x), obesity, > 40 yrs, rapid weight loss
- Etiology: trauma, tumor, infection, pelvic floor spasms; hypermobile coccyx
  - Neville CE et al PMR 2021 reported “almost 50% of women seeking PFPT for pelvic pain had coexisting coccygodynia”
- Mimickers: SI, facet, hip pathology; ischial bursitis; IF impingement
- Treatment: NSAIDs, seating adjustments, PT/PFPT, OMM, ganglion impar block, caudal injection

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MYTH: Piriformis Syndrome?

TRUTH: …

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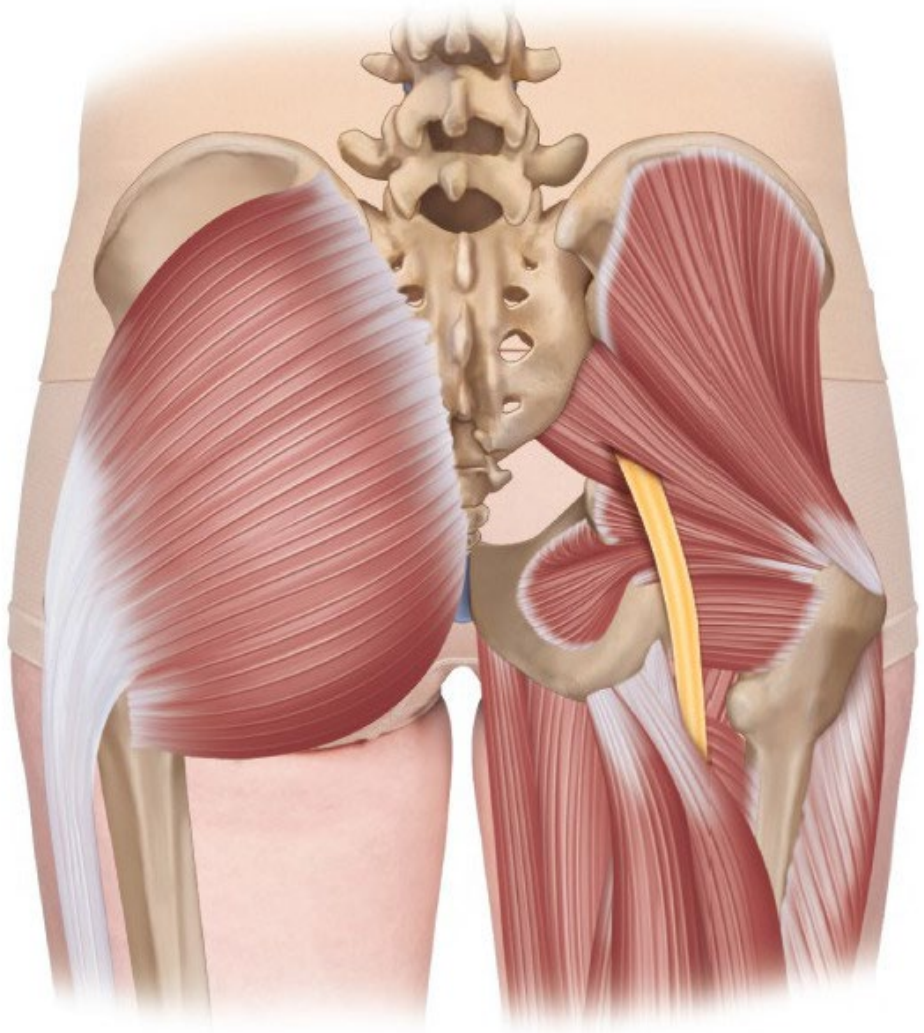
Piriformis

- AKA “non-discogenic sciatica” or “deep gluteal pain syndrome”
  - Due to abnormal piriformis anatomy
  - Reproduced with specific testing
- Controversial, and likely over diagnosed
  - MRI can demonstrate abnormal course of the nerve or hypertrophied/edematous muscle
- Prevalence reportedly around 5-6% of LBP



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Piriformis

- Rule out the other etiologies
  - Lumbar radiculopathy
  - Ischiofemoral impingement
  - Hamstring tendinitis/ischial bursitis
  - Referred intraarticular hip pain
- Core and hip strengthening
  - Gluteus medius/maximus
  - Hamstrings
  - Caution with external rotation exercises
  - Pelvic floor training
- Stretching
- Injections

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MYTH: Pelvic floor physical therapy (PFPT) is just for middle aged, often multiparous women with urinary incontinence

TRUTH: …

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Pelvic Floor Dysfunction

- 47% of regular exercisers report some urinary incontinence
  - 28% of nulliparous women with urine loss during sport
- Increased demands on pelvic floor musculature in high impact activity
  - Running, jumping, landing
  - Reported more in practice than in competition
- Stress incontinence – 41% of elite female athletes
  - Incompetent sphincter
  - Incontinence with Valsalva, jumping, cough
- Urge incontinence – 16% of elite female athletes

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Pelvic Floor Dysfunction

- Risk factors/causes
  - Pregnancy
  - Vaginal delivery
  - Pudendal nerve injury/ neuropathy
    - Cyclists
  - Perineal nerve injury/neuropathy
  - Detrusor overactivity (urge)
- Clinical presentation:
  - Bowel/bladder incontinence
  - Frequency of BMs
  - Constipation,
    inability to complete BM
  - Urinary frequency, dysuria
  - Low back pain, pelvic pain
  - Dyspareunia

