

Femoroacetabular Impingement

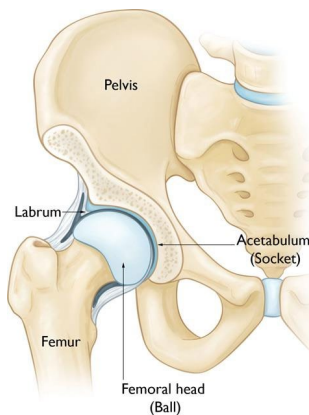
Femoroacetabular impingement (FAI) is a condition in which extra bone grows along one or both of the bones that form the hip joint — giving the bones an irregular shape. Because they do not fit together perfectly, the bones rub against each other during movement. Over time this friction can damage the joint, causing pain and limiting activity.

Anatomy

The hip is a ball-and-socket joint. The socket is formed by the acetabulum, which is part of the large pelvis bone. The ball is the femoral head, which is the upper end of the femur (thighbone).

A slippery tissue called articular cartilage covers the surface of the ball and the socket. It creates a smooth, low friction surface that helps the bones glide easily across each other during movement.

The acetabulum is ringed by strong fibrocartilage called the labrum. The labrum forms a gasket around the socket, creating a tight seal and helping to provide stability to the joint.



In a healthy hip, the femoral head fits perfectly into the acetabulum.

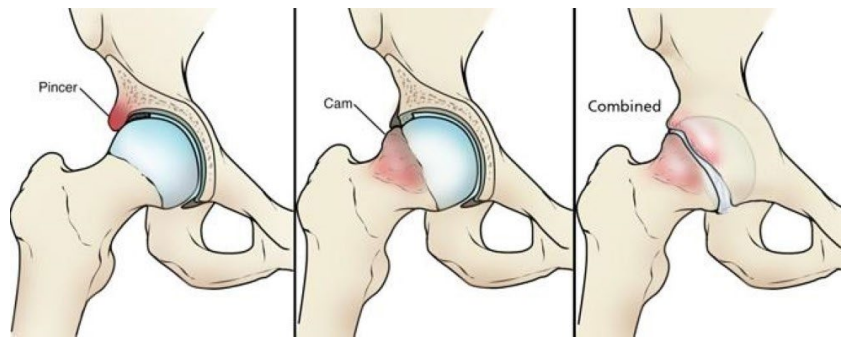
Description

In FAI, bone overgrowth — called bone spurs — develop around the femoral head and/or along the acetabulum. This extra bone causes abnormal contact between the hip bones, and prevents them from moving smoothly during activity. Over time, this can result in tears of the labrum and breakdown of articular cartilage (osteoarthritis).

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

- **Pincer.** This type of impingement occurs because extra bone extends out over the normal rim of the acetabulum. The labrum can be crushed under the prominent rim of the acetabulum.
- **Cam.** In cam impingement the femoral head is not round and cannot rotate smoothly inside the acetabulum. A bump forms on the edge of the femoral head that grinds the cartilage inside the acetabulum.
- **Combined.** Combined impingement just means that both the pincer and cam types are present.





Cause

FAI occurs because the hip bones do not form normally during the childhood growing years. It is the deformity of a cam bone spur, pincer bone spur, or both, that leads to joint damage and pain. When the hip bones are shaped abnormally, there is little that can be done to prevent FAI.

It is not known how many people have FAI. Some people may live long, active lives with FAI and never have problems. When symptoms develop, however, it usually indicates that there is damage to the cartilage or labrum and the disease is likely to progress.

Because athletic 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.

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 can be provided in a prescription-strength form to 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.

Surgical Treatment

If tests show joint damage caused by FAI and your pain is not relieved by nonsurgical treatment, your doctor may recommend surgery. Many FAI problems can be treated with arthroscopic surgery. Arthroscopic procedures are done with small incisions and thin instruments. The surgeon uses a small camera, called an arthroscope, to view inside the hip. During arthroscopy, your doctor can repair or clean out any damage to the labrum and articular cartilage. He or she can correct the FAI by trimming the bony rim of the acetabulum and also shaving down the bump on the femoral head.

