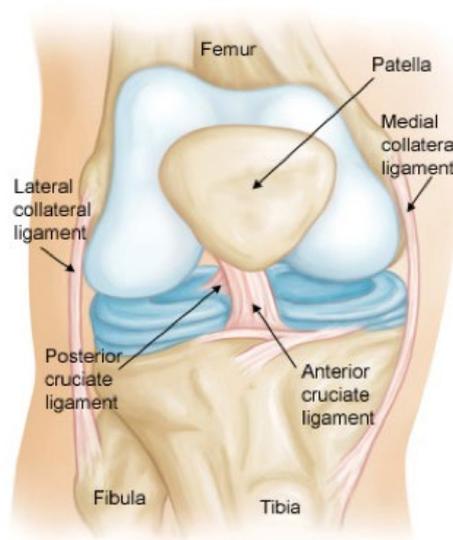


ACL RECONSTRUCTION - PATIENT INFORMATION

✚ OVERVIEW

The ACL or Anterior Cruciate Ligament is one of the main stabilizing ligaments of the knee joint. It is commonly injured during high demand, pivoting sports. Injuries may result from a rapid change in motion, landing from a jump incorrectly or from collisions such as a tackle. While a functioning anterior cruciate ligament is not essential for day to day life, generally the knee will not feel 'normal' and it will be difficult to return to high level pivoting activities without a reconstruction.

✚ ANATOMY



The four main ligaments that stabilize the knee joint are shown in this diagram. They are the ACL, PCL, MCL and LCL. The ACL is found inside the joint (as opposed to the LCL and MCL which are outside the joint) and passes diagonally from the tibia (shin bone) to the femur (thigh bone). It prevents the tibia from moving forwards on the femur and also controls rotation of the joint.

ACL injuries can range from a strain, where the ligament remains intact but is stretched, to a complete rupture. Complete ruptures are often associated with other injuries inside the knee such as meniscal tears, cartilage injuries or other ligament ruptures.

✚ SYMPTOMS

When you injure your anterior cruciate ligament typically the knee will be acutely **painful**. Often you will hear or feel a '**pop**' in the knee. You may initially be unable to weight bear. The knee often becomes **swollen** over minutes to hours. Your knee will generally feel unstable.

✚ MY ASSESSMENT AND THE TREATMENT OPTIONS

During your assessment I will take a history and examine your knee. The examination revolves around confirming that the ACL is no longer functioning (with special tests) and excluding other injuries to the knee that are commonly associated with an ACL rupture such as meniscal tears or other ligament injuries.

I will arrange some plain X-rays of your knee if these have not already been done. The X-rays are aimed at excluding fractures around the knee and looking for signs of arthritis in the knee (which may alter management).

I will also arrange a MRI of the knee. This again is aimed at confirming the ACL rupture and to look for other signs of injury inside the knee.

Once a ligament injury is confirmed we will discuss your management options. Non surgical management with physiotherapy and bracing will be recommended for:

1. patients with loss of full extension of the knee (operating in this scenario can prolong rehabilitation and surgery will only be undertaken once full extension is regained)
2. patients with low demands
3. older patients
4. patients with arthritis changes in the knee
5. obese patients or those with significant medical comorbidities
6. younger patients who don't wish to return to pivoting sports

Unless there is severe damage within the knee joint a period of pre-operative physiotherapy will be recommended for all patients. Operating too early may be associated with significant scarring within the knee that may lead to loss of motion and a longer recovery.

✚ SURGICAL MANAGEMENT

The anterior cruciate ligament itself cannot be stitched back together. This was tried in the past with poor outcomes. The reason is twofold. Firstly the forces that are put through the ligament overcome the breaking strain of the suture material. Secondly the ligament itself has a poor blood supply and does not heal reliably. For this reason a reconstruction – where a new ligament is fashioned – rather than a repair, is undertaken.

I personally use a **hamstrings** reconstruction. In the past a patella (knee cap) tendon reconstruction was common. Because of a higher incidence of knee pain after the surgery these are done routinely by only about 5% of orthopaedic surgeons in Australia.

✚ THE SURGERY

You will be admitted to the hospital on the morning of your operation. A cannula or drip will be placed in your arm or hand. You will then be taken around to the theatre where I will see you before your surgery and put a mark on the leg that is to be operated on. If you could please give me the green form with your chosen contact person's details it would be appreciated.

This operation is usually done under a general anaesthetic. You will meet the anaesthetist and the risks and benefits of the anaesthetic will be discussed. You will then be taken into the operating room. I use a nerve block (saphenous nerve) to help control your pain after the surgery. This is generally put in once you are asleep.

The hamstrings reconstruction operation involves making an approximately 3-4cm incision over the upper shin bone. Through this incision, two of the hamstrings tendons are retrieved. The tendons are then passed through a special button device that is used to secure them to the femur. An arthroscopy (keyhole inspection) of the joint is then performed via two small (8mm) incisions and any associated injuries in the knee are taken care of. Through these two portals the tunnels for the new ligament are prepared. Once the shin bone and thigh bone tunnels are drilled, the graft is passed. It is generally secured on the thigh bone with a small button device and on the shin bone side with a screw. Occasionally (especially in bigger patients) I will further secure the graft on the shin bone side with a staple.

The knee is then washed out thoroughly, the incisions are closed and the dressings are applied. You will then be taken to recovery to wake up.

I will come and see you the afternoon after your operation to discuss the surgical findings. The physio will get you up and about either that afternoon or the following morning. You will generally stay in hospital for one night after the reconstruction.

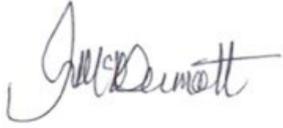
I prefer you to use crutches for support when walking for the first week or two to prevent falls. Once you are confident and stable on your leg, these can be discarded. You will not need a brace for a standard reconstruction.

The morning after your operation, provided your pain is well controlled with tablets (see POST-OP PAIN CONTROL document) and you are safely walking you can go home. I will see you to check the wounds about 10 days after the surgery.

Rehabilitation with a physiotherapist is essential for recovery from an ACL reconstruction. You should book in to see your physio about 5 days after the operation and see them once or twice a week for a minimum of 3 months. For my physio protocol please see the document 'ACL RECONSTRUCTION REHABILITATION' on this website.

This information is not exhaustive and if you have further questions I would be happy to answer them.

Regards,



Luke McDermott.