



Texas Orthopedics,
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Hip Arthroscopy
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Hip arthroscopy is a minimally invasive technique used to surgically treat many different causes of hip pain. It is not used to perform hip replacement surgery. Several (but not all) of the causes of hip pain that can be treated with hip arthroscopy are:

Femoroacetabular impingement (FAI)

Labral tear

Cartilage defects/flaps

To explain unexplained hip pain (diagnostic hip arthroscopy)

Inflammation of the hip lining (synovitis)

Investigation of a painful joint replacement or hip resurfacing

IT Band bursitis

Pigmented Villonodular Synovitis

Infection

Description of Femoroacetabular Impingement and Labral Tears

The two most common reasons to perform hip arthroscopy are for femoroacetabular impingement (FAI) and labral tears. FAI is a condition affecting the hip joint and is characterized by abnormal contact between the femoral head (hip ball) and the rim of the acetabulum (hip socket) leading to damage to the articular cartilage surface (covering on the end of bones- gristle on the end of a chicken bone for example). This damage can occur on the femoral head, the acetabulum, or both. The labrum is a band of tissue that is attached to the rim of the acetabulum. It serves two major purposes. First, it acts to deepen the socket to provide more stability without having extra bone. Secondly, it lies on the femoral head normally and provides a suction seal to trap a small amount of fluid between the two bones.

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Damage to the labrum can occur from abnormal contact between these two bones. The labrum can be pinched with “pincer impingement” and occurs when the acetabulum covers too much of the femoral head. The labrum can be sheared off of the acetabulum with “cam impingement” and occurs when there is an abnormal amount of extra bone on the edge of the femoral head. Most patients (80%) with FAI have both cam and pincer type impingement. Males are predisposed to cam impingement and females typically present with more pincer impingement.

When the labrum becomes damaged, it loses its ability to form a suction seal on the femoral head. This has several consequences. First, the inability to keep a thin layer of fluid between the two bones leads to a higher friction system. Although nobody is completely positive because we, as doctors, lack 25 years of research to prove this, most who perform this surgery believe that this increase in friction leads to arthritis at an early age. Secondly, the lack of a seal causes micro-instability in the hip yielding more friction in the joint- possibly leading to early arthritis. A damaged labrum hurts because the labrum has nerve fibers in it. Additionally, the labrum has a poor blood supply, so it typically does not heal very well on its own.

Initially, FAI and labral tears present as groin pain and a progressive loss of motion (stiff hip). Patients can sometimes subsequently develop pain in the hip flexor muscle, IT band bursitis (pain on the outside part of the upper thigh), and abductor tendonitis (pain in the buttock). Initial treatment is focused on physical therapy, rest from the offending activity, and possibly injections. If a thorough, non-operative treatment plan has been complied and the patient still has pain, a discussion between the fellowship trained hip arthroscopist and the patient should be had regarding the potential for surgical intervention.

Who gets FAI and labral tears?

Not everyone with too much bone on the femoral head or acetabulum ends up with a labral tear. In fact, 25% of Caucasian males in North America have evidence of cam impingement on x-ray, but obviously, 1 in 4 men are not undergoing surgery for this problem. The “conflict” between the two bones is a dynamic process. Meaning, if you sit at a desk all day long and your bones never come into abnormal contact with themselves, you will likely not have pain unless you have a lot of extra bone. However, if you are active in sports or activities that put your hip in a position for the two bones to hit each other, you are at an increase risk for labral tears, even if you only have small amounts of extra bone. Common sports associated with FAI and labral tears include: hockey, football, baseball, golf, tennis, kicking sports, dancing (ballet in particular), and track & field.

Surgery Description

The surgery involves two incisions (occasionally three) placed in the front and on the side of the hip. A high definition camera is used to look inside the hip joint through one incision, and tools are used to perform the surgery through the other incision. Tools used frequently include a burr (similar to the dentist’s office), a knife blade, a shaver (used to get rid of some of the torn labrum or other torn structures), a radio-frequency probe (heat probe used to get rid of inflamed, painful tissue) and a grasper (to remove loose pieces). The extra bone on the acetabulum and femoral head is burred off and suctioned out of the hip. The labrum is repaired with stitches. Occasionally, the labrum is too small or

too damaged to be repaired. In this case, the tear is taken away with the shaver (this is called a debridement). Usually, we try to repair the labrum instead of performing a debridement because this tends to yield better long term results (new research has shown this). The freshly burred bone on the socket provides a good blood supply for the labral repair to heal. So, not only do we get rid of the conflict between the two bones to prevent future tearing of the labrum and pain, but we also repair the labral tear to recreate the suction seal that is so important.

Some patients have damage to the cartilage (covering on the end of the bone). This damage is arthritis. Depending on the amount of damage, a procedure can be performed called microfracture that can help the patient re-grow his/her own cartilage. Sometimes the damage is too far gone to repair. However, often the surgery can be successful in re-growing cartilage.

Postoperative recovery

The postoperative recovery can be very variable depending on exactly what is done in the hip joint. It is very helpful to have a caregiver or family member present on the day after surgery to learn many of the physical therapy exercises. Additionally, if a family member or friend can be present for 5-7 days following surgery, most patients find this aids in assistance with daily activities. Typically, patients are flat foot weight bearing for about 17-21 days. This means the patient is allowed to put 20 lbs of pressure through the leg that was operated on with the aid of crutches for the first 2 ½ - 3 weeks. For the 3-5 days following this, the patient is allowed to put 50% of body weight through this leg. Then, the patient is allowed to wean off crutches as tolerated. A hip brace is worn for the first 21 days after surgery to help protect the repair performed during surgery. A CPM (continuous passive motion) machine is typically used for the first 2 weeks. It is used for 4-6 hours per day during the first 2 days after surgery, then 1-2 hours per day until two weeks. The time to return to work or school can vary depending on each patient's individual situation. It is imperative that the patient honor the commitments to physical therapy upon returning to work or school.

The biggest variable in the postoperative recovery occurs if a microfracture procedure to re-grow cartilage has been performed. This significantly changes the rehab. The patient must be flat foot weight bearing (20 lbs pressure) with the aid of crutches for 8 weeks. A CPM machine is also used for 8 weeks. This change in the rehab is crucial to provide the microfracture the best chance of healing.

Lastly, despite the minimally invasive, arthroscopic approach of this surgery, a lot of work is performed inside the hip joint. A complete recovery usually takes between 4 and 9 months, and patients can have symptoms improve for the first two years after the operation. For professional athletes, a return to sport can vary depending on the sport and the exact amount and type of work done inside the hip, but the average is about 4 months.