

Explanation of Procedure and/or Diagnosis

The knee joint is made to withstand the forces of walking, running and jumping as well as allowing motion. The knee is basically a hinge joint made of bone, ligament, and cartilage.

The **anterior cruciate ligament or ACL** is attached to the femur bone and tibia bone. The major function of the ACL is to provide stability to the knee during cutting and jumping activities. An ACL tear is a major problem for an athlete who desires pivoting, cutting and changing direction as part of their athletic lifestyle. These functions are required for sports such as skiing, soccer, football, basketball, volleyball and racquet sports. Once the ACL is torn, the knee becomes unstable and there is a risk of repeat injury and over time possibly advanced degeneration of the joint (arthritis).

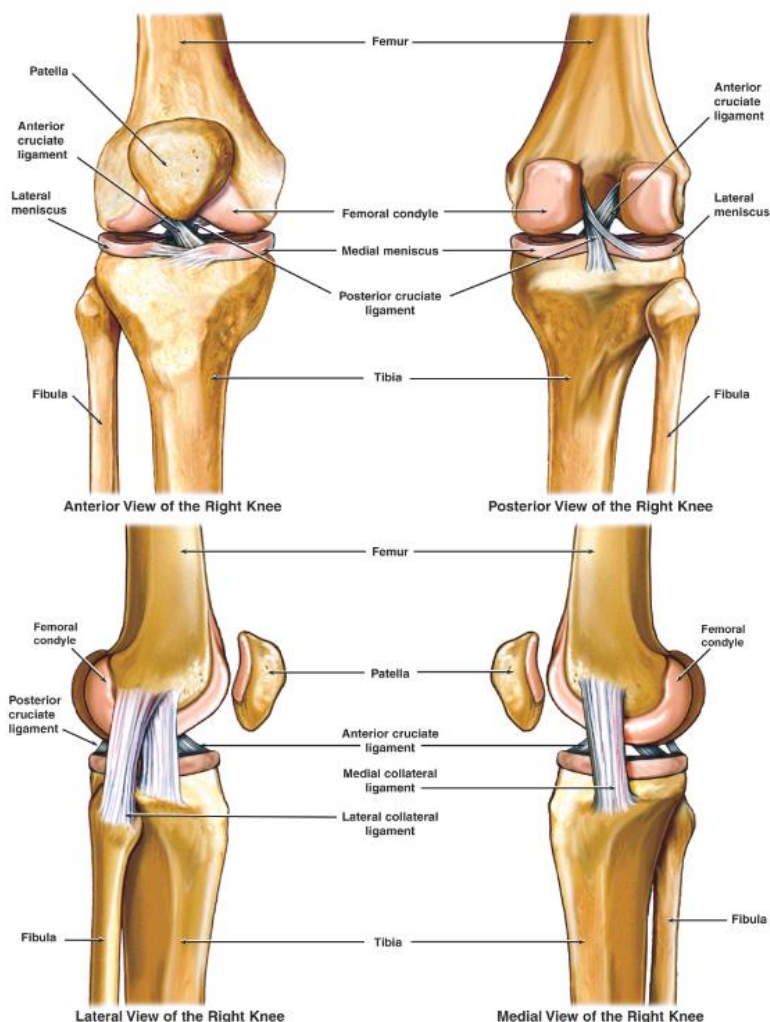
The **posterior cruciate ligament or PCL** is one of the most important ligaments of the knee, giving it stability. The PCL achieves this role by preventing excessive twisting, straightening of the knee (hyperextension) and backward movement of the tibia on the femur.

When these movements are excessive and beyond what the PCL can withstand, tearing to the PCL occurs. This condition is known as a PCL tear and may range from a small partial tear resulting in minimal pain, to a complete rupture of the PCL resulting in significant pain and disability.

The **medial collateral ligament or MCL** also provides stability to the knee from the medial (inner) aspect. The MCL achieves this role by preventing excessive twisting, and side to side (lateral) movements of the knee. When these movements are excessive and beyond what the ligament can withstand, tearing to the MCL occurs.

The **lateral collateral ligament or LCL** gives the knee lateral stability. The LCL achieves this role by preventing excessive twisting and side to side movements of the knee or when these movements are excessive and beyond what the ligament can withstand, tearing to the LCL occurs.

