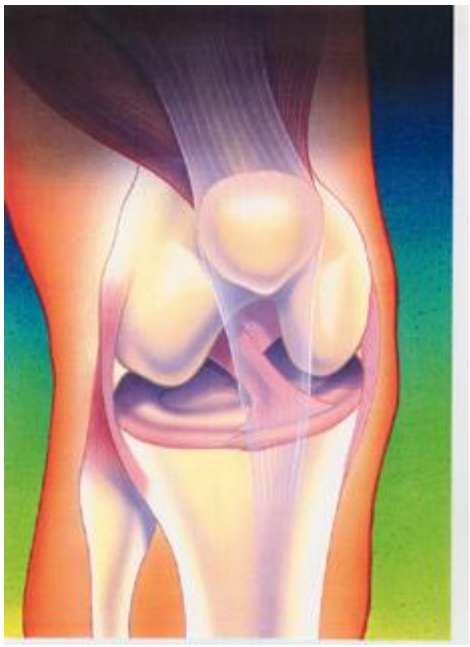
Dr Michael McAuliffe

Orthopaedic Surgeon

Knee, hip and lower limb specialist

Knee Arthroscopy

If you have persistent pain, catching, or swelling in your knee, a procedure known as arthroscopy may help relieve these problems.

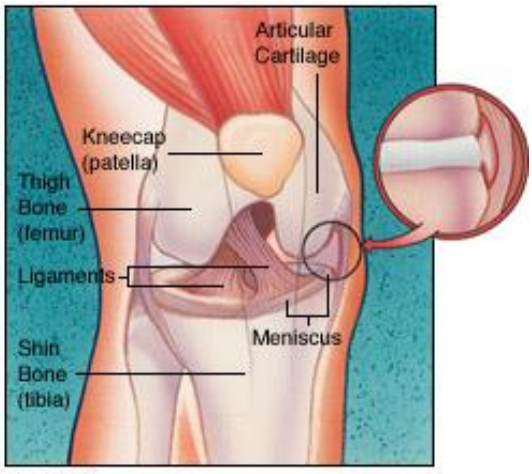


Arthroscopy allows an orthopaedic surgeon to diagnose and treat knee disorders by providing a clear view of the inside of the knee with small incisions, utilizing a pencil-sized instrument called an arthroscope. The scope contains optic fibers that transmit an image of your knee through a small camera to a television monitor. The TV image allows the surgeon to thoroughly examine the interior of your knee and determine the source of your problem. During the procedure, the surgeon also can insert surgical instruments through other small incisions in your knee to remove or repair damaged tissues.

Modern or contemporary arthroscopy of the knee was first performed in the late 1960s. With improvements of arthroscopes and higher-resolution cameras, the procedure has become highly effective for both the accurate diagnosis and proper treatment of knee problems.

How the Normal Knee Works

The knee is the largest joint in the body, and one of the most easily injured. It is made up of the lower end of the thigh bone (femur), the upper end of the shin bone (tibia), and the knee cap (patella), which slides in a groove on the end of the femur. Four bands of tissue, the anterior and posterior cruciate ligaments, and the medial and lateral collater ligaments connect the femur and the tibia and provide joint stability. Strong thigh muscles give the knee strength and mobility. The surfaces where the femur, tibia and patella touch are covered with articular cartilage, a smooth substance that cushions the bones and enables them to glide freely. Semicircular rings of tough fibrous-cartilage tissue called the lateral and medial meniscii act as shock absorbers and stabilizers.



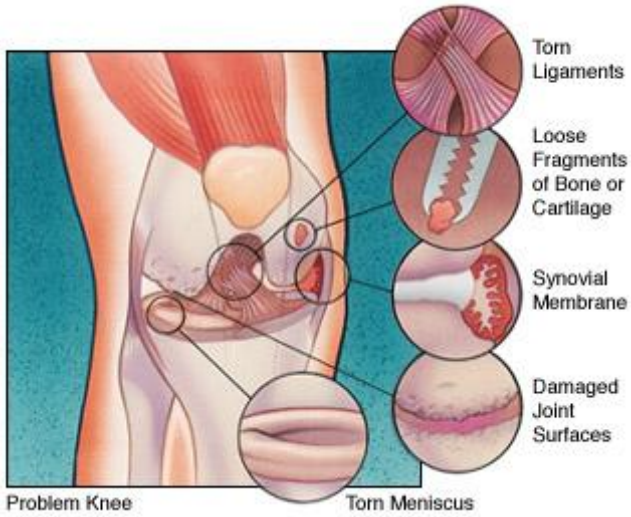
Healthy Knee

Knee Problems

Normally, all parts of the knee work together in harmony. But sports, work injuries, arthritis, or weakening of the tissues with age can cause wear and inflammation, resulting in pain and diminished knee function.

