

Anterior cruciate ligament



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A Complete Analysis of the Anterior Cruciate Ligament (ACL) The anterior cruciate ligament (ACL) is the major stabilizing ligament of the knee. Located in the center of the knee joint, the ACL runs from the femur (thigh bone) to the tibia (shin bone), through the center of the knee. The primary function of the ACL is to prevent a buckling type of instability to the knee.

For people who are active in sports, the ACL is a particularly important ligament, and can often be problematic in that the ligament can easily be torn, and will then require treatment. The tearing of the ACL usually occurs due to a sudden direction change, or when a deceleration force crosses the knee. " The patient often feels or hears a popping sensation, has the rapid onset of swelling, and develops a buckling sensation in the knee when attempting to change direction." (The Center for Orthopaedics & Sports Medicine, 2003).

In order to properly diagnose an ACL injury, there must be a thorough examination, which would include: determining the mechanism of injury, examining the knee, determining the presence or absence of blood within the joint, and performing diagnostic studies. Once a tear of the ACL has been confirmed through clinical evaluation and MRI (magnetic resonance imaging), the unstable knee can now be repaired. " This is only possible if the ACL is of good quality and if the ligament can be passed posterior to the PCL, both of which are determined in surgery. acutely (recently) torn ligaments are typically of better quality and therefore have a greater chance of being repaired as opposed to the chronically torn ligaments." (Stone, Walgenbach, and Mullin, n. d.).

There are many methods which are used to reconstruct an ACL, the most common one of which in the past some have referred to as the 'Gold

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Standard'. It is with this particular technique that a segment of patellar tendon with attached bone blocks at each end is placed in the same position as the original ACL, and then fastened securely in place with two 'interference fit' screws. This is a strong and stable form of reconstruction, and " allows early, safe, secure motion of the knee, and allows the rehabilitation process to proceed rapidly without fear of damaging the graft or impairing the healing process, culminating in a stable, fully-healed knee at approximately 6 months after surgery." (Orthopaedic Associates of Portland).

An ACL reconstruction typically takes anywhere from 2-2 hours, and is really well-suited to be an outpatient procedure, in that so much of the procedure can now be done arthroscopically, without big incisions and excessive trauma to the tissues. General anesthesia is the most often recommended and used form of anesthesia in this type of procedure, and with this, a quick acting agent called 'Propofol' is given by IV in the OR, which almost immediately will put the patient to sleep.

It usually takes a patient about 90-120 minutes in the Recovery Room, and after this most times they will then be able to sit up, eat some light food, use the bathroom (with crutches), and feel ready to go home. " By one week post-op, most patients are able to walk quite easily with crutches, can lift their leg without assistance from a position lying on their back, and by the end of the second week post-op can walk without crutches and without any need from the leg immobilizer." (Orthopaedic Associates of Portland).

Works Cited

The Center for Orthopaedic & Sports Medicine.

" Arthroscopic ACL (Surgery) Reconstruction". Mar. 4, 2003. 14 Feb. 2006

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<http://www.arthroscopy.com/sp05018.htm>

Orthopaedic Associates of Portland. "The ACL Page".

Orthopaedic Associates of Portland. 2001. 14 Feb. 2006 http://www.orthoassociates.com/ACL_Page.htm

Stone, Kevin R., M. D., Walgenbach, Ann W., RNNP, &

Mullin, Michael J., ATC, PTA. "Anterior Cruciate Ligament Repair". The Stone Clinic. n. d. 15 Feb. 2006 <http://www.stoneclinic.com/aclrep.htm>