- Athletes have often failed traditional core/hip PT

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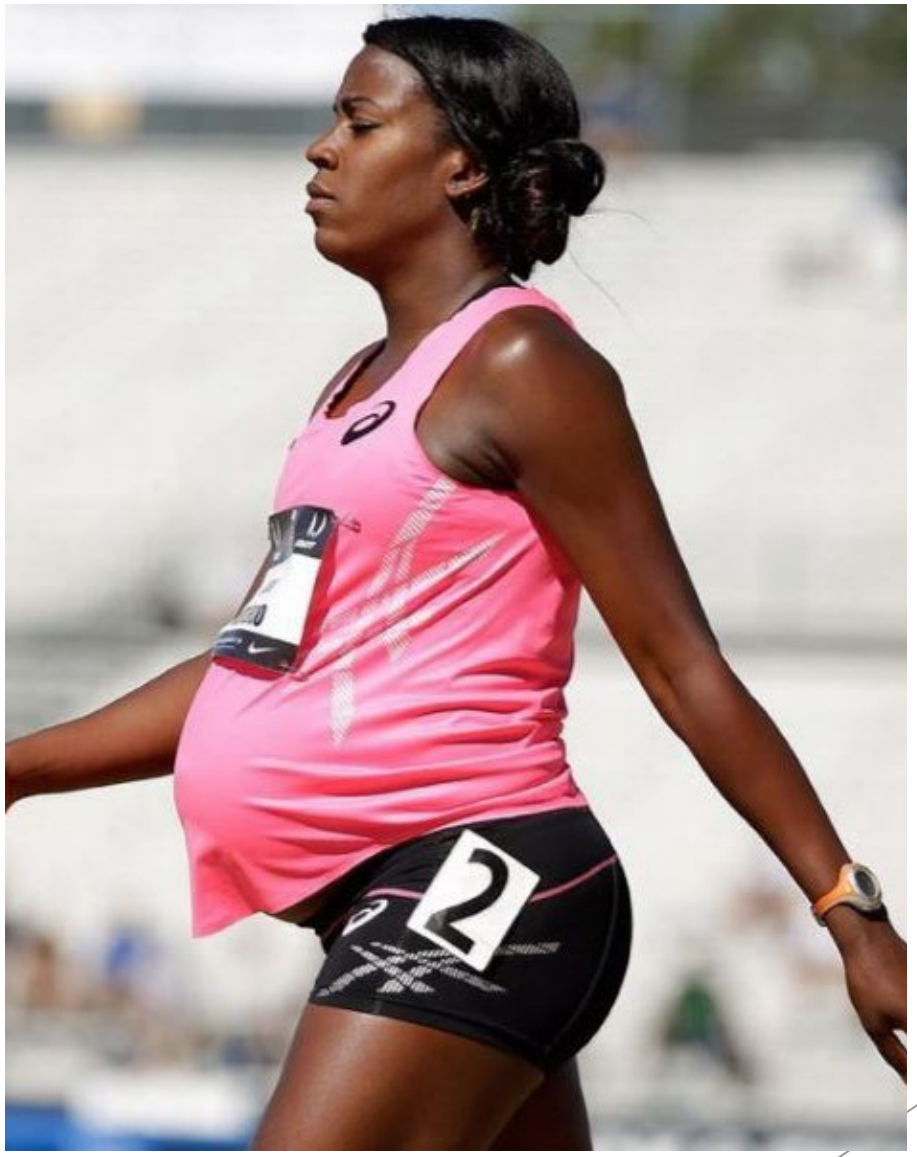

MYTH: pregnant athletes should limit exercise to gentle activities, like yoga

TRUTH: …

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Physical Changes

- Most can safely maintain or increase intensity by 5% during pregnancy
- Joint laxity
  - Feet, SI joints, pubic symphysis, knees
  - Support the body with inserts, SI belt, bracing
- Shift in center of gravity
  - Forward and upward
  - Increased lumbar lordosis

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Postpartum Athlete

- 19% of runners experience stress incontinence up to 2 years postpartum
- Barriers: stress, pain, social support, discouragement
- ACOG:
  - When medically safe: days to 4-6 weeks post partum
  - Gradual return
  - Decreases risk of post-partum depression
- Considerations
  - Method of delivery, stitches
  - Diastasis Recti Abdominis, pubic symphysis separation, SI dysfunction, LBP
  - Small studies indicate return to heavy physical work at < 1 month increases risk of organ prolapse

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Return to Running

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Return to Running

4 Key Muscle Groups: Abdominals, pelvic floor, gluteus medius, foot muscles

Phase 1: ESTABLISH neuromuscular coordination, strength, endurance, and control

Phase 2: IMPROVE coordination, strength, endurance and progress cardiovascular endurance; increased positional and stability changes for neuromuscular control

Phase 3: BUILD on power, dynamic stability, load management

Phase 4: RETURN to full participation with increased resistance and changes in surface stability; single leg strength and plyometrics, resistance with weights

(Christopher SM, et al)

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Pelvic Floor Physical Therapy

- “After most ma
rehabilitation;
postchildbirth.”

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Questions?

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Thank you!

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