

Hip & Spine Exam Pearls

Sara Raiser, MD, FAAPMR, CAQSM

Assistant Professor of Orthopaedics & Rehabilitation Medicine

Running Medicine, Women's Sports, Adolescent Sports

Emory Johns Creek & Emory Sports Medicine Complex

sraiser@emory.edu

Twitter: @raisermd

EMORY
HEALTHCARE

Official Sports
Medicine Provider



Disclosures

- I have no relevant financial relationships with commercial interests.



Official Sports
Medicine Provider



Groin Pain

EMORY
HEALTHCARE

Official Sports
Medicine Provider



Runner with vague groin pain. Resolves with warm up. Aches after runs.



Official Sports
Medicine Provider



Pearl (1) Hip Stress Fractures

- Femoral neck
 - Superolateral at high risk for progression (tension)
 - Pain with weightbearing – single leg hop
 - Pain with end range of passive hip motion (especially IR)
 - +/- TTP deep palpation
- Femoral shaft
 - Fulcrum test



Soccer player with persistent groin pain despite multiple courses of physical therapy.
Pain with sneezing.



Pearl (2) Sports Hernia

- Unilateral deep groin, lower abdominal, or pubic pain with exertion
- Worse with kicking, sprinting, cutting, sit ups; coughing, sneezing
- Posterior inguinal wall, transversalis fascia, distal rectus abdominis insertion, conjoined tendon, external oblique aponeurosis
- Concomitant osteitis pubis
- Adductor tendinitis in 24% of cases
- Don't miss FAI!



Pearl (2) Sports Hernia

- Palpation to rule out inguinal hernia
- Resisted curl up
- Adductor squeeze
- Muscular imbalances
- Check for reduced hip ROM
- Check for FAI



Hockey athlete with medial groin pain. No pain with Valsalva.



Pearl (3) Adductor Tendinopathy or Tear

- Muscle imbalances- iliopsoas, rectus abdominis, adductor
- Poor hip abduction flexibility
- Adductor weakness
- Adductor squeeze test



Sacral Pain



Official Sports
Medicine Provider



Runner with SI joint pain.
Aches after runs.



Official Sports
Medicine Provider



Pearl (4) Sacroiliac Joint Dysfunction

- Referred pain to posterior hip
- Special tests:
 - FABER
 - Fortin finger sign
 - Distraction test
 - Gaenslen's test
 - Thigh thrust
 - Pain with prone hip extension



Pearl (4) Sacroiliac Joint Dysfunction

- Don't forget rheumatologic diseases!
 - Sacroiliitis, especially in the adolescent.



Runner with SI joint pain.
Aches after runs.



Official Sports
Medicine Provider



Pearl (5) Sacral stress fracture

- Local TTP
- May radiate into lower extremity, reduced mobility
- Worse with weightbearing
- Positive SIJ compression test
- May also have positive Gaenslen's test
- RF: leg length discrepancy
- Critical site, often associated with RED-S



Low Back Pain



Official Sports
Medicine Provider



Collegiate golfer who has taken on too many classes complains of low back pain.



Official Sports
Medicine Provider



Pearl (6a) Axial Low Back Pain

- Red flags
- Estimated 85-90% of LBP complaints are not given exact diagnosis
- Nociceptive structures:
 - Vertebral endplate, annulus fibrosis, laminae, facet joints, surrounding ligaments, dura mater, nerves, muscles, fascia
- Pain hypervigilance, catastrophizing, stress, anxiety



Pearl (6b) Axial Low Back Pain

- Non-neutral spinal postures in standing (hyperlordotic, flat back)
- Glut/lower limb weakness- squat, lunge
- Back weakness- squat hold or Sorensen test
- Special exams:
 - Percussion test
 - Supine test
 - Extension rotation / facet loading test



Collegiate golfer now notes tightness and aching in his right hamstring and calf that is worse with prolonged sitting.



Official Sports
Medicine Provider



Pearl (7a) Lumbosacral radiculopathy

- Red flags
- Pain worse with forward-bending or straightening leg at the knee (peripheralization)
- Pain worse with sitting, bending, lifting, coughing, sneezing, Valsalva
- NV: Motor, strength, DTRs
- Functional concerns: poor coordination, difficulty with sit to stand, dragging a foot in swing phase
- Special tests:
 - Slump test
 - Straight leg raise



Pearl (7b) Lumbosacral radiculopathy

- Anatomy:
 - Flat back has been “clinically” affiliated (no evidence)
 - Lateral list (away from painful side)
 - (Posture and gait)
 - Knee flexion in affected limb with standing
 - Acquired scoliosis



Gymnast present with
insidious right-sided low
back pain.



Pearl (8) Pars stress reaction

- Reproduced with lateral flexion, rotation, hyperextension
→ load ipsilateral posterior vertebral arch and facet joint
- TTP + muscle spasm common --> helps identify level
- Lumbar hyperlordosis (intrinsic risk factor)
- Special test:
 - Single-leg hyperextension test or stork test
 - Spinous process palpation for step off (-listhesis)



Thank you!



Official Sports
Medicine Provider



References upon request

EMORY
HEALTHCARE

Official Sports
Medicine Provider