During multi-ligament reconstruction surgery, your ligaments are reconstructed using a graft taken from you, or donor tissue (allograft) may be utilized. Surgical reconstruction is usually performed arthroscopically. Tunnels are created in the thigh and tibia bone using a small drill to allow the grafts to be placed into the knee and to replace the torn ligaments. After the grafts are placed, your surgeon will utilize screws, washers, and other fixation devices to secure the grafts and hold the ligament in place until healing takes place.



Medical Illustration © 2012 Nucleus Medical Art, Inc.

Early treatment of multi-ligament injuries allows satisfactory repair or reconstruction of the ligaments resulting in several advantages:

- Improved function
- Early rehabilitation and return to sports
- Decreases knee joint instability
- Slows rapid progression of arthritis

Preparing for surgery

Pre-Operative Visit

The purposes of this visit are:

- To further help you understand your options
- To review the risks of surgery and all details of the procedure, including post-operative recovery and rehabilitation programs
- To review all logistical issues
- To provide prescription medication including:
 - Oxycodone, which is an excellent pain reliever that is a codeine analogue. You may take this medication as prescribed. Since we have been using the present protocol of local anesthesia, patients require much lower amounts of pain medications.
- To assure we have adequately screened you medically with respect to physical exam, blood and other tests
- To provide necessary crutches, knee braces, etc.

Anesthesia Options

- **Local with sedation:** This option is reserved for those individuals to have arthroscopy with meniscus care only.
- **Spinal/epidural:** Widely accepted, but rarely used for knee arthroscopy.
- **General:** Widely accepted and most commonly used for multi-ligament knee reconstruction.

All patients have a level of nervousness in the days prior to surgery. The best thing to do about all concerns is to talk with friends, family, and us. We have dealt with this many times and we want to make your experience as pleasant as we can. There are some important rules to follow:

- Do not eat or drink after midnight the night before surgery.
- Make sure you have someone to drop you off and pick you up from the surgical center. The staff will review for you the best times.
- Read all material given to you the night before surgery. Make sure you understand all logistics, options risks and benefits in full detail. If you have any questions, ask them. Remember, the key to an optimal result is information, comfort and confidence.

What to expect at surgery (this section copied from Patient Education – Knee Arthroscopy)

When surgery is complete, you will be in the recovery room and perhaps groggy or still somewhat sedated from the anesthesia. In this period, it is essential we:

- Minimize pain and nausea
- Ice your knee to minimize swelling and pain.
- When you are feeling good enough to go home, you will be discharged. The nurse will review all issues including exercises, icing protocols, medication, and follow-up appointments.

Once you are home our goals remain much the same.

Care After Surgery

Once surgery has been completed, a physical therapy program will be started immediately. Full rehabilitation is a long process that requires hard work and attention to detail, however, this is necessary to help you regain function of the knee. The program is designed to first regain motion of the knee, then to regain strength and coordination of the leg, hip and trunk, and finally the therapists will work with you to allow you to return to the activities that you enjoy.

Medications

Our goal is to minimize pain with this procedure. Take your pain medication as prescribed. As most pain subsides, you can just take two tablets of Tylenol every four to six hours (maximum of 3000mg in 24 hours).

Possible Complications and Instructions

It is our responsibility to make sure you have a realistic understanding of the risks and potential complications of surgery. They are the following:

- Risk of Anesthesia- As a general rule all anesthesia options are safe and effective. Regardless of the anesthesia option selected, complication rates are generally low. The most important issue is making sure you are healthy with no underlying medical conditions. In some situations you will be asked to see your general physician for a “preoperative clearance” in order to ensure that you are medically fit for surgery.
- Infection - To minimize this risk potential you will receive pre-operative antibiotics.
- Chronic stiffness
- Re-operation
- Persistent subtle instability
- Nerve and blood vessel injury
- Deep vein thrombosis or blood clots
- Persistence of pain – this is typically due to:
 - 1) Degenerative articular cartilage changes or arthritis that can cause persistent pain, soreness and swelling.
 - 2) Osteonecrosis or avascular necrosis of bone.
 - 3) Other causes of pain in extremities:
 - a) Loose bodies
 - b) Gout
 - c) Fibromyalgia
 - d) Complex regional pain syndrome

Please contact our office immediately if you feel you are experiencing any of these complications.

Questions

The CORE Institute is dedicated to your outcome. If any questions or concerns arise, please call The CORE Institute at 1.866.974.2673.