

What is an ACL tear?

Anterior cruciate ligament (ACL) tears are some of the most common forms of injuries encountered by athletes. The ACL is one of four ligaments that connect the thighbone (femur) to the shin bone (tibia). These ligaments are what give the knee and leg stability and allow the joint to move easily. When torn the knee joint is less stable and may buckle or give way while walking.

While the majority of people who experience an ACL tear are athletes, this injury can happen to anyone. Females are more susceptible to this than males, due to variable conditioning methods and anatomic differences. Injury to the ACL may occur during recreational or sport activities, with maneuvers such as a fast turn with a planted foot when running, or being tackled from behind in football or hockey. There are different levels of ACL tears, and some require surgery to treat. Without proper **treatment**, other parts of the knee can become injured as well, causing further problems down the road.

Symptoms

Depending on the severity of the ACL tear, symptoms can change. Most people who have an ACL tear report hearing a loud pop when the tear occurs. They also feel the sensation of the knee giving out from underneath them.

While every person is different and not everyone will experience all of the same symptoms when a tear occurs, the following are common ACL tear symptoms.:

- Swelling in the knee
- Pain on the outside or back of the knee
- Restricted mobility in the knee
- The feeling of instability when standing on the involved leg

ACL tear symptoms may be confused with those of other sports injuries, such as a tear in the meniscus, which often goes along with an ACL tear. Generally, people with a tear are in so much pain that they stop all activity.

Causes

There are many causes of ACL tears. While most causes are associated with some sort of sports trauma, there are other ways a person can tear the ACL including:

- **Intense impacts or collisions** – This happens in sports when an athlete is struck from behind. When this occurs, the knee moves in an abnormal direction, making it easy for the ACL to tear.

- **A rapid change in direction** – When an athlete or other person is running and quickly makes a turn to avoid a tackle or to change directions with a planted foot, the person risks tearing the ligaments. This is because the ligaments are suddenly jolted in an abnormal direction and the strain can cause them to snap.
- **Suddenly stopping** – If an athlete comes to a fast stop, the ligament wants to continue to help the body move. This puts an unusual type of strain on the ligament, often resulting in an injury.
- **Landing wrong from a jump** – When landing a jump, the ligament experiences the same sort of sensation as it does when a person stops suddenly. If a person lands at an awkward angle, the ligament under tension may tear.

Types

ACL tears can be divided into three gradation levels depending on their severity:

- **Grade 1** – This is the mildest form of an ACL tear. A person who has a grade 1 tear is still able to walk and maintain stability of the knee. While the ligament is stretched, it is stable and functional. Treatment focuses on nonoperative treatment, including physiotherapy
- **Grade 2** – This is usually referred to as a partial tear. When a grade 2 ACL tear occurs, the ligament is stretched to a point where it becomes loose, but not completely unstable. A partial tear of the ACL may heal and respond to nonoperative treatment.
- **Grade 3** – This is the most severe form of tear and results in a complete tear of the ligament. When this happens, the knee is unstable. Unfortunately, this degree of injury usually requires surgery.

Surgery

In ACL reconstructive surgery, the torn ligament is replaced with either a tendon from another part of your body, such as the bone - patella tendon – bone autograft, or a donated cadaver tendon, such as the Achilles tendon allograft. The procedure is performed arthroscopically through small incisions around the knee joint, as an outpatient.

ACL reconstruction is usually recommended if:

- An athlete that wants to continue in a sport that requires jumping, cutting or pivoting
- A knee injury has a meniscus tear or another ligament injury, such as the MCL
- The ACL tear is causing the knee to buckle during daily activities

Successful ACL reconstruction, along with a structured rehabilitation program can restore knee function and stability. Within the first couple of weeks following surgery, you should gain the motion and strength in your knee. In the following weeks and months, the new ACL graft will heal to the bone and provide stability. Recovery in a structured rehabilitation program takes about 6-9 months. It may take 9-12 months to return to sports.