



ACL RECONSTRUCTION PATIENT INFORMATION

This leaflet is designed to explain the treatment and recovery process following your ACL RECONSTRUCTION.

Some of the terms may be unknown to you and the procedures complex. Please do not hesitate to talk to your doctor or physiotherapist and ask them any questions.

Most injuries to the ACL happen when playing sport such as football, squash, tennis or skiing. It can also occur after all types of other injuries including a fall or road traffic accident. The most common injury to the ACL that needs surgery is a full tear to the ligament.

Why you might need an operation

A ligament is a strip of strong tissue that holds bones together.

In the knee, the anterior cruciate ligament (ACL) is one of four important ligaments connecting the bones of the knee joint. It holds the bottom of the thigh bone (femur) to the top of the shin bone (tibia) so that it keeps the joint stable.

In addition to its supporting function, the ACL provides important feedback that directly affects sense of joint position, and stabilisation of the joint. This is known as **proprioception**.

A tear can be partial or complete. Sometimes other ligaments, along with the menisci and articular cartilage in the knee joint, are injured at the same time. The meniscal cartilage is the shock absorber and the articular cartilage is a smooth protective layer that allows the bones to glide smoothly over each other.

The ACL does not normally heal by itself and as such may lead to recurrent episodes of instability in your knee (commonly felt like your knee is going to give or actually giving way).

Treatment Options

If you have a tear to your anterior cruciate ligament, you can be treated with surgery and also by non-surgical means.

Many patients perform very well with simply physiotherapy. This is aimed at strengthening the muscles around your knee, and many people are able to return to the level of function they had prior to the injury.

Sometimes patients opt to use a brace to stabilise their knee so they can return to activities such as skiing.

However some people will need surgery due to their knee being unstable. Surgery is aimed at returning the patient to full activity without the knee giving way. It is also thought that performing the operation decreases the risk of the patient developing arthritis of the knee earlier than normal, although there is some controversy regarding this.

Deciding to have surgery –

The decision to have knee surgery will depend on the extent of damage to your anterior cruciate ligament (ACL) and whether it affects your quality of life.

If your knee doesn't feel unstable and you don't have an active lifestyle, you may decide not to have ACL surgery.

However, you should be aware that delaying surgery could result in further damage to your knee.

One study of people with ACL tears found that their risk of damaging the injured knee increased by 1% for every month between the injury occurring and surgery.

Things to consider - When deciding whether to have ACL surgery, the following factors should be taken into consideration:

Your age – older people who aren't very active may be less likely to need surgery
Your lifestyle – for example, whether you'll be able to follow the rehabilitation programme after having surgery. **How often you play sports** – you may need to have surgery if you play sports regularly. **Your occupation** – for example, whether you do any form of manual labour

How unstable your knee is – if your knee is very unstable, you're at increased risk of doing further damage if you don't have surgery

Whether you have any other injuries – for example, your menisci (small discs of cartilage that act as shock absorbers) may also be torn and may heal better when repaired at the same time as ACL reconstruction

What does the operation involve

If surgery is required.

We reconstruct the ligament by replacing it with a graft taken from tissues around the knee.

Different tissues can be used and the three most common types are:

- Hamstring tendons. These tendons run from the back of the knee on the inner side, all the way up the thigh and can usually be felt as firm cords.
- Quadriceps Tendon – this tendon runs just above your knee cap (the patella)
- Strip of the patellar tendon, this tendon runs from the bottom of the kneecap (the patella) to the top of the shin bone (the tibia) at the front of the knee.

They are all very strong but the hamstring graft is associated with fewer complications. Current research data suggests that results are similar for the different grafts. Rehabilitation is the same for each type of procedure and is essential in regaining both the strength and proprioception required for a near normal knee.

A device called an endobutton and metal or plastic screws are used to fix the graft. These fixation devices do not need to be removed. Although sometimes extra fixation staples may be required and these sometimes need to be removed.

The operation has a high success rate with 85 to 90% of patients after five years considering their knee to be functioning normally or near normally.

The surgery is designed to allow individuals to return to full contact sports activities **but** unfortunately this can be unpredictable. It is important to emphasise that the new ligament is not a “normal” ligament.

Recreating stability with the graft is only one aspect of attempting to improve knee function after injury. Other problems such as joint surface damage or meniscal tears may co-exist, which can interfere with the joints ability to tolerate the use associated with sport and other arduous activities. Wear and tear arthritis is associated with ligament injury and is not necessarily prevented by reconstruction surgery.

Problems can occur. Some are minor but some may need another operation. Please ensure you understand these before surgery.

Complications include:

- Failure to provide enough stability in the knee to allow return to full sporting activities.
- Altered sensation from where the graft was taken.
- Complications of deep vein thrombosis (clot formation in your legs and lungs) which may lead to further admission to hospital and even death in rare occasions (1 in a 1000).
- Wound Infection – We take great precautions to minimise the risk of infection, before, during and after surgery, but a small proportion of patients (around 2%) develop a significant wound infection. This may require further surgery, but may also lead to failure of the reconstruction.
- There is also a risk of COVID.
- Knee Pain – Patients sometimes experience different types of knee pain which can be common.
- Knee Stiffness – Which may lead to further surgery
- There can be complications linked to the metal and plastic fixation devices we use to fix the ACL graft
- As with any operation, there is a very small risk of complications related to the general anaesthetic including death.

After arthroscopic surgery, see a doctor urgently if you:

- Have severe and progressively worsening pain or swelling in the knee, particularly if the joint is also hot, tender or red. (This may indicate bleeding or infection in the joint).
- Develop a high temperature.
- See fluid, pus or excessive blood coming from the site of the incision
- Swelling in the calf
- Breathing difficulties
- Chest pain or palpitations
- PLEASE CONTACT US IF YOU ARE CONCERNED ABOUT ANYTHING AFTER SURGERY - We would rather know than not know!!

Rehabilitation guidelines

Rehabilitation is vital in helping you regain use of your knee. The overall rehabilitation plan emphasises education and exercises, early knee extension, unrestricted weight bearing and balance exercises. **Please note that after Surgery Patients will not usually be allowed to go back to unrestricted sport for around 9-12 months.**

Please note it takes time for the graft to integrate, so its important you don't do too much too early.

Straight line exercises and strengthening is fine but twisting exercises commence 6 months after surgery.

Rehabilitation before the operation

Rehabilitation before surgery ensures that you and your knee are ready for the operation.

- Ensure full range of movement and maintain quadriceps/hamstring muscle strength before surgery.
- Usually seen in the physiotherapy department for education and knee assessment.
- Going on a cycle machine and strengthening your knee is an ideal exercise.