

Hip, Thigh and Knee

Hip Diagnosis and Treatment

Clinical pearl: to affect anterior hip pain, treat postero-lateral hip and buttock first.

1. Traumatic arthritis
2. Hypermobility and labral tears
3. Femoral acetabular impingement syndrome
4. Loose body
5. Avascular osteonecrosis
6. Hip joint DJD

Symptoms. The primary and common symptom of all hip pathologies is pain felt primarily at the anterior hip (groin), sometimes referring to the knee, extending laterally to the trochanter, and rarely posteriorly to the buttock. A few additional symptoms may help differentiate among hip conditions, but their reliability and specificity is low compared to etiology, physical exam, and imaging studies.

- Painful clicking, clunking, and sudden shifting that occurs on active or passive motion, particularly external rotation and extension: sprains, hypermobility and labral tears.
- Sudden sharp twinges of pain that occur unpredictably on both active and passive motion: suggests femoral acetabular impingement, loose body, and/or labral tears.
- Stiffness: suggests traumatic arthritis, DJD, avascular necrosis.
- Constant severe pain: suggests severe traumatic, seropositive or degenerative arthritis.
- Pain that crescendoes to severe over days to weeks: suggests avascular necrosis.

Signs.

- Hip held in flexion during gait: suggests DJD and/or hip flexor muscular contracture.
- AROM: Capsular pattern of gross limitation of internal rotation, some limitation of flexion and abduction, and slight limitation of extension suggests traumatic, degenerative or seropositive arthritis or avascular necrosis.
- PROM: Flexion **AB**duction **E**xternal **R**otation (FABER) and Flexion **AB**duction **I**nternal **R**otation (FADIR)
 - Hard end-feel, particularly of internal rotation: suggests DJD.
 - Mushy end-feel, mobility of femoral head/neck suggests hypermobility:

- congenital (bilateral), sprain, or insidious etiology.
- Clicks, clunks, sudden shifts suggest labral tear.
- Sharp pain in any plane suggests:
 - Sprain, hypermobility, labral tear.
 - Femoral acetabular impingement.
- Soft end-feel and increased buttock pain on pure flexion: suggests “sign of the buttock,” serious pathologies of the gluteals. ilium, ischium, sacrum or rectum.
- Manual strength testing: weakness suggests extra-articular myofascial or neurologic condition.

Manual and Exercise Therapies. Goals: reduce pain-inhibition and trigger points, strengthen and re-train gluteals to:

1. Hold femoral head in capsule and prevent anterior displacement, and
 2. Fire before hamstrings during hip extension phase of gait.
- Cooks bridging. [See video.](#)
 - Side-stepping, alternating 1-leg stands with theraband resistance.
 - Sidelying hip external rotation, progress to theraband resistance.
 - Cross-fiber deep tissue massage, suction cupping, *gua sha* to affected/target muscles.
 - Combine deep tissue massage, cupping with concurrent hip active range-of-motion in flexion/extension, abduction/adduction, external/internal rotation.
 - Manual reduction of anterior femoral head displacement. Important to perform prior to prolo-acupuncture of anterior hip capsule. Practitioner laterally distracts, and then posteriorly relocates proximal femur/thigh. Best accomplished by:
 - Positioning patient supine with hips flexed 45° (hips and knees flexed with feet planted on table)
 - Looping belt around both patient’s proximal thigh and practitioner’s hips, which allows practitioner free use of both hands.
 - Practitioner then leans away from patient to laterally distract femur.
 - Practitioner then pushes posteriorly at knee along the axis of the femur

Prolo-, trigger, and electro-acupuncture. Stimulation/strengthening/stabilization of hip musculature and ligaments/capsule through deep needling into TrPs that reproduce typical symptoms, including:

Postero-lateral: TrPs in gluteus medius and minimus, piriformis, quadratus femoris; posterior capsule.

Anterior: TrPs in pectineus; adductors longus, brevis and magnus; gracilis; iliopsoas distal attachment, anterior hip capsule.

Caution: Femoral artery must be located first and avoided during needling into anterior groin. In most patients the femoral artery is located mid-way between the ASIS and the pubic symphysis, but anatomic variation requires confirmation by palpation. Asking the patient to locate their own femoral pulse and maintain their finger on it during needling is generally re-assuring to the patient and helpful for the practitioner.

Classical loci: tissue access depends on depth and angle of needle.

- GB 30: superficial: gluteals; deeper: piriformis; deepest: posterior hip ligaments/capsule.
- Huanzhong: superficial: gluteus maximus and medius; deeper: external rotators; deepest: sacro-tuberous ligament
- UB 54, tunzhong: gluteus maximus and medius.
- GB 29: lateral hip ligaments and capsule.
- St 31: tensor fascia lata, sartorius.
- Lv 10, 11: superficial: adductor longus; deeper, medial: adductor brevis.

Passive capsular stretching.

- Indications: degenerative joint disease:
- Contraindications: osteopenia/porosis, suspected anterior hip hypermobility or labral tear.
- Joint should be warmed and loosened first, ideally by a combination of at least 5 minutes @ of exercise and hot packs.
- Patient lies supine and flexes opposite hip fully, which will bring treatment hip into flexion, raising thigh off table (Thomas test)
- Practitioner applies gentle, sustained downward pressure, forcing hip slowly into extension, for 5-10 minutes.