

About Anterior Cruciate Ligament Tears

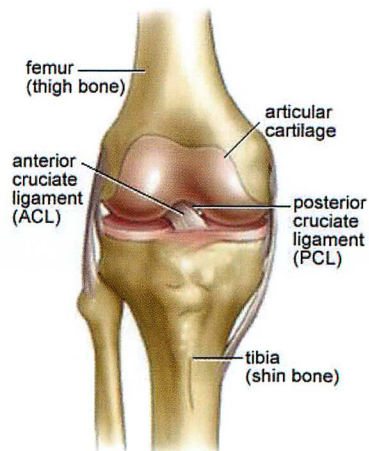
Knee Anatomy

The anterior cruciate ligament (ACL) is located in the middle of the knee joint. It runs from the back of the thigh bone (femur) to the front of the shin bone (tibia).

Function of the ACL

Ligaments are tough bands of tissue that connect two bones to each other. They are responsible for controlling or "checking" certain motions that occur between the bones.

The ACL is the primary controller of how far forward the tibia moves underneath the femur (anterior translation of the tibia). It is the first ligament to become tightened as the leg is straightened.



How do ACL tears occur?

ACL tears occur with sudden deceleration, excessive hyperextension of the knee, or pivoting in place. Sports related injuries are the most common cause of ACL tears.

- Noncontact injury: sports that require the foot to be planted and the body to change direction rapidly (i.e. basketball)
- Contact injury: blow to the outside of the knee when the foot is planted on the ground (i.e. football)

Symptoms

Common symptoms of ACL tears include the following:

- Mechanism of injury involving sudden deceleration, excessive hyperextension, or pivoting in place
- Many patients report hearing and/or feeling a "pop"
- Swelling occurs within a short time which indicates blood in the joint due to torn blood vessels in the ACL (within 2 hours as opposed to the following day which would indicate the normal inflammatory response to injury)
- Feeling like the knee is unstable and "giving out"

How Physical Therapy Can Help

Physical Therapy can help patients with ACL tears in a number of ways, both before and after surgery to reconstruct the ligament.

- Modalities (heat/ice, electric stimulation, ultrasound) to decrease pain/inflammation and promote healing
- Therapeutic exercises to strengthen hip and knee muscles in order to increase dynamic stability of the knee (strengthening muscles such as the hamstrings that have the same job as the ACL)
- Manual techniques to improve knee range of motion (ROM)
- Personalized home exercise program to maintain strength/flexibility outside of therapy

With physical therapy, many patients gain relief from their ACL injury and are able to return to full activity with improved strength and flexibility.

