Hip & Lumbar
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Anterior Hip Pathologies
- Iliopsoas
  - Musculotendinous Unit
  - Anterior hip pain
  - Insidious or traumatic
  - Pain with active hip flex/add and passive ext
- Painful snapping of the hip
- Pain in the femoral triangle
- Pain/weak resisted hip flex and hip ER in flex
- Pain with passive hip ext and end range flex/add

- Femoral Acetabular Impingement
- Cam(A): abnormal femoral head
- Pincer (B): abnormal deep acetabulum
- Active/younger/grain pain: anterior, insidious
- Worse with prolonged deep sitting, getting out of car, stop and go or pivoting
- Anterior imp: flex/add/IR
- Posterior imp: ER with ext

Palpation
- Piriformis
- Gluteus Maximus
- Gluteus Medius
- Greater Trochanteric Bursa
- Sacrum
- Sacral Sulcus
- Psoas Tendon
- ASIS
- PSIS
- Femoral Triangle
- Lumbar Spinal Process
- Lumbar Facets
- Quadratus Lumborum
- Multifidus
- Lumbar paraspinals

Anterior Hip Pathologies
- Labral Tear
- Trauma, impingement, laxity/hypermobility.
- Insidious, repetitive hip pivoting/twisting, ant hip or groin pain
- Increases with age
- Catching/popping, clicking, locking, giving way (ER/IR=labrum, Flex/Ext=psoas)
- Tests: FABER, SCOUR
- Osteoarthritis
- Older, insidious, groin pain, anterior LE pain, stiffness or worse in A.M.
- Antalgic gait, capsular pattern= IR especially
- Squatting aggravates it.
- Lateral hip pain with active flexion
- SCOUR with add= pain
- Pain with active extension
- HIP IR < 25 deg.

Lateral Hip Pathologies
- Greater Trochanteric Pain Syndrome (Trochanteric Bursitis)
- Lateral hip/buttock pain
- Lateral “snapping”
- Pain on palpation of greater trochanter
- Tight TFL/ITB
- Pain at end range rotation or add/abd.
- Pain with resisted hip add

- Meralgia Paresthesia
- Numbness on anterolateral aspect of thigh
- Lateral femoral cutaneous nerve compression
- Obesity, pregnancy, tight belt, diabetes, surgery, bone graft of crest
- Paresthesia of upper, lateral thigh
- Worse: tapping. Better: sitting
- Strictly Sensory Loss.

Posterior Hip Pathologies
- Piriformis
- ER with hip ext
- Abd with hip flex
- Pain in buttoc, SI region, sciatic notch (may radiate into calf)
- Worse: sitting. Better: hip ER, traction to LE
- Stand with LE in ER, pain to palpate of greater sciatic foramen, dec ROM hip IR in prone, hip add in flex
- + SLR
- Hamstring Strain
- Common sports injury
- Pain with palpation (possible bruising)
- Limited hamstring flexibility
- Pain and/or weakness with resistance testing
- Consider Lumbar Spine
Fractures
- Femoral Neck Stress Fracture
- Overuse problems
- Poorly localized pain, possibly referral to thigh or back
- Gradual onset, increases with activity
- Antalgic gait, pain at end-range hip IR/ER

Femoral Avascular Necrosis
- Progressive ischemia & death of osteophytes
- 30-60 y/o
- Loss of ROM
- Pain with weight bearing, groin pain, stiffness

Lumbar Spine Review
- Yellow Flags
  - Depression: during the past month, feeling down, depressed, or hopeless, little interest.
  - Fear: FABQ > 14, exposure
  - Catastrophizing: pain catastrophizing scale < 21, exaggerated response

Red Flags
- Compromised bone: immediate, severe pain, major trauma, mild trauma > 50 y/o, prolonged corticosteroid use, osteoporosis.
- Compromised Nerve: severe, dramatic change, sciatica, SLR < 60, crossed SLR, myotomal weakness; Spinal cord compression: bilateral. Cauda Equina Syndrome: B&B dysfunction
- 30-60 y/o
- Loss of ROM
- Pain with weight bearing, groin pain, stiffness

