Orthopod®
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A Patient's Guide to
Arthroscopy of the Hip

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Zehr Center for Orthopaedics

Welcome to the Zehr Center for Orthopaedics in Naples, FL where we strive every day to make a difference in the lives of our patients. Our orthopaedic practice is decidedly preferred by patients with difficulties affecting their HIPS and KNEES, as these are the problem focused areas where we have our most extensive experience.

Philosophically, we want you to know that the hallmark virtues upon which our practice is founded "Wisdom, Integrity, Experience and Compassion" Inspire each member of the patient care team to reach beyond themselves to provide you the highest quality in patient care, prudent counsel, clinical expertise and most importantly-- true concern for YOU, our patient, for whom we are honored to care.

Our founder, Robert J. Zehr, MD, has dedicated his professional education and career to the research, understanding and care of some of the most complex orthopaedic problems in the field including primary and revision total joint replacement, as well as, skeletal reconstruction associated with tumors and fractures.

With the experience of over 6000 primary, revision and complex joint reconstructions to call upon, Dr. Zehr brings the most up to date surgical techniques, patient safety and knowledge of rehabilitation to each patient's surgical problem. In addition, his mastery of minimally invasive surgical techniques, rapid recovery rehab protocols and shortened hospital stays has resulted in greatly improved surgical outcomes, fewer complications and highly satisfied patients. It is our great privilege to serve you!

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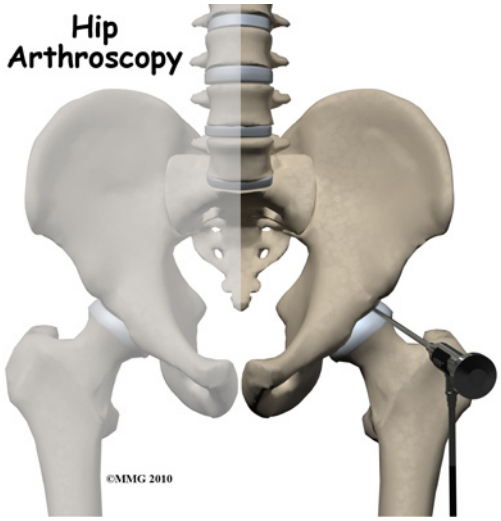


Introduction

A hip arthroscopy is a procedure where a small video camera attached to a fiber-optic lens is inserted into the hip joint to allow a surgeon to see without making a large incision. Arthroscopy is now used to evaluate and treat orthopedic problems in many different joints of the body. While not as common as arthroscopy of the knee and shoulder, hip arthroscopy is used to evaluate and treat certain problems affecting the hip joint and the space outside the hip joint known as the *greater trochanteric bursa*.

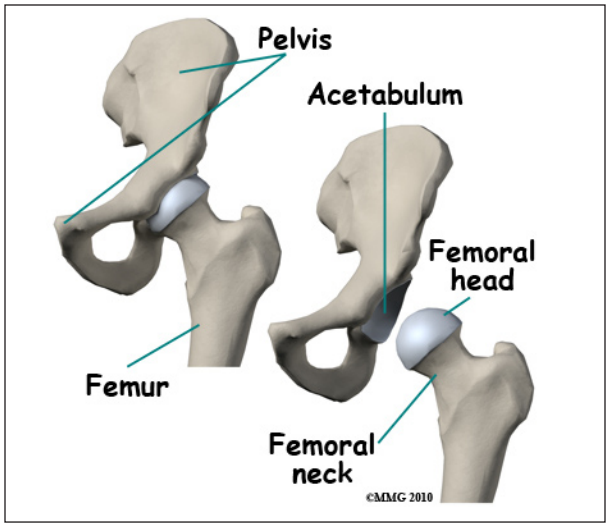
This guide will help you understand

- **what parts of the hip are treated during hip arthroscopy**
- **what types of conditions are treated with hip arthroscopy**
- **what to expect before and after hip arthroscopy**

