



Arthroscopic Surgery: What Does This Mean?

The visit to the orthopaedic surgeon didn't go as you planned...surgery has been scheduled. The doctor explained that this is a simple "scope procedure." What does this mean?

The arthroscope (picture at right) is a small fiber optic camera inserted into the joint to visualize and repair injuries. The surgeon will make two or three small (about ½ inch) incisions at the joint line of the knee to insert the arthroscope and arthroscopic tools.



The camera contains an incredibly bright light source to help visualize the joint structures. The camera and arthroscopic instruments are approximately 5 millimeters (½ inch) in diameter. These small instruments are used to repair the damaged structures.



A solution of sodium chloride flows into the joint, facilitating the procedure. This solution serves two purposes. One, the constant flow of the liquid will flush out any debris created by the procedure. Two, the liquid distends the joint allowing the surgeon to see better. The camera acts as a spigot, allowing the fluid to enter the joint. Suction, applied through other instruments, removes the fluid.

The fiber optic camera is connected to a television monitor that the physician looks at while performing the procedure. This requires incredible skill and coordination.

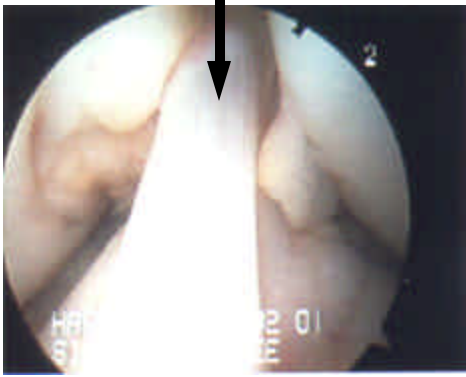
Today the skilled orthopaedic surgeon uses the arthroscope to assist with numerous injury repairs. The arthroscopic procedure has continued to advance since its first use in the early 1970's. Originally used as a diagnostic tool to determine the extent of injury, the scope has evolved into the preferred technique for many joint repairs. Advances in technology have allowed the orthopaedic surgeon to become more innovative in the use of the scope.

Advances in surgical techniques, combined with advances in anesthesia, have resulted in very short hospitalization after the procedure. Most arthroscopic procedures are performed as day surgery. That is, the patient reports to the hospital or out-patient surgical facility in the morning and is home before the end of the business day. Many arthroscopic procedures can be completed in under one hour. This results in a total hospital stay of 3 to 5 hours.



Repair of damaged structures is made easier due to the magnification caused by the camera. Structures that are

Anterior Cruciate Ligament

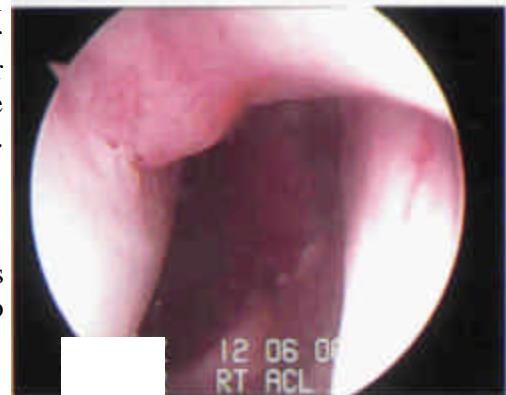


small to the naked eye are made larger facilitating repairs. This picture is a normal appearing ACL. The picture on the left is a torn ACL as seen on arthroscopic evaluation. Notice the rope-like structure that is absent in the middle of this picture.

Due to the small size of joints the instruments used are also small. The magnification of the image by the camera makes the use of these small tools easier. The surgeon will use small probes to maneuver under the cartilage to look for tears. Small scissors can be utilized to trim out torn tissue.

The tools of the orthopaedic surgeon are not unlike the tools of a master carpenter, only on a much smaller scale.

The picture below shows the use of an awl to “pick” the bone. This instrument is used in cases of premature arthritic changes to encourage new joint surface cartilage formation



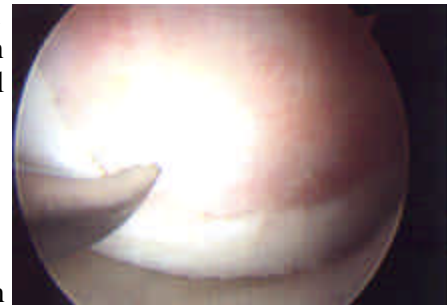
The surgeon can also utilize powered instruments to assist in the repairs. The most commonly used motorized tool is called a shaver (on right) ; it looks like a hollow tube with rotating teeth. This instrument is used to remove large amounts of damaged tissue and is connected to a suction device. Removal of the excised tissue is a very important part of any arthroscopic procedure.

The arthroscope can be used in nearly any joint. Arthroscopic surgeries are very commonly used in the larger joints of the knee and shoulder. The small instruments allow the surgeon to access relatively small joints such as the elbow and ankle.



Recovery Time

The use of the scope in surgical procedures results in less trauma to the body when compared to “open” procedures. This has allowed athletes to return to participation faster.



Recovery time after arthroscopic surgery varies based on the work performed. “Simple” procedures such as cartilage resection (removal of a torn cartilage) can have a recovery time of as little as two weeks. In contrast, recovery time from more complex procedures such as an ACL reconstruction can take 4 to 6 months.

Actual recovery time can vary from person to person. The surgeon’s repair of the damaged tissue is only half of the recovery. The athlete must rehabilitate the surgical limb to regain normal strength, balance, and sport specific techniques. If the athlete approaches the rehabilitation with a poor attitude the outcome will be poor.

In all orthopaedic injuries, the recovery after the injury or surgery is extremely important. If the athlete does not return to participation at full strength, he/she is asking for further injury to occur.