

Femoroacetabular (FAI) Impingement & Labral Tears

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Background:

Femoroacetabular impingement (FAI) is a condition where there is too much friction in the hip joint from bony irregularities causing pain and decreased hip range motion. The damage can occur to articular cartilage (the smooth white surface of the ball or socket) or the labral tissue (the ligament lining the edge of the socket) during normal movement of the hip. The articular cartilage or labral tissue can fray or tear after repeated friction. Over time, more cartilage and labrum is lost until eventually the femur bone and acetabulum bone impact on each other. Bone on bone friction is commonly referred to as osteoarthritis.

FAI generally occurs as two forms: Cam & Pincer.

CAM Impingement: The Cam form of impingement is when the femoral head and neck are not perfectly round, most commonly due to excess bone that has formed. This lack of roundness and excess bone causes abnormal contact between the surfaces.

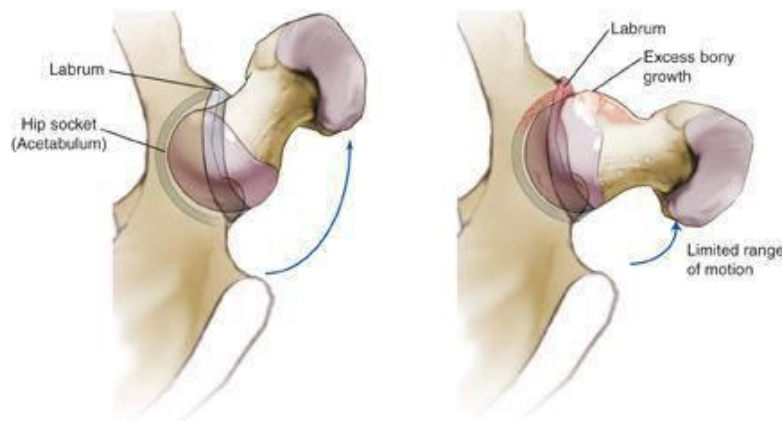
PINCER Impingement: The Pincer form of impingement is when the socket or acetabulum rim has overgrown and is too deep. It covers too much of the femoral head resulting in the labral cartilage being pinched. The Pincer form of impingement may also be caused when the hip socket is abnormally angled backwards causing abnormal impact between the femoral head and the rim of the acetabulum.

CAM Impingement is more common than PINCER impingement, but most diagnoses of FAI include a combination of the CAM and PINCER forms. Impingement can ultimately lead to labral tearing.



Symptoms of FAI:

- Groin pain associated with hip activity
- Complaints of pain in the front, side or back of the hip
- Pain may be described as a dull ache or sharp pain
- Patients may complain of a locking, clicking, or catching sensation in the hip
- Pain often occurs to the inner hip or groin area after prolonged sitting or walking
- Difficulty walking uphill
- Restricted hip movement
- Low back pain
- Pain in the buttocks or outer thigh area



Risk Factors

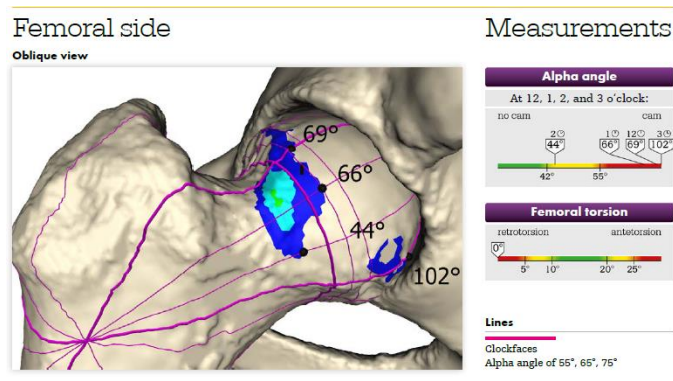
A risk factor is something that is likely to increase a person's chance of developing a disease or condition. Risk factors for developing femoroacetabular impingement may include the following:

- Athletes such as football players, weight lifters, and hockey players
- Heavy laborers
- Repetitive hip flexion
- Congenital hip dislocation
- Anatomical abnormalities of the femoral head or angle of the hip
- Legg-Calves-Perthes disease: a form of arthritis in children where blood supply to bone is impaired causing bone breakdown.
- Trauma to the hip
- Inflammatory arthritis

Diagnosis

Hip conditions should be evaluated by an orthopedic hip surgeon for proper diagnosis and treatment.