Treatment Based Classification: Stage 1: Modification of Pain
- Specific Exercise
  - Pain below the knee
  - Directional preference: repeated/sustained motion
  - Extension
    - Pain below knee
    - Younger 25-60 y/o
    - Central with ext/ peripheral with flex
  - Flexion
    - Pain below knees
    - Older > 60 y/o
    - More arthritic changes
    - Central with flex/ periph with ext
  - Stenosis: narrow spinal cord
    - Adv: Neural tension: + slump test
  - Lateral Shift:
    - Sudden, severe onset
    - Neuro signs
    - Tx: traction, repeated extension

Mobilization (4/5+)
- Symptoms < 16 days
- Pain doesn’t extend below knees
- FABQ < 19
- HIP IR > 35 deg
- Lumbar hypomobility (PA glides)
- Tx: Reverse Earhardt, lumbar gapping, flex/ext exercises.
Treatment Based Classification:
Stage 2: Emphasis on ROM, Strength, Conditioning

- Able to sit > 30 min, stand > 15 min, walk > ¼ mile
- Unable to perform stressful ADL: vacuuming, mowing lawn
- ODI 20-40%
- ROM: movement into motion that caused pain in Stage I

- Flexibility: screen ilioptoesa, rectus, TFL/ITB, Hamstrings, gastroc/soleus
- Strength: modified SLR, partial sit up, side plank, core.

Treatment Based Classification:
Stage 3: Functional Training

- For individuals placing high physical demands
- ODI < 20%
- Functional Capacity Evaluation
- Work Hardening Programs

Common Lumbar Pathologies

- Lumbar Disc Herniation
  - 30-40 y/o
  - 95% are L4-L5, L5-S1
  - + SLR
- Facet/Muscle/Soft Tissue Strain
  - Positional and related to loading of particular tissue
  - Ext or same side bending: facet
  - Contralateral side bending: soft tissue

- Myofascial Pain Syndrome/Fibromyalgia
- Chronic pain syndrome
- Tender points
- Fatigue, HA, paresthesias, sleep disturbances
- Accompanied with depression and other psychological diagnosis

Common Lumbar Pathologies

- DDD/Arthritis/ Spondylolisthesis
  - Narrowing disc space
  - Loss of disc height
  - Loss of motion, pain, and stiffness
  - Worse after periods of inactivity, AM-PM, referred pain, disc is narrowing
  - Gradual onset, loss of ROM

- Spondylosis
  - Frx of pars interarticularis
  - Young sports related due to hyperextension
  - Frx slips forward
  - Young L4-L5
  - Painful in extension
  - Slipping forward (I-IV)
  - Positional pain

Common Lumbar Pathologies

- Ankylosing Spondylitis
  - Chronic polyarthritis
  - Men males < 40 y/o
  - Inflammatory fusion of vertebrae
  - Long Hx of sorenness and stiffness after rest
  - Feel better with activity
  - Loss of lumbar motion in all planes, diminished thoracic expansion, loss of lumbar lordosis.

- SI Joint
  - Insidious or traumatic, pregnancy
  - Unilateral: PSIS, groin, buttck, generally below the knees
  - Worse: walking, asymmetrical movements, transitional movements.
  - Palpation tests, provocation tests, Fortin’s sign
  - Tx : reverse Earhardt, MET

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Tests for Hip & Lumbar

- Thomas Test: flexibility
- Anterior/Posterior Impingement: not specific for labral tear
- FABER Test: Labral tear or OA (note location of pain)
- Scour Test: labral tear or OA
- SLR: adverse mechanical traction (flex category) or stabilization

- Sump: adverse mechanical traction (flex category)
- Prone knee bend: (pain note below knee)
- Trunk Strength
  - Bilateral Active SLR: Stage II strength
  - Active sit up test
  - Side bridge test
  - Spinal Extension Test
Tests for Hip & Lumbar

- Spring Test (PA Glides): mobilization or extension category
- Prone Instability Test: stabilization category
- Lumbopelvic technique: mobilization
- Lumbar gapping technique
- Lateral shift reduction