Arthroscopy can be used to diagnose and treat many of these problems:

- Torn meniscal cartilage.
- Loose fragments of bone or cartilage.
- Damaged joint surfaces or softening of the articular cartilage known as chondromalacia.
- Inflammation of the synovial membrane, such as rheumatoid or gouty arthritis.
- Abnormal alignment or instability of the kneecap.
- Torn ligaments including the anterior and posterior cruciate ligaments.



By providing a clear picture of the knee, arthroscopy can also help decide whether other types of reconstructive surgery would be beneficial.

Signs that you may be a candidate for this procedure include swelling, persistent pain, catching, giving-way, and loss of confidence in your knee. When other treatments such as the regular use of medications, knee supports, and physiotherapy have provided minimal or no improvement, you may benefit from arthroscopy.

Most arthroscopies are performed on patients between the ages of 20 and 60. There is now clear evidence that arthroscopy for the treatment of knee osteoarthritis is unlikely to be successful. Michael will discuss this with you particularly if he feels that the major problem is arthritis rather than a torn cartilage or ligament.

The Orthopaedic Knee Evaluation

- A medical history, in which information about your symptoms and general health are reviewed.
- A physical examination to assess your knee motion and stability, muscle strength and overall leg alignment.
- X-rays to evaluate the bones of your knee. An MRI to provide more information about the soft tissues of your knee may also be useful. An MRI uses magnetic sound waves to create images of bone, cartilage ligaments, muscles and tendons. Blood tests may be obtained to determine if you have inflammatory arthritis.

Evaluation of these results can help determine whether arthroscopy would be the best method to further diagnose and treat your knee problem. Other treatment options, such as medications or other surgical procedures also will be discussed and considered.

A few small incisions will be made in your knee. A sterile solution will be used to fill the knee joint and rinse away any cloudy fluid, providing a clear view of your knee.

Michael will then insert the arthroscope to properly diagnose your problem, using the TV image to guide the arthroscope. If surgical treatment is needed, a variety of small surgical instruments (scissors, clamps, shavers) can be inserted through another small incision.

Common treatments with knee arthroscopy include:

- Removal or repair of torn meniscal cartilage.
- Reconstruction of a torn cruciate ligament.
- Trimming of torn pieces of articular cartilage.
- Removal of loose fragments of bone or cartilage.
- Removal of inflamed synovial tissue.

Your Recovery at Home

Recovery from knee arthroscopy is much faster than recovery from traditional open knee surgery.

Swelling

Keep your leg elevated as much as possible for the first few days after surgery. Apply ice as recommended to relieve swelling and pain.

Dressing Care

You will leave the hospital with a dressing covering your knee. You may remove the dressing the 48 hours after surgery. You may shower, but should avoid directing water at the incisions. Do not soak in a bath or pool. Keep your incisions clean and dry.

Bearing Weight

After most arthroscopic surgeries, you can walk unassisted but you may need to use crutches, a cane, or a walker for a period of time after surgery. You can gradually put more weight on your leg as your discomfor subsides and you regain strength in your knee.

Exercises to Strengthen Your Knee

You should exercise your knee regularly for several weeks following surgery to strengthen the muscles of your leg and knee.

Medications

You may need pain medication to help relieve discomfort following your surgery.

Complications

Potential postoperative problems with knee arthroscopy include infection, blood clots, and an accumulation of blood in the knee. These occur infrequently and are usually minor and treatable.

Warning Signs

Call the rooms immediately if you experience any of the following:

- Fever.
- Chills.
- Persistent warmth or redness around the knee.
- Persistent or increased pain.
- Significant swelling in your knee.
- Increasing pain in your calf muscle.
- Shortness of breath or chest pain.

Reasonable Expectations after Arthroscopic Surgery

Although arthroscopy can be used to treat many problems, you may have some activity limitations even after recovery. The outcome of your surgery will often be determined by the degree of injury or damage found in your knee.
For example, if you damage your knee from jogging and the smooth articular cushion of the weight-bearing portion of the knee has worn away completely, then full recovery may not be possible. You may be advised to find a low-impact alternative form of exercise. Physical exercise and rehabilitation will play an important role in your final outcome.

It is reasonable to expect that by six to eight weeks you should be able to engage in most of your former physical activities. Twisting maneuvers may have to be avoided for a longer time.

If your job involves heavy work, such as a construction laborer, you may require more time to return to your job than if you have a sedentary job.