- Medical History
- Physical Examination
- Diagnostic studies including X Rays, MRI Scans, and CT Scan

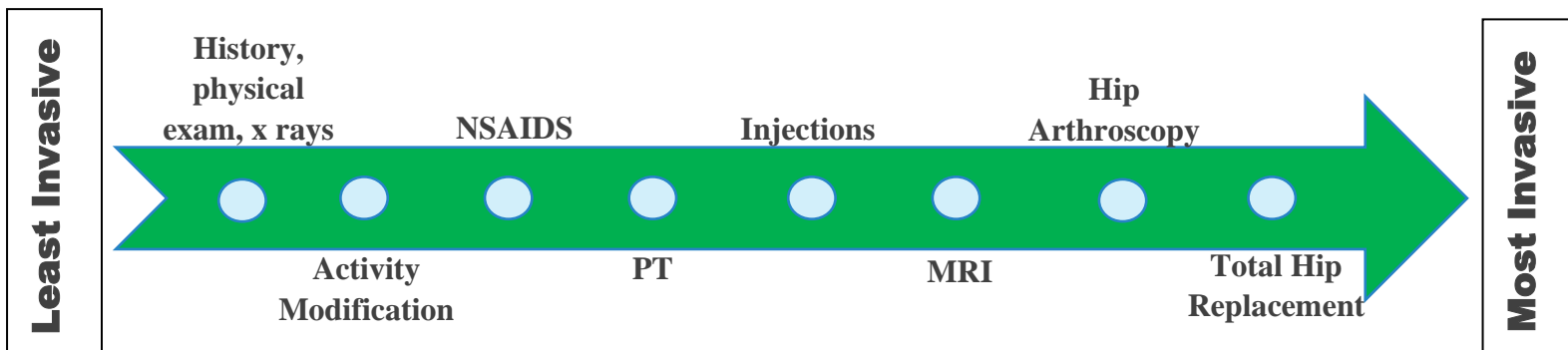


Treatment

Conservative treatment options refer to management of the problem without surgery. Nonsurgical management of FAI will probably not change the underlying abnormal biomechanics of the hip causing the FAI but may offer pain relief and improved mobility.

Conservative Treatment Measures

- Rest
- Activity Modification and Limitations
- Anti-inflammatory Medications
- Physical Therapy
- Injection of steroid into hip joint



Hip Arthroscopy

Arthroscopy, also referred to as minimally invasive surgery, is a procedure in which an arthroscope is inserted into a joint to check for any damage and repair it simultaneously.

An arthroscope is a small, fiber-optic instrument consisting of a lens, light source, and video camera. The camera projects an image of the inside of the joint onto a large screen monitor allowing the surgeon to look for any damage, assess the type of injury, and repair the problem.

Hip arthroscopy is a surgical procedure performed through very small incisions to diagnose and treat various hip conditions including:

- Removal of torn cartilage or bone chips that cause hip pain and immobility.
- Repair a torn labrum: The labrum is a fibrous cartilage ring which lines the acetabular socket.
- Removal of bone spurs or extra bone growths caused by arthritis or an injury.
- Removal of part of the inflamed synovium (lining of the joint) in patients with inflammatory arthritis. This procedure is called a partial synovectomy.
- Repair of fractures or torn ligaments caused by trauma.
- Evaluation and diagnosis of conditions with unexplained pain, swelling, or stiffness in the hip that does not respond to conservative treatment.

2 or 3 small incisions are made about 1/4 inch in length around the hip joint. Through one of the incisions an arthroscope is inserted. Along with it, a sterile solution is pumped into the joint to expand the joint area and create room for the surgeon to work.

The larger image on the television monitor allows the surgeon to visualize the joint directly to determine the extent of damage so that it can be surgically treated.

Surgical instruments will be inserted through other tiny incisions to treat the problem.

The advantages of hip arthroscopy over the traditional open hip surgery include:

- Smaller incisions
- Minimal trauma to surrounding ligaments, muscles, and tissues
- Less pain
- Faster recovery
- Lower infection rate
- Less scarring
- Earlier mobilization

As with any surgery, there are potential risks and complications involved. It is very important that you are informed of these risks before you decide to proceed with hip arthroscopy surgery. Possible risks and complications include:

- Infection at the surgical incision site or in the joint space
- Nerve damage which may cause numbness, tingling, pain, and weakness
- Excess bleeding into the joint, a condition called hemarthrosis
- Blood clots may form inside the deep veins of the legs which can travel to the lungs (pulmonary embolism).

