

Reconstruction of the anterior cruciate ligament.

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Opinion

ACL reconstruction is surgery to repair a torn anterior cruciate ligament (KROO-she-ate) — a key ligament in the knee. ACL injuries are most common in sports like soccer, football, basketball, and volleyball, which require rapid pauses and changes in direction. Ligaments are strong tissue bands that connect one bone to another. The torn ligament is removed and replaced with a strip of tissue that usually connects muscle to bone during ACL restoration (tendon). The graft tendon comes from a different area of your knee or a deceased donor. ACL reconstruction is an outpatient operation that is performed by a doctor who specialises in bone and joint surgery (orthopedic surgeon).

The ACL connects your thighbone to your shinbone and helps maintain your knee joint. It is one of two ligaments that cross the centre of your knee. The majority of ACL injuries occur as a result of sports or fitness activities that place stress on the knee:

- i. Abruptly slowing down and altering course (cutting)
- ii. Pivoting while keeping your foot firmly on the ground
- iii. Landing improperly after a jump
- iv. Abruptly halting
- v. Getting a straight hit on the knee

People, who are relatively inactive, engage in moderate exercise and recreational activities, or play sports that place less stress on the knees may benefit from physical therapy to rehabilitate an ACL injury.

The ACL is a ligament that connects your thighbone to your shinbone and aids in the maintenance of your knee joint. It's one of two ligaments that cross your knee in the middle. ACL injuries are most commonly caused by sports or fitness activities that put stress on the knee: unexpectedly slowing down and changing direction (cutting). Pivoting while keeping your foot firmly planted on the ground, landing improperly after a leap that comes to a sudden halt. Taking a direct strike to the knee. Physical treatment to recover an ACL injury may be beneficial for people who are generally inactive, engage in moderate exercise and recreational activities, or play sports that put less stress on the knees.

You'll probably need to go to physical therapy for a few weeks before your surgery. Prior to surgery, the goal is to minimise pain and swelling, restore complete range of motion in your knee, and strengthen muscles. People who have a stiff, swollen knee before surgery may not be able to regain complete range of motion afterward. You'll be able to go home the same day after your ACL restoration because it's an outpatient treatment. Make arrangements to have someone drive you home. ACL reconstruction is usually done under general anaesthesia, so

you'll be completely unconscious during the procedure. Small incisions are used to hold a thin, tube-like video camera and others to provide surgical instruments access to the joint space during ACL restoration.

Your injured ligament will be removed and replaced with a tendon segment by your surgeon. A graft is a piece of replacement tissue that comes from another portion of your knee or a tendon from a deceased donor. To correctly position the graft, your surgeon will drill sockets or tunnels into your thighbone and shinbone, which will subsequently be fastened to your bones with screws or other devices. The graft will act as a framework for the growth of new ligament tissue.

For various reasons, many surgeons have a favoured approach. A patellar tendon and a hamstring graft are nearly identical in terms of strength. There is no one-size-fits-all solution, at least not one that has been established in orthopaedic research. Allograft tissue has a lower strength than the other grafts, although both the patellar tendon and hamstring tendon grafts are stronger than a native ACL. Patient selection, surgical technique, postoperative rehabilitation, and related secondary restraint ligamentous instability all play a role in the success of anterior cruciate ligament replacement. Graft failure can also be caused by mistakes in graft selection, tunnel placement, tensioning, or fixation procedures.

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