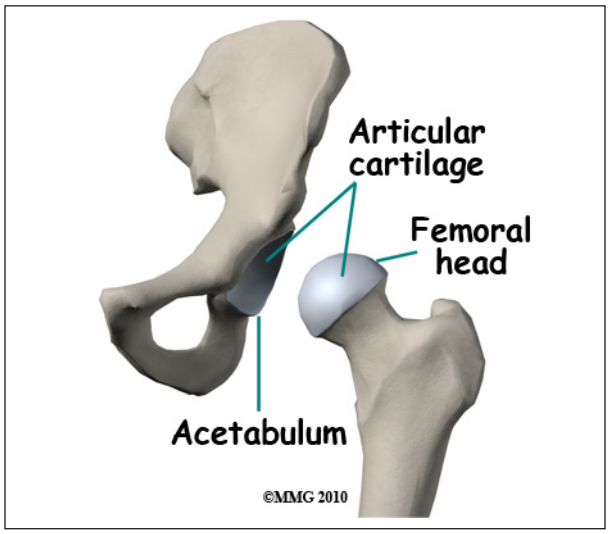
Anatomy

What parts of the hip are involved??

The hip joint is one of the true ball-and-socket joints of the body. The hip socket is called the *acetabulum* and forms a deep cup that surrounds the ball of the upper thigh bone. The



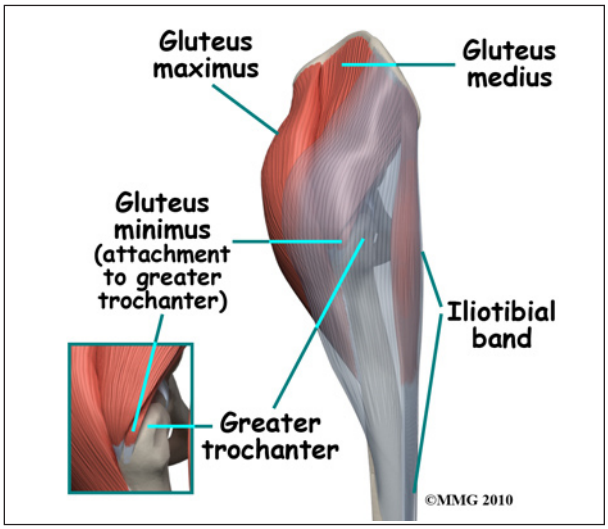
thigh bone itself is called the *femur*, and the ball on the end is the *femoral head*. The ball and socket arrangement gives the hip a large amount of motion needed for daily activities like walking, squatting, and stair-climbing.



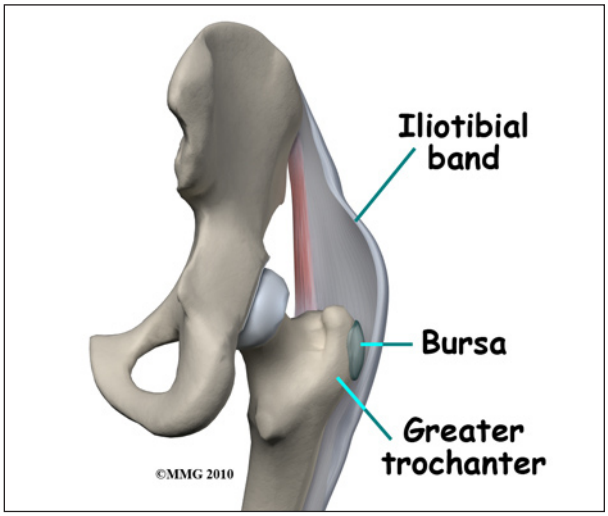
The surfaces of the femoral head and the inside of the acetabulum are covered with *articular cartilage*. This material is about one-quarter of an inch thick in most large joints. Articular cartilage is a tough, slick material that allows the surfaces to slide against one another without damage.

The *gluteus maximus* is the largest of three gluteal muscles of the buttock. This muscle spans the side of the hip and joins the *iliotibial band*. The iliotibial band is a long tendon that

passes over the bursa on the outside of the greater trochanter. It runs down the side of the thigh and attaches just below the outside edge of the knee.

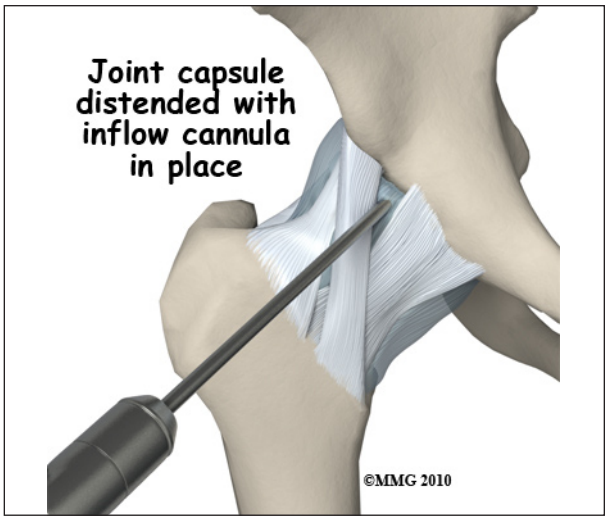


Two other buttock muscles attach to the greater trochanter, the *gluteus medius* and the *gluteus minimus*. These muscles are known as the *abductors* because they function to pull the lower leg away from the body - a motion that is called *abduction*. These muscles can be torn where they attach to the greater trochanter causing pain and weakness as well as a snapping sensation.



