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ANTERIOR CRUCIATE LIGAMENT (ACL) RECONSTRUCTION

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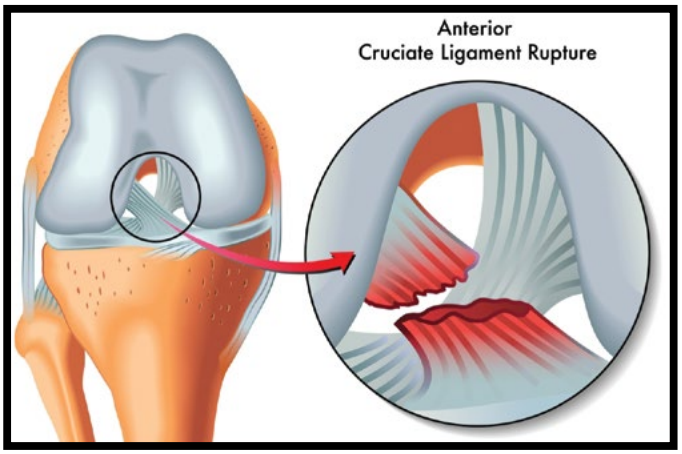
CLINICAL DIAGNOSIS

ACL Rupture (tear) is a common injury. It usually occurs in running ball sports – soccer, football, rugby, netball, and basketball, as well as skiing. The classic history usually involves a pivoting or deceleration manoeuvre, there is collapse to the ground and sometimes a sound is heard or a pop is felt. Swelling occurs characteristically within a few hours. This means there is bleeding into the joint. After this injury the player almost always has to be carried off the court or sporting ground. It is common to end up in an Emergency Department and have an x-ray and be told "there is no fracture".

The knee often improves within a couple of weeks. Return to sport may be associated with repeated instability episodes.



INVESTIGATION

Good history taking and examination should diagnose the ACL tear. An MRI scan is commonly ordered to confirm the diagnosis and assess other damage, e.g. to the menisci (cartilages).

WHO CAN BENEFIT?

Not everyone needs an ACL. The ACL is needed for side stepping, pivoting, and landing from a jump. For all younger active patients surgery should be considered and is usually recommended. This is to restore stability to the knee and prevent injury to the menisci which can lead to degeneration of the joint. Older patients with an ACL tear may choose to avoid surgery, but in that case should not return to pivoting ball sports.

Running, cycling, swimming, driving, and working, are usually possible without an ACL.

SURGERY

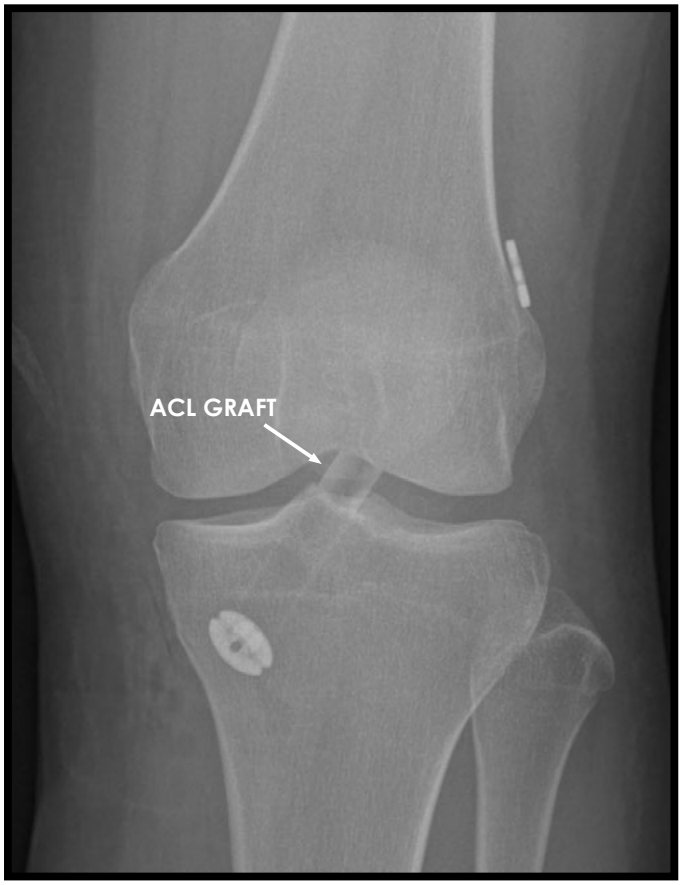
An ACL reconstruction is done to restore stability to the knee joint. Important issues include graft choice and placement, fixation, mobilisation, and pain relief. Our ACL surgeons are Fellowship trained with many years of experience in ACL reconstruction and use proven methods.

GRAFT CHOICE

We usually use hamstring tendons for the ACL graft. This graft is the most commonly used graft in the world and is very strong. We sometimes do patellar tendon or quadriceps tendon grafts. We rarely use the LARS ligament except in the knee with multiple ligament injuries.

HOW IS THE SURGERY DONE?

After the anaesthetic, the knee is examined clinically and with the telescope (arthroscope). The torn ACL remnant is removed and cartilage tears dealt with. A graft is harvested and then inserted through drill holes re-creating the normal position of the ACL. The graft is held securely with screws or special buttons.



PROVEN TECHNIQUES

Our preference is to avoid techniques which make the operation more complicated and sometimes less successful such as "double bundles", or ACL surgery with LARS ligament alone. Anterolateral ligament (ALL) repairs are sometimes needed in revision ACL Reconstruction, very loose knees and in some younger kids and teenagers.

POST OPERATION REHABILITATION

ACL reconstruction can be done as a day case. In our hands many patients go home the same day but some stay overnight especially if the operating list is in the afternoon.

Early physiotherapy and accelerated rehabilitation are associated with better outcomes, and we rarely recommend a post-op brace. Our anaesthetists help achieve minimal post-op pain and the techniques used by our surgeons also streamline the operation and allow quick surgery with small incisions and faster recovery.

Rehabilitation involves seeing a physiotherapist. Results are optimal with: early regaining of normal gait pattern, full weight bearing; moving onto functional activities such as cycling and swimming within the first 6 weeks, and jogging within two to four months. Weight training is allowed after several months.

RETURN TO SPORT

You may return to sport as early as 9 months. Depending on rehabilitation and testing it may be best to wait until 12months. Return to sport is not purely time based but is better judged on passing certain tests (such as hop and strength tests) which prove fitness and co-ordination.

WHAT ARE THE RISKS?

All surgery has a risk of complications. ACL reconstruction is a very successful operation with a low complication and high success rate. It is possible to have numbness over the outside aspect of the knee. Stiffness of the knee and blood clots are possible but usually avoided by accelerated rehabilitation and early weight bearing. Infection is always possible but is rare. Graft re-rupture is possible when returning to high level sports for years into the future, but tends to approximate the risk of rupture of the normal ACL of the other knee. Overall the re-rupture rate is relatively rare in our hands.