

Anterior Cruciate Ligament Injury (ACL)

Definition

The anterior cruciate ligament injury is the most common knee ligament injury requiring surgery. Excessive lateral rotation, sudden deceleration and hyperextension movements may cause the ACL to strain or tear. Tears almost always require surgery. The most common method for repairing ACL injuries is arthroscopic surgery. Other common injuries accompanying ACL tears are meniscus, medial collateral ligament, and knee cartilage tears.

Anatomy:

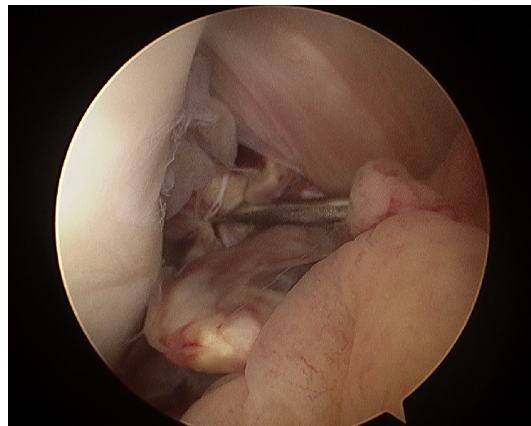
The anterior cruciate ligament (ACL) is one of the four major ligaments of the human knee. The ACL originates from deep within the notch of the distal femur. Its proximal fibers fan out along the medial wall of the lateral femoral condyle. There are two bundles of the ACL—the anteromedial and the posterolateral, named according to where the bundles insert into the tibial plateau. The ACL attaches in front of the intercondyloid eminence of the tibia, being blended with the anterior horn of the lateral meniscus. These attachments allow it to resist anterior translation of the tibia, in relation to the femur.

Symptoms:

A patient with an acute tear of the ACL may have felt a pop. The knee often swells over a period of. It will be stiff, painful and be difficult to move. If the patient is not careful with walking the knee may feel unstable and buckle. The symptoms will improve over a week as the swelling subsides but the knee will likely remain unstable particularly with more aggressive activity.

Diagnosis:

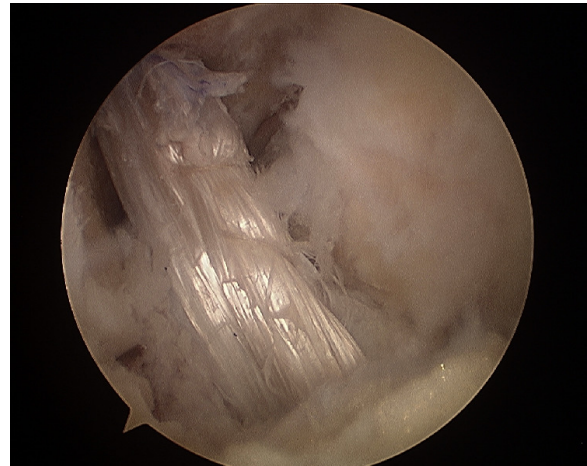
Dr. Wertz will examine your knee to determine its stability He will assess the stability of the other ligaments and determine if the meniscus (cartilage) is torn. X-rays will be taken to assess bone injury. Often an MRI is used to help diagnose the ACL tear and concomitant injuries.



Treatment:

Initially, utilize rest, ice, compression, elevation. Crutches may be necessary for support. Early motion to prevent stiffness is important. ACL reconstructive surgery can utilize several different tendons and grafts in place of the torn ACL including the hamstring, patellar tendon, semitendinosus tendon, gracilis tendon and quadriceps tendon. There is great controversy as to which source produces the strongest, most stable ACL replacement. Many orthopedic surgeons prefer to use tendons and grafts from cadavers.

Dr. Wertz prefers to use tendons directly from the patient.



The surgery is performed with arthroscopic assistance and is minimally invasive. Patients are not required to stay in the hospital.

Rehabilitation:

Rehabilitation with a physical therapist is initiated immediately after surgery. Dr. Wertz will monitor a patient's progress with doctor visits at 10 days, 3 weeks, 6 weeks, 3 months, 6 months and one year after surgery.

Patients can resume biking, hiking and low impact exercises after two to 3 weeks. Patients can return to running, jumping and pivoting sports after 6 months.