

Knee Anterior Cruciate Ligament (ACL) Tear

The anterior cruciate ligament (ACL) is one of the four major ligaments in the knee. Ligaments attach bones to bones, and the ACL is found in the center of the knee. It is designed to stabilize the knee by preventing the shin bone from sliding forward relative to the thighbone and limiting the twisting or pivoting motions of the knee.

ACL injuries can occur by direct contact or by non-contact (when an athlete is running or jumping and then suddenly slows and changes direction or twists). This injury can occur at any age, but younger kids are more likely to break a bone before tearing this ligament. Girls appear to be at higher risk than boys for tearing the ACL.

Symptoms

Symptoms of an ACL tear include:

- Feeling or hearing a "pop" in the knee (at the time of injury)
- Initial sharp pain that resolves over a month
- Significant swelling within the first few hours after injury
- Unstable knee with a sense that it will "give out"

Diagnosis

A physical exam of the knee will often diagnose an ACL tear. X-rays should be done to rule out any fractures. An MRI should be done to confirm the exam findings, and to evaluate associated injuries such as meniscus tears.

Treatment

Treatment is an initial period of ice and compression to reduce swelling and pain. Crutches and a brace can be protective during this period, but it is important to work on knee motion. Once knee motions has been restored and the swelling is gone, it is safe to undergo surgery to reconstruct (or replace) the ACL.

The surgery to replace this ligament is followed by more bracing and about six months of physical therapy. The young athlete can then return to sports. Most athletes will not feel 100 percent for at least a year from the surgery date.