

Anterior Cruciate Reconstruction

Advice leaflet

What is the Anterior Cruciate Ligament?

The anterior cruciate ligament (ACL) is a piece of very strong soft tissue in the centre of the knee joint. It connects the femur (thigh bone) to the tibia (shin bone) just like a rope or a cable.

What does the Anterior Cruciate Ligament do?

The anterior cruciate ligament helps to keep the knee stable, controlling the forward, backwards and twisting movements.

What happens if the Anterior Cruciate Ligament is injured?

Following this injury, the knee can give way when you try to change direction. This can make your knee feel unstable.

How is the Anterior Cruciate Ligament reconstructed?

If you are active and your knee feels unstable you may require an operation to reconstruct the ligament. The torn ligament is replaced with a graft from your hamstring tendons (semitendinosus-gracilis autograft) or using the middle third of your patella tendon (bone-patella tendon-bone autograft).

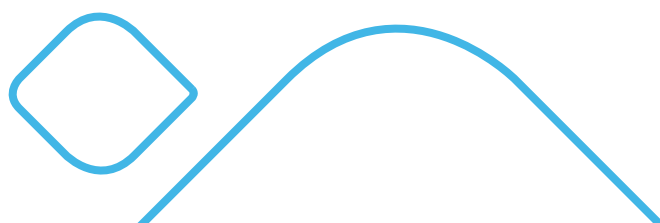
Using an arthroscope (telescope) a keyhole reconstruction is undertaken, after drilling a hole into the femur and the tibia, the graft is pulled into the knee joint. The graft is then fixed to the bone.

What is a lateral Extra Articular Tenodesis (LET)?

A lateral extra articular tenodesis (LET) is an additional procedure that involves taking a strip of tissue from the iliotibial band (a thickened band of tissue that runs down the outside of your thigh) and re-routing it to increase the stability of the knee. This procedure increases the success rate of the operation in patients who have a higher risk of damaging their reconstructed anterior cruciate ligament.

What should you do before your operation?

The time period after a confirmed ACL injury and before the operation is an important one. During this time, you have an opportunity to prepare your knee and body for surgery. You will need to work hard to get full movement, strength, balance and fitness. Studies have shown that



doing exercises before the operation significantly improved the results of the operation and enable more patients to return to their pre-injury level of activities.

If your knee is stiff or your muscles are weak it may result in a delay in your operation.

What are the goals of surgery?

The goal of the operation is to make your knee stable, preventing further damage to the rest of your knee. It should allow you to return to full activity and sports, although only 50% of people return to competitive sport after an anterior cruciate ligament reconstruction.

Rehabilitation

After your operation, it is important for you to do exercises, initially to achieve full movement and then to strengthen your muscles. A physiotherapist will guide you in your rehabilitation and monitor your progress. If you would like to return to sport after your operation you will need to attend a gym in the final stages of your rehabilitation.

How quickly you progress after your operation varies but you may be able to **cycle on a static exercise bike after a few weeks**. If your muscles are strong enough, you may be able to start **jogging** and **swimming breaststroke 12 weeks after the operation**.

You are advised to avoid competitive sports such as **rugby and football until a year after your operation**. You will need to have completed your rehabilitation achieving full strength, balance and fitness.

Information about the operation.

- **The Hospital:** You usually go home on the same day of the operation, some patients may stay in hospital for one night.
- **Anaesthesia:** You will usually have a general or spinal anaesthetic. You will see the anaesthetist on the day of the operation to discuss this in more detail.
- **Crutches:** After the operation, most patients initially walk using two elbow crutches for a short period (3-7 days). This can depend on the pain and the swelling.
- **Driving:** It is generally recommended that you avoid driving for six weeks after the operation.
- **Brace:** A brace is not usually necessary after the operation unless an additional procedure is performed such as a repair of the meniscus.
- **Travelling:** To reduce the risk of deep vein thrombosis (also known as blood clot or DVTs) long distance travel (nonstop for 3 hours) should be avoided for three weeks before and after the operation. Long haul flights should be avoided for six weeks after the operation.

- **Work:** It is ideal to have a few weeks off work, this will vary depending on your type of work.

What are the possible problems after the operation?

Pain at the front of the knee: Occasionally patients may describe pain at the front of their knee during exercises such as squatting, jumping or kneeling. This is often due to increasing the level of activity too quickly and trying to work through the pain. You should avoid the exercises that are too painful and continue with exercises that are more comfortable. This generally settles by the end of a year following surgery. The risks of pain at the front of the knee are increased when using a patella tendon graft.

Arthritis: There is an increased risk of arthritis following an ACL rupture. When the ACL ruptures there is often damage to shock-absorbing structures in the knee (cartilage and meniscus) and subsequent episodes when the knee gives way may damage the joint further. It is hoped that by restoring the stability and function of the knee the risks of further damage is reduced. Arthritis may lead to problems in the knee in late middle age.

Complications are uncommon but may occur. They include knee stiffness, graft laxity, graft injury, venous thrombosis (also known as blood clots or DVT's), skin or joint infection, fracture of the bones, pain or weakness from where the graft was taken and injury to nerve and blood vessels.

Useful Links:

[ACL prehab booklet](#)

[Pool exercises after knee injury](#)

Royal United Hospitals Bath NHS Foundation Trust
Combe Park, Bath, BA1 3NG

01225 428331 | www.ruh.nhs.uk

Please contact the Patient Advice and Liaison Service (PALS) if you require this leaflet in a different format, or would like to feedback your experience of the hospital.

Email ruh-tr.pals@nhs.net or telephone 01225 825656.

