Femoroacetabular Impingement (FAI)

In FAI, bone spurs develop around the femoral head and/or along the edge of the socket. The bone overgrowth causes the hip bones to contact each other, and over time, this can result in the tearing of the labrum (lip that surrounds the socket) and damage to the articular cartilage, leading to osteoarthritis.

There are three types of FAI: pincer, cam, and combined impingement:

**Cam.** In cam impingement, the most common type, a bump forms on the edge of the femoral head that causes impingement, labral tearing, and subsequent arthritis.

**Pincer.** With pincer impingement a bone spur forms on the edge of the socket. The labrum can be torn under the prominent rim of the socket, leading to labral tear and subsequent arthritis.

**Combined.** Combined impingement means that both the pincer and cam types are present.
Symptoms:
People with FAI usually have pain in the groin area, although the pain sometimes may be more toward the outside of the hip. Sharp stabbing pain may occur with turning, twisting, and squatting, but sometimes, it is just a dull ache.

Cause:

The exact cause of FAI is unclear. There may be a genetic predisposition. Ultimately the abnormal anatomy leads to destruction of the joint, and ultimate arthritis. It is now considered one of the more common causes of hip osteoarthritis. Although athletes and other active people may work the hip joint more vigorously, they may begin to experience pain earlier than those who are less active. However, exercise does not cause FAI.

Diagnosis:

A careful history and physical examination will raise suspicion for FAI. Plain x-rays are often diagnostic and can show the abnormal bone formation. Advanced imaging, with CT and / or MRI may be necessary. CT scan shows bone detail, and 3-dimensional images show the precise bony abnormality. MRI is useful for imaging the labrum, to see if the labrum is torn.

Treatment:

Nonsurgical Treatment

Activity changes. Your doctor may first recommend simply changing your daily routine and avoiding activities that cause symptoms.

Non-steroidal anti-inflammatory medications. Drugs like ibuprofen and naproxen can help reduce pain and inflammation.

Physical therapy. Specific exercises can improve the range of motion in your hip and strengthen the muscles that support the joint. This can relieve some stress on the injured labrum or cartilage.

Injections. Steroid injections may help to relieve pain and inflammation. Viscosupplementation can be used to relieve pain and treat arthritic symptoms. PRP injections can also be used to minimize symptoms, and to stimulate healing. There are also other biologicals that can be injected, such as AmnioFix.
**Surgical Treatment**

Surgery is an option for those who have progressive symptoms that are not relieved with nonsurgical treatment, in particular if there is a labral tear present. There may be a role for surgical treatment in individuals with bony deformities and/or labral tear, even in the absence of significant symptoms, in order to prevent or slow the ultimate development of arthritis.

Many FAI problems can be treated with arthroscopic surgery in an ambulatory surgery setting. The arthroscope is used to view the inside of the hip joint, then labral repairs or trimming, and bone removal can be done using small instruments placed through small incisions. Sometimes, open surgery is needed to address all of the problems. When FAI is severe, and there is considerable joint destruction, total hip replacement may be the only surgical option.