

Anterior cruciate ligament (ACL) injury

Definition

An anterior cruciate ligament injury is the over-stretching or tearing of the anterior cruciate ligament (ACL) in the knee. A tear may be partial or complete.

Alternative Names

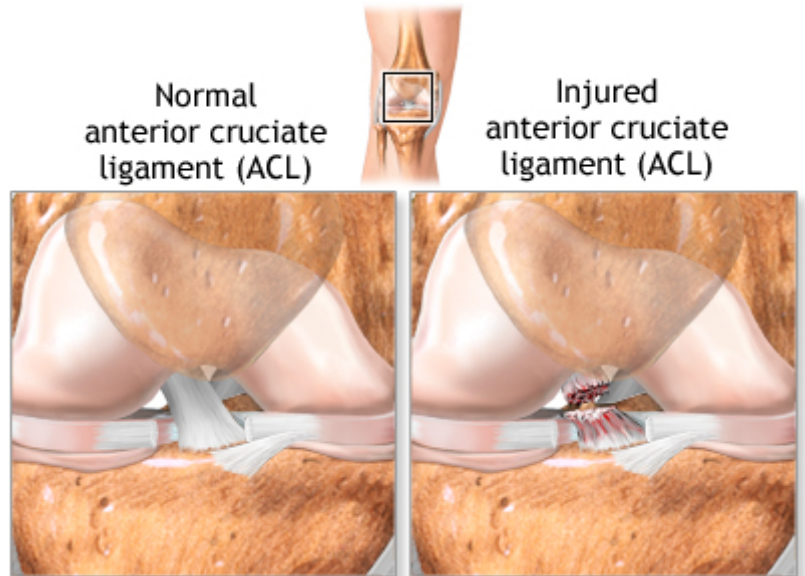
Cruciate ligament injury - anterior;
ACL tear; Knee injury - anterior
cruciate ligament (ACL)

Considerations

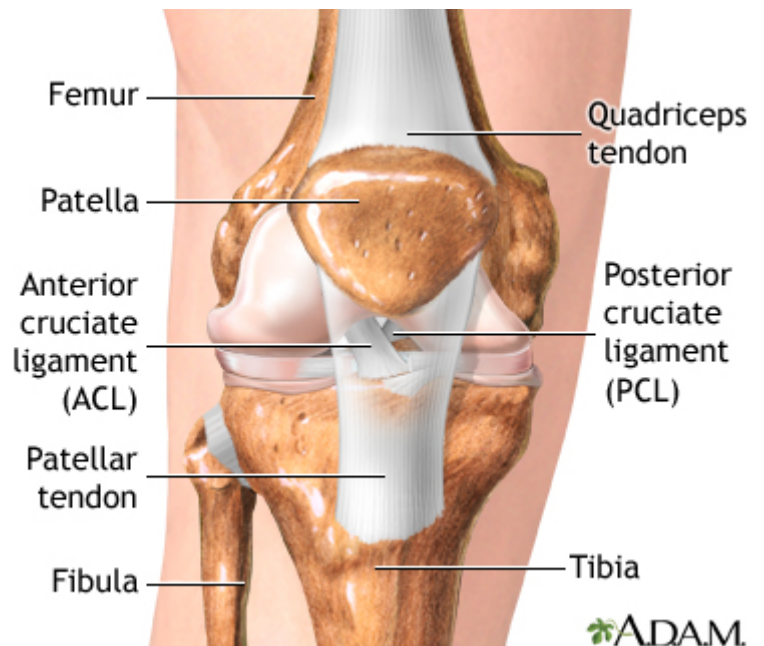
The knee joint is located where the end of the thigh bone (femur) meets the top of the shin bone (tibia).

Four main ligaments connect these two bones:

- Medial collateral ligament (MCL) runs along the inside of the knee. It prevents the knee from bending in.
- Lateral collateral ligament (LCL) runs along the outside of the knee. It prevents the knee from bending out.
- Anterior cruciate ligament (ACL) is in the middle of the knee. It prevents the shin bone from sliding out in front of the thigh bone.
- Posterior cruciate ligament (PCL) works with the ACL. It prevents the shin bone from sliding backwards under the femur.



ADAM.



ADAM.

Women are more likely to have an ACL tear than men.

Causes

An ACL injury can occur if you:

- Get hit very hard on the side of your knee, such as during a football tackle
- Overextending your knee joint
- Quickly stop moving and change direction while running, landing from a jump, or turning

Basketball, football, soccer, and skiing are common sports linked to ACL tears.

ACL injuries often occur with other injuries. For example, an ACL tear often occurs along with tears to the MCL and the shock-absorbing cartilage in the knee (meniscus).

Most ACL tears occur in the middle of the ligament, or the ligament is pulled off the thigh bone. These injuries form a gap between the torn edges, and do not heal on their own.

Symptoms

Early symptoms:

- A "popping" sound at the time of injury
- Knee swelling within 6 hours of injury
- Pain, especially when you try to put weight on the injured leg
- Difficulty in continuing with your sport

Those who have only a mild injury may notice that the knee feels unstable or seems to "give way" when using it.

First Aid

See your health care provider if you think you have an ACL injury. Do not play sports or other activities until you have seen a provider and have been treated.

Your provider may send you for an MRI of the knee. This can confirm the diagnosis. It may also show other knee injuries.

First aid for an ACL injury may include:

- Raising your leg above the level of the heart
- Putting ice on the knee
- Pain relievers, such as nonsteroidal anti-inflammatory drugs (such as ibuprofen)

You also may need:

- Crutches to walk until the swelling and pain get better
- Brace to give your knee some stability
- Physical therapy to help improve joint motion and leg strength
- Surgery to rebuild the ACL

Some people can live and function normally with a torn ACL. However, most people complain that their knee is unstable and may "give out" with physical activity. Unrepaired ACL tears can lead to further knee damage. You are also less likely to return to the same level of sports without the ACL.

Do Not

- Do NOT move your knee if you have had a serious injury.
- Use a splint to keep the knee straight until you see a doctor.
- Do NOT return to play or other activities until you have been treated.

When to Contact a Medical Professional

Call your provider right away if you have a serious knee injury.

Get immediate medical attention if the foot is cool and blue after a knee injury. This means that the knee joint may be dislocated, and blood vessels to the foot may be injured. This is a medical emergency.

Prevention

Use proper techniques when playing sports or exercising. Some college sports programs teach athletes how to reduce stress placed on the ACL. This involves a series of warm up exercises and jumping drills.

The use of knee braces during vigorous athletic activity (such as football) is controversial. It has not been shown to reduce the number of knee injuries, but not specifically ACL injuries.

References

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