Where friction must occur between muscles, tendons, and bones, there is usually a *bursa*. A bursa is a thin sac of tissue that contains a bit of fluid to lubricate the area where the friction occurs. The bursa is a normal structure, and the body will even produce a bursa in response to friction. The bursa next to the greater trochanter is called the *greater trochanteric bursa*.

The hip joint is surrounded by a water-tight pocket called the *joint capsule*. This capsule is formed by ligaments, connective tissue and synovial tissue. When the joint capsule is filled with sterile saline and is *distended*, the surgeon can insert the arthroscope into the pocket that is formed, turn on the lights and the camera and see inside the hip joint as if looking into an aquarium. The surgeon can see nearly everything that is inside the hip joint including: (1) the joint surfaces of the femoral head and acetabulum (2) the *acetabular labrum* and (3) the synovial lining of the joint.



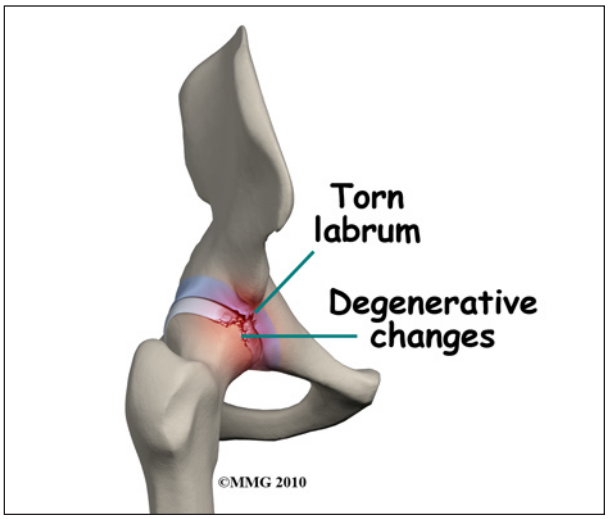
The arthroscope can also be inserted into the space outside the hip joint - the greater trochanteric bursa. This allows the surgeon to see the attachment of the gluteus medius muscle and the inside of the bursa.

Rationale

What does my surgeon hope to achieve?

When hip arthroscopy first became available it was used primarily to look inside the hip joint and make a diagnosis. Today, hip arthroscopy is used in performing a wide range of different

types of surgical procedures on the hip joint including confirming a diagnosis, removing loose bodies, removing or repairing a torn labrum, debriding excess inflamed bursa tissue, repairing a tear in the gluteus medius tendon, and fixing fractures of the joint surface.



Your surgeon's goal is to fix or improve your problem by performing a suitable surgical procedure; the arthroscope is a tool that improves the surgeons ability to perform that procedure. The arthroscope image is magnified and allows the surgeon to see better and clearer. The arthroscope allows the surgeon to see and perform surgery using much smaller incisions. This results in less tissue damage to normal tissue and can shorten the healing process. But remember, the arthroscope is only a tool. The results that you can expect from a hip arthroscopy depend on what is wrong with your hip, what can be done inside your hip to improve the problem and your effort at rehabilitation after the surgery.

Preparation

What do I need to know before surgery?

You and your surgeon should make the decision to proceed with surgery together. You need to understand as much about the procedure as possible. If you have concerns or questions, be sure and talk to your surgeon.

Once you decide on surgery, you need to take several steps. Your surgeon may suggest a complete physical examination by your regular doctor. This exam helps ensure that you are in the best possible condition to undergo the operation.

You may also need to spend time with the physical therapist who will be managing your rehabilitation after surgery. This allows you to get a head start on your recovery. One purpose of this preoperative visit is to record a baseline of information. The therapist will check your current pain levels, ability to do your activities, and the movement and strength of each hip.

