

## 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 Dr. McAllister 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 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. Today, arthroscopy is one of the most common orthopaedic procedures in the United States.

## 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 collateral 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 menisci* act as shock absorbers and stabilizers.

The bones of the knee are surrounded by a thin, smooth tissue capsule lined by a thin synovial membrane which releases a special fluid that lubricates the knee, reducing friction to nearly zero in a healthy knee.

## Knee Problems

Normally, all parts of the knee work together in harmony. But sport injuries, 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 meniscus 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 the orthopaedic surgeon decide whether other types of reconstructive surgery would be beneficial.

## Is Arthroscopy for You?

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 physical therapy have provided minimal or no improvement, you may benefit from arthroscopy.

Most arthroscopies are performed on patients between the ages of 20 and 60, but patients younger than 10 years and older than 80 years have benefited from the procedure.

### The Orthopaedic Knee Evaluation

The orthopaedic knee evaluation consists of three components:

1. *A medical history*, in which Dr. McAllister gathers information about your general health and asks you about your symptoms.
2. *A physical examination* to assess your knee motion and stability, muscle strength and overall leg alignment.
3. *Imaging*: X-rays are used to evaluate the bones of your knee. Dr. McAllister may also arrange for you to have an MRI to provide more information about the soft tissues of your knee. An MRI does not use radiation and provides additional information not seen with x-rays.

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Dr. McAllister will review the results of your evaluation with you and discuss 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. Dr. McAllister will explain the potential risks and complications of knee arthroscopy, including those related to the surgery itself and those that can occur after your surgery.

## Preparing for Surgery

If you decide to have arthroscopy, you may be asked to have a complete physical with your family physician before surgery to assess your health and to rule out any conditions that could interfere with your surgery.

Before surgery, tell Dr. McAllister about any medications that you are taking. You will be informed which medications you should stop taking before surgery. Tests, such as blood samples or a cardiogram, may be ordered by Dr. McAllister to help plan your procedure.

## Your Arthroscopic Knee Surgery

Almost all arthroscopic knee surgery is done on an outpatient basis. Usually you will be asked to arrive at the surgery center two hours prior to your surgery. Do not eat or drink anything after midnight the night before your surgery. After arrival, you will be evaluated by a member of the anesthesia team. Arthroscopy is usually performed with both local and general anesthesia. Local anesthesia numbs your knee and general anesthesia puts you to sleep.

Dr. McAllister will make a few small incisions 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. Dr. McAllister will then insert the arthroscope to properly diagnose your problem, using the TV image to guide the arthroscope. If surgical treatment is needed, Dr. McAllister can use a variety of small surgical instruments (e.g., scissors, clamps, motorized shavers, etc.) through another small incision. This part of the procedure usually lasts 45 minutes to 1 1/2 hours.

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

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At the conclusion of your surgery, Dr. McAllister will close your incisions with a suture or paper tape and cover them with a bandage. You will be moved to the recovery room. Usually, you will be ready to go home in one or two hours. You should have someone with you to drive you home.

## Your Recovery at Home

Recovery from knee arthroscopy is much faster than recovery from traditional open knee surgery. Still, it is important to follow Dr. McAllister's instructions carefully after you return home.

*Swelling:* Keep your leg elevated as much as possible for the first few days after surgery. Apply ice as recommended by Dr. McAllister to relieve swelling and pain.

*Dressing Care:* You will leave the hospital with a dressing covering your knee. You may remove the dressing a few days after surgery. You may shower, but should avoid directing water at the incisions. Do not soak in a tub. Keep your incisions clean and dry.

Dr. McAllister will see you in the office a few days after surgery to check your progress, review the surgical findings, and begin your postoperative treatment program.

*Bearing Weight:* After most arthroscopic surgeries, you can walk unassisted but Dr. McAllister may advise you 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 discomfort subsides and you regain strength in your knee. Dr. McAllister may allow you to drive after you can walk comfortably without crutches.

*Medications:* Dr. McAllister will prescribe 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, and damage to blood vessels or nerves. These occur problems occur infrequently and are usually treatable.

## Rehabilitation Exercises

Dr. McAllister will likely recommend exercises to help rehabilitate your knee following surgery. Oftentimes this will require visiting with a physical therapist. Sometimes, exercises can be done on your own at home. [Click here for more information on home exercises.](#)

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## Warning Signs

Call Dr. McAllister's office 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. An intercollegiate or professional athlete often sustains the same injury as a weekend recreational athlete, but the potential for recovery may be improved by the over-development of knee muscles. 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 as long as they do not involve significant impact. Twisting maneuvers may have to be avoided for a longer period of 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.