

Arthroscopic Surgery

Quincy Medical Center

Massachusetts General Hospital

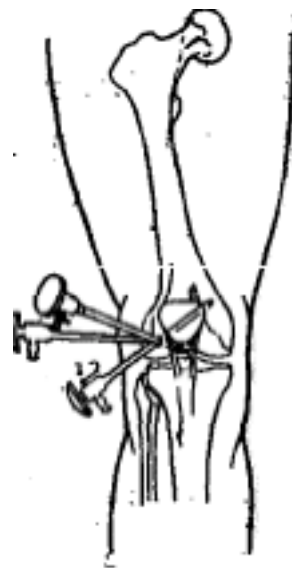
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What is arthroscopy?

Arthroscopy is a surgical procedure that orthopedic surgeons use to visualize, diagnose and treat problems inside of a joint. The word arthroscopy comes from the Greek words, "arthro" (joint) and "skopein" (to look). The term literally means "to look within the joint".

In an arthroscopic examination, the doctor makes a small incision in the patient's skin and inserts pencil-sized instruments that contain a small lens and lighting system to magnify and illuminate the structures inside the joint. Light is transmitted through fiber optics to the end of the arthroscope that is inserted into the joint. By attaching the arthroscope to a miniature camera, The doctor is able to see the interior of the joint through this very small incision rather than the large incision needed for conventional "open" surgery.



The television camera attached to the arthroscope displays the image of the joint on a television screen, allowing the doctor to look, for example, throughout the knee-at cartilage and ligaments, and under the kneecap. The doctor can determine the amount and type of injury, and then repair or correct the problem, if it is necessary.

Why is arthroscopy necessary?

Diagnosing joint injuries and disease begins with a thorough medical history, physical examination, and usually X-rays. Additional tests such as MRI, or CT scan also may be needed. Through the arthroscope, a final diagnosis is made which may be more accurate than through "open" surgery, X-ray studies or MRI alone. Disease and injuries can damage bones, cartilage, ligaments, muscles and tendons. Some of the most frequent conditions found during arthroscopic examination of joints are:

- **Inflammation** - Synovitis-inflamed lining (synovium) in knee, shoulder, elbow or ankle.
- **Injury** - acute and chronic
 - **Shoulder** - rotator cuff tendon tears, impingement syndrome, and recurrent dislocations.
 - **Knee** - meniscal (cartilage) tears, chondromalacia (wearing or injury of cartilage cushion), and anterior cruciate ligament tears with instability.
- **Loose bodies of bone and/or cartilage** - knee, shoulder, ankle and elbow

Although the inside of nearly all joints can be viewed with an arthroscope, six joints are most frequently examined with this instrument. These include the knee, elbow, shoulder, ankle, hip and wrist. As engineers make advances in electronic technology and orthopedic surgeons develop new techniques, other joints may be treated more frequently in the future.

How is arthroscopy performed?

Arthroscopic surgery, although much easier in terms of recovery than "open" surgery, still requires the use of anesthetics and the special equipment in a hospital operating room or outpatient surgical suite. You will be given a general, spinal or a regional anesthetic, depending on the joint or suspected problem.

A small incision (about the size of a buttonhole) will be made to insert the arthroscope. Several other incisions may be made to see other parts of the joint or insert other instruments.

When indicated, corrective surgery is performed with specially designed instruments that are inserted into the joint through the accessory incisions.

Initially, arthroscopy was a simple diagnostic tool for planning standard open surgery. With the development of better instruments and surgical techniques, many conditions can be treated arthroscopically. For instance, most meniscal tears in the knee can be treated successfully with arthroscopic surgery.

Some problems associated with arthritis also can be treated. Several disorders are treated with a combination of arthroscopic and standard surgery.

- Rotator cuff repair
- Repair or resection of torn cartilage from the knee or shoulder
- Reconstruction of the anterior cruciate ligament of the knee
- Removal of inflamed lining (synovium) in the knee, shoulder, wrist and ankle
- Repair of torn ligaments
- Removal of loose bone or cartilage in the knee, shoulder, elbow, ankle and wrist

What happens after arthroscopy?

After arthroscopic surgery, the incisions will be covered with a dressing. You will move from the operating room into the recovery room. Some patients need little or no pain medication, although it is not uncommon to have pain if an injury was treated. Before being discharged, you will be given instructions about care for your incisions, what activities you should avoid, and which exercises you should do to aid your recovery.

During the follow-up visit, the doctor will inspect your incisions, remove sutures, if present; and discuss your rehabilitation program.

The amount of surgery required and recovery time will depend upon the complexity of your problem. Occasionally, during arthroscopy, the doctor may discover that the injury or disease cannot be treated adequately with arthroscopy alone. The "open" surgery, if previously agreed, can be performed while you are still anesthetized, or at a later date after you have discussed the findings with the doctor.

What are the possible complications?

Although uncommon, complications do occur occasionally during or following arthroscopy. Infection, phlebitis (blood clots of a vein), excessive swelling or bleeding, joint stiffness, damage to blood vessels or nerves, and instrument breakage are the most common complications, but occur in far less than 1 percent of all arthroscopic procedures.

What are the advantages?

Although arthroscopic surgery has received a lot of public attention because it is used to treat well-known athletes, it is an extremely valuable tool for all orthopedic patients and is generally easier on the patient than open surgery. Most patients have their arthroscopic surgery as outpatients and are home several hours after surgery.

Recovery after arthroscopy

The small puncture wounds take several days to heal. The operative dressing can usually be removed the morning after the surgery and adhesive strips can be applied to cover the small healing incisions.

Although the puncture wounds are small and the pain in the joint that underwent arthroscopy is minimal, it takes several weeks (6-8, sometimes longer) for the joint to maximally recover. A specific activity and rehabilitation program may be suggested to speed your recovery and protect your future joint function.

It is not unusual for patients to go back to work or school or resume daily activities within a few days. Athletes and others who are in good physical condition may in some cases return to athletic activities within a few weeks.

Remember, though, that people who have arthroscopy can have many different diagnoses and preexisting conditions, so each patient's arthroscopic surgery is unique to that person. Recovery time will reflect that individuality. It is very rare that your recovery will be the same as that of a friend or family member who also had "arthroscopic surgery".