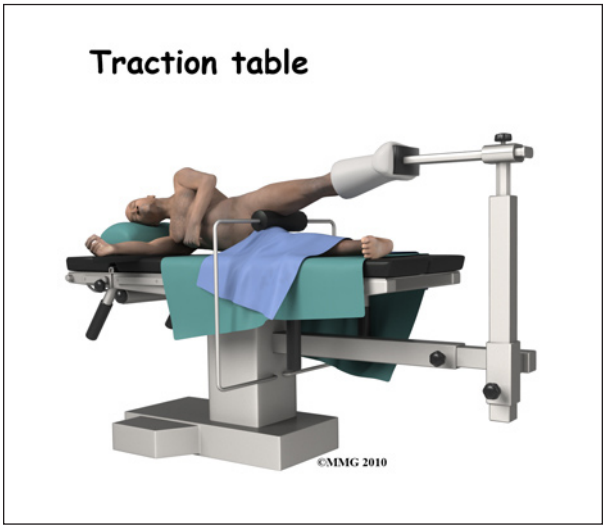
A second purpose of the preoperative visit is to prepare you for surgery. The therapist will teach you how to walk safely using crutches or a walker. And you'll begin learning some of the exercises you'll use during your recovery.

On the day of your surgery, you will probably be admitted for surgery early in the morning. You shouldn't eat or drink anything after midnight the night before.

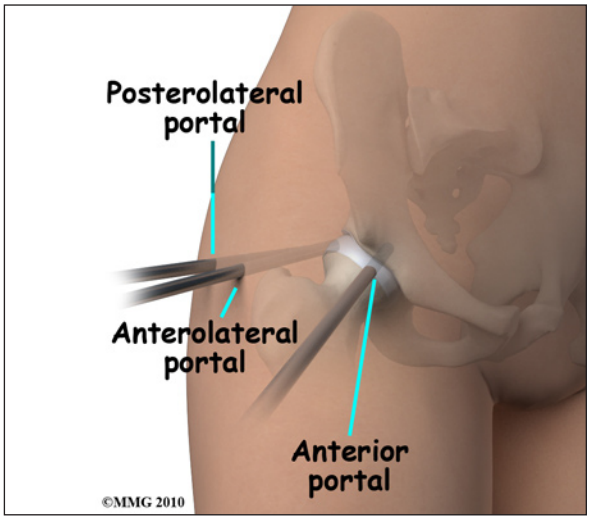
Surgical Procedure

What happens during hip arthroscopy?

Before surgery you will be placed under either general anesthesia or a type of spinal anesthesia. A special operating room table called a *traction table* will be used.



The hip joint is very tight with little space between the ball and the socket. By applying traction, the surgeon is able to increase this space and allow the arthroscope to be inserted into that space. The end of the arthroscope will be moved about in this space to look throughout the joint. Finally, sterile drapes are placed to create a sterile environment for the surgeon to work. There is a great deal of equipment that surrounds the operating table including the TV screens, cameras, light sources, and surgical instruments.



The surgeon begins the operation by making two or three small openings into the hip, called *portals*. These portals are where the arthroscope and surgical instruments are placed inside the hip. Care is taken to protect the nearby nerves and blood vessels. A small metal or plastic tube (or *cannula*) will be placed through one of the portals to inflate the hip with sterile saline.

The arthroscope is a small fiberoptic tube that is used to see and operate inside the joint. The arthroscope is a small metal tube about 1/4 inch in diameter (slightly smaller than a pencil) and about seven inches in length. The fiber-optics inside the metal tube of the arthroscope allows a bright light and TV camera to be connected to the outer end of the arthroscope. The light shines through the fiberoptic tube and into the hip joint. A TV camera is attached to the lens on the outer end of the arthroscope. The TV camera projects the image from inside the hip joint on a TV screen next to the surgeon. The surgeon actually watches the TV screen (not the hip) while moving the arthro-scope to different places inside the hip joint and bursa.

Over the years since the invention of the arthroscope, many very specialized instruments have been developed to perform different types of surgery using the arthroscope to see what is going on while the instruments are being used. Today, many surgical procedures that once required large incisions for the surgeon to see and fix the problem can be done with much smaller incisions. For example, simple removal of a torn labrum or loose body can be done using two or three small 1/4 inch inci-sions. More extensive surgical procedures may require larger incisions. Your surgeon may decide during the procedure that the problem requires a more traditional open type operation. If this has been discussed before the operation the surgery may be performed imme-diately; if not, the arthroscopic procedure will be concluded and a later operation planned. Your surgeon will discuss the details of what was found at the time of the arthroscopy and what more needs to be done in the later opera-tion.

