



Specialist Centre for Orthopaedic Surgery

Anterior Cruciate Ligament Injuries

Patient Information Sheet

INTRODUCTION

The Anterior Cruciate Ligament (ACL) is a 38mm long band of fibrous tissue that connects the femur (thigh bone) and the tibia (shin bone). It runs from front of the tibia to the back of the femur through the centre of the joint. It prevents the tibia moving forward on the femur during twisting type activities. It provides stability to the knee. It typically is not functioning during normal daily activities such as walking but when the knee comes under load the ACL comes into play. The ACL is essential in controlling forces across the knee in twisting activities such as stepping, pivoting and landing from a height.

ACL INJURY

The ACL is commonly injured in sporting situations where a sudden change of direction is associated with a sudden deceleration such as stepping or pivoting whilst a contact is being made. The knee gives way as the lower limb foot is fixed, but the momentum of the body continues over the knee. A pop or snap is felt in the knee with severe pain. The knee often takes on an extreme position at the time of the injury. This usually corrects spontaneously. Typically the patient is unable to continue with the activity. The knee swells shortly after and peaks at 24hours. The knee continues to ache and feels unstable. An ominous sign is lack of swelling in the knee and marked pain and bruising on the inside of the calf indicating major ligament disruption.

It is difficult to weight bear initially but as time goes on and pain subsides walking becomes possible and the knee settles down. As time goes the patient often feels the knee is unstable if they return to twisting type activities.



Anterior Cruciate Ligament rupture



Normal Anterior Cruciate Ligament

TREATMENT

The goal of treatment of an injured knee is to return to normal activities and prevent further damage to the chondral surfaces of the bone and the meniscal cartilages (the shock absorbers of the knee). If the patient's knee continues to be unstable, further damage will occur to the articular cartilage and menisci, which will lead to early onset osteoarthritis (wear and tear arthritis).

Treatment may be operative or non-operative. This often depends on the level of activity the patient wishes to pursue. The knee may become stable through a course of physiotherapy aimed at using the muscles about the knee to stabilise the knee. If the patient wishes to return to a high level of physical activity, then surgery may become necessary

If there is internal derangement to the knee, such as a meniscal tear, which needs repair, or other ligamentous injury requiring repair, then an early reconstruction is usually necessary.

Surgical repair (Anterior Cruciate Ligament Repair) is a serious undertaking with a long rehabilitation program. Typically it takes 6-9 months before a return to sport can be anticipated. Long term physiotherapy and rehabilitation exercises will be required in order for a good outcome to be achieved.

Antero-Lateral Ligament Reconstruction

Once the ACL has been repaired the “stability” of your knee joint will be tested. If your knee is mostly stable, but continues to have a positive pivot shift coming into extension (straightening the knee) then your knee will be reinforced with an ALL reconstruction. This involves another hamstring graft being taken (at the same site as the ACL) and the lateral (outside) part of the knee is reinforced.

