

# Paul D Maitino DO FAOAO Hip Knee Shoulder & sports medicine Oklahoma City OK

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## CAM/PINCER Impingement

Femoroacetabular impingement (FAI), often referred to as hip impingement is a condition where there is too much friction in the hip joint from bony irregularities causing pain and decreased range of hip motion. The femoral head and acetabulum rub against each other creating damage and pain to the hip joint. The damage can occur to the articular cartilage (the smooth white surface of the ball or socket) or the labral tissue (the lining of 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 one other. Bone on bone friction is commonly referred to as Osteoarthritis.

FAI impingement generally occurs as two forms: Cam and 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.

Most diagnoses of FAI include a combination of the Cam and Pincer forms.

## Symptoms of FAI

Symptoms of femoroacetabular impingement can include the following:

- 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 Options**

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 include:**

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

## **Surgical treatment**

Hip arthroscopy to repair femoroacetabular impingement is indicated when conservative treatment measures fail to provide relief to the patient. Hip arthroscopy, also referred to as keyhole surgery or minimally invasive surgery, is performed through very small incisions to evaluate and treat a variety of hip conditions.