Once the surgical procedure is complete, the arthroscopic portals and surgical incisions will be closed with sutures or surgical staples. A large bandage will be applied to the hip. You may be placed in compression stockings; compressive stockings reduce swelling and help prevent blood clots in the leg. Once the bandage has been placed, you will be taken to the recovery room.

Complications

What might go wrong?

As with all major surgical procedures, compli-cations can occur. This document doesn't

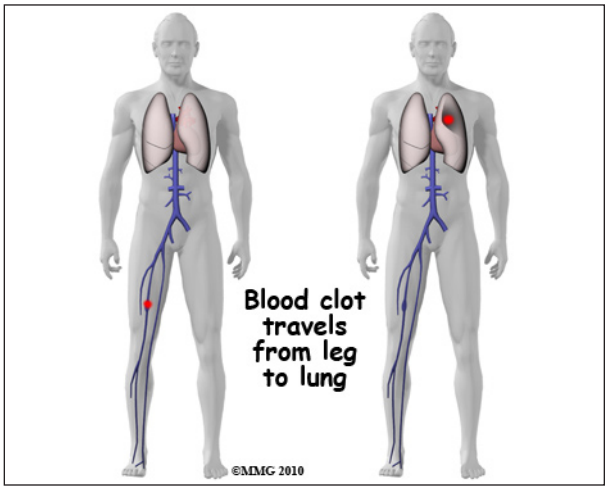
provide a complete list of the possible complications, but it does highlight some of the most common problems. Some of the most common complications following hip arthroscopy include

- anesthesia complications
- thrombophlebitis
- infection
- equipment failure
- slow recovery

Anesthesia Complications

Most surgical procedures require that some type of anesthesia be done before surgery. A very small number of patients have problems with anesthesia. These problems can be reactions to the drugs used, problems related to other medical complications, and problems due to the anesthesia. Be sure to discuss the risks and your concerns with your anesthesiologist.

Thrombophlebitis (Blood Clots)



Thrombophlebitis, sometimes called *deep venous thrombosis* (DVT), can occur after any operation, but it is more likely to occur following surgery on the hip, pelvis, or knee. DVT occurs when the blood in the large veins of the leg forms blood clots. This may cause the leg to swell and become warm to the touch and painful. If the blood clots in the veins break apart, they can travel to the lung, where they lodge in the capillaries and cut off the blood supply to a portion of the lung. This is called a *pulmonary embolism*. (*Pulmonary* means lung, and *embolism* refers to a fragment of something traveling through the vascular system.) Most surgeons take preventing DVT very seriously. There are many ways to reduce the risk of DVT, but probably the most effective is getting you moving as soon as possible. Two other commonly used preventative measures include

- pressure stockings to keep the blood in the legs moving
- medications that thin the blood and prevent blood clots from forming

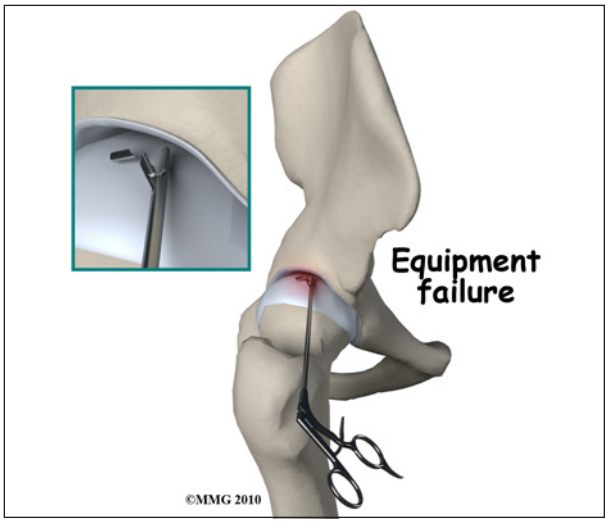
Infection

Following hip arthroscopy, it is possible that a postoperative infection may occur. This is very uncommon and happens in less than 1% of cases. You may experience increased pain, swelling, fever and redness, or drainage from the incisions. You should alert your surgeon if you think you are developing an infection.

Infections are of two types: superficial or deep. A superficial infection may occur in the skin around the incisions or portals. A superficial infection does not extend into the joint and can usually be treated with antibiotics alone. If the hip joint itself becomes infected, this is a serious complication and will require antibiotics and possibly another surgical procedure to drain the infection.

