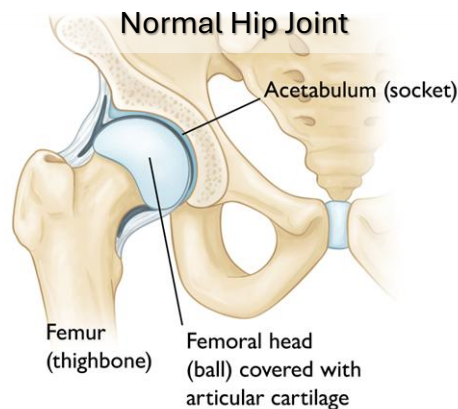


What is FAI?

- the hip joint is a ball-and-socket joint made up of the femoral head (ball) and acetabulum (socket)
- femoroacetabular impingement syndrome** or **FAI** is an abnormal shape of the femoral head or acetabulum that leads to pathological contact and friction within the hip joint during motion, especially deep flexion
- two types of FAI:** **cam** (femoral sided deformity) and **pincer** (acetabular sided deformity)
- FAI may cause hip pain, loss of motion, and damage to the hip joint
- untreated FAI may lead to pain, loss of function, and early arthritis

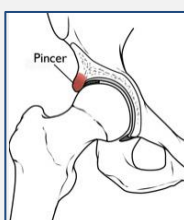


Cam impingement



- out-of-round femoral head or bump on neck impinges within the acetabulum leading to cartilage and labrum damage
- damage occurs when the out-of-round area of the ball rotates into the round socket (square peg in a round hole)
- pain with hip flexion, internal rotation, squats, pivoting, etc.

Pincer impingement



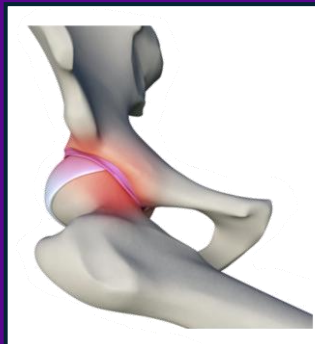
- overhang of the acetabular rim causing overcoverage of the femoral head
- may be caused by a socket that is too deep or not facing forward (retroversion)
- damage occurs when the neck collides with the rim of socket and pinches the labrum
- pain with hip flexion, abduction, prolonged sitting, stairs, etc.

Who is affected by FAI?

- FAI has genetic and developmental risk factors
- activities (athletic, occupational, etc.) with repetitive hip flexion and pivoting may cause symptoms
- onset of symptoms variable but pain usually develops insidiously and worsens over time

How is FAI diagnosed?

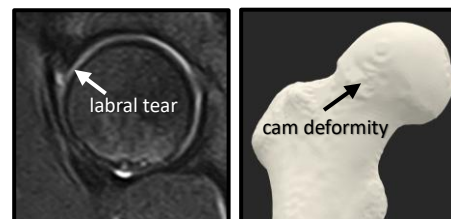
- history of activity-related hip/groin pain worse with deep flexion and pivoting activities
- exam findings include loss of hip motion (especially internal rotation), pain / pinching with hip flexion and internal rotation
- X-rays show cam or pincer morphology. Also useful to rule-out arthritis / dysplasia.
- MRI useful to demonstrate labrum and cartilage damage
- CT scan characterizes the bony anatomy and rotation of the socket and femur
- injection of anesthetic into the hip joint may be indicated to elucidate symptoms



FAI on imaging



Plain Radiographs (X-rays)



MRI

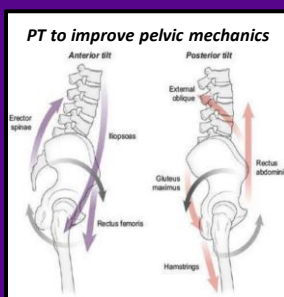
CT

Key concepts to consider:

- FAI is a dynamic problem.... It occurs because the hip is under stress from certain activities and from repetitive microtrauma**
- many meet X-ray criteria for FAI but only small percentage become symptomatic and even smaller percentage require surgery
- goal of treatment is to return hip to pre-symptomatic state by reducing inflammation and optimizing mechanics around pelvis

Conservative Treatment for FAI

- goal is to return hip to pre-symptomatic state
- rest and avoiding the inciting activities
- anti-inflammatory medications
- cortisone injection into hip can calm inflammation
- physical therapy essential to building strength, improving mechanics and stabilizing gait
- most cases of FAI improve without surgery**



Surgery for FAI

- indicated when conservative treatment fails
- hip arthroscopy to reshape the hip joint and repair the labrum
- out-patient procedure (go home same day)
- partial weightbearing, crutches $\approx$ 4 weeks
- post-operative physical therapy essential
- 4 to 6 month recovery