Equipment Failure

Many of the instruments used by the surgeon to perform hip arthroscopy are small and fragile. These instruments can be broken resulting in a piece of the instrument floating inside of the joint. The broken piece is usually easily located and removed, but this may cause the operation to last longer than planned. There is usually no damage to the hip joint due to the breakage.



Different types of surgical devices (screws, pins, and suture anchors) are used to hold tissue in place during and after arthroscopy. These devices can cause problems. If one breaks, the free-floating piece may hurt other parts inside the hip joint, particularly the articular cartilage. The end of the tissue anchor may poke too far through tissue and the point may rub and irritate nearby tissues. A second surgery may be needed to remove the device or fix problems with these devices.

Slow Recovery

Not everyone gets quickly back to routine activities after hip arthroscopy. Because the arthroscope allows surgeons to use smaller incisions than in the past, many patients mistakenly believe that *less surgery was necessary.* This is not always true. The arthroscope allows surgeons to do a great deal of reconstructive surgery *inside* the hip without making large incisions. How fast you recover from hip arthroscopy depends on what type of surgery was done *inside* your hip. Simple problems that require simple procedures using the arthroscope generally get better faster. Patients with extensive damage to the hip articular cartilage tend to require more complex and extensive surgical procedures. These more extensive reconstructions take longer to heal and have a slower recovery. You should discuss this with your surgeon and make sure that you have realistic expectations of what to expect following arthroscopic hip surgery.

After Surgery

What happens after hip arthroscopy?

Hip arthroscopy is usually done on an outpatient basis meaning that patients go home the same day as the surgery. More complex reconstructions that require larger incisions and surgery that alters bone may require a short stay in the hospital to control pain more aggressively and monitor the situation carefully. You may also begin physical therapy while in the hospital.

The portals are covered with surgical strips, the larger incisions may have been repaired with either surgical staples or sutures. Crutches are commonly used after hip arthroscopy. They may only be needed for one to two days after a simple procedures.

Follow your surgeon's instructions about how much weight to place on your foot while standing or walking. Avoid doing too much, too quickly. You may be instructed to use a cold pack on the hip and to keep your leg elevated and supported.

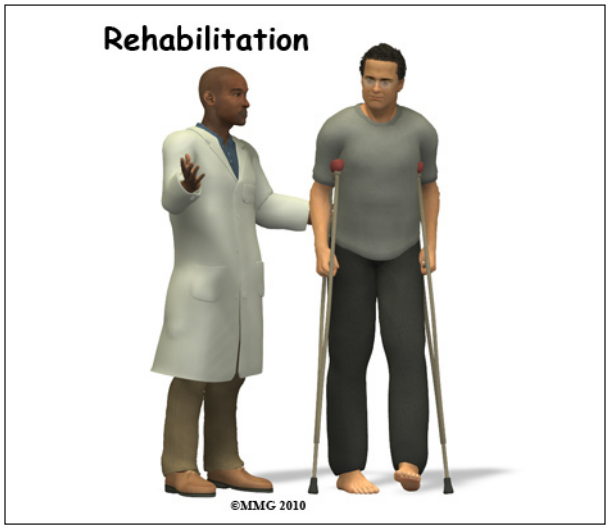
Rehabilitation

What will my recovery be like?

Your rehabilitation will depend on the type of surgery required. You may not need formal physical therapy after simple procedures such as a labral debridement. Some patients may simply do exercises as part of a home program after some simple instructions.

Many surgeons have patients take part in formal physical therapy after any type of hip arthroscopy procedure. Generally speaking, the more complex the surgery the more involved and prolonged your rehabilitation program will be. The first few physical therapy treatments are designed to help control the pain and swelling from the surgery. Physical therapists

will also work with patients to make sure they are putting only a safe amount of weight on the affected leg.



Today, the arthroscope is used to perform quite complicated major reconstructive surgery using very small incisions. Remember, just because you have small incisions on the outside, there may be a great deal of healing tissue on the inside of the hip joint. If you have had major reconstructive surgery, you should expect full recovery to take several months. The physical therapist's goal is to help you keep your pain under control and improve the range of motion and strength of your hip. When you are well under way, regular visits to your therapist's office will end. The therapist will continue to be a resource, but you will be in charge of doing your exercises as part of an ongoing home program.

Notes