

Expires end of April 2025

Patient Information for Consent

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What is the anterior cruciate ligament?

The anterior cruciate ligament (ACL) is one of the important ligaments in your knee. If you have torn (ruptured) this ligament, your knee can collapse or 'give way' when making twisting or turning movements. This may interfere with sports or even everyday activities.

Your surgeon has suggested an ACL reconstruction to replace the torn ligament. However, it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you to make an informed decision.

If you have any questions that this document does not answer, it is important that you ask your surgeon or the healthcare team. Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point.

How does an ACL rupture happen?

An ACL rupture happens as a result of an injury to your knee. The common causes are twisting or landing badly during sports activities. It may feel like there is a pop in your knee, or like something has moved out of place. At first, your knee fills with blood and can be swollen and painful but this settles with time. You can injure other parts of your knee at the same time such as tearing a cartilage (meniscus) or damaging the joint surface.

Some people with an ACL rupture get back good function in their knee with the help of exercises and physiotherapy. If your knee continues to give way, your surgeon may recommend ACL reconstruction.

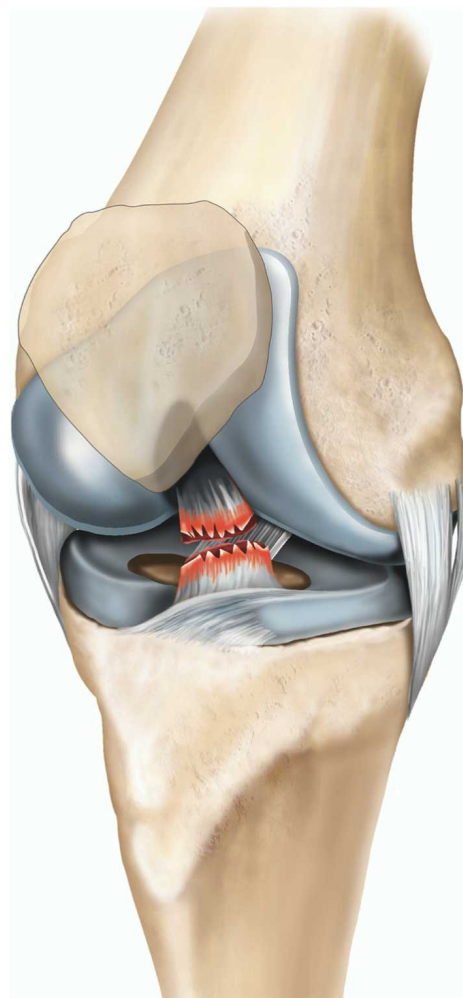
What are the benefits of surgery?

Your knee should not give way any more. This will allow you to be more active and you may be able to return to some of or all your sporting activities.

Are there any alternatives to surgery?

The physiotherapist can give you exercises to strengthen and improve the co-ordination of the quadriceps and hamstring muscles in your thigh. This can often prevent your knee from giving way during everyday activities.

Wearing a knee brace can sometimes help if your knee only gives way while you are playing sports. However, a brace is often too bulky and awkward to wear all the time.



A torn ACL

What will happen if I decide not to have the operation or the operation is delayed?

Unless you are a high-level athlete, there is a 4 out of 5 chance that your knee will recover to near normal without surgery. High-level athletes do not usually do well without surgery.

If your knee continues to give way, you can get a torn cartilage (risk: 3 in 100). This increases the risk of you having problems with your knee in the future. You will usually need another operation to remove or repair the torn piece of cartilage.

If you have increased pain or swelling in your knee, contact your healthcare team.

What does the operation involve?

The healthcare team will carry out a number of checks to make sure you have the operation you came in for and on the correct side. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having.

Various anaesthetic techniques are possible. Your anaesthetist will discuss the options with you.

You may also have injections of local anaesthetic to help with the pain after the operation.

You may be given antibiotics during the operation to reduce the risk of infection. The operation usually takes an hour to 90 minutes.

Your surgeon will make one or more cuts around your knee. Most surgeons perform the operation by an arthroscopy (keyhole surgery), using a camera to see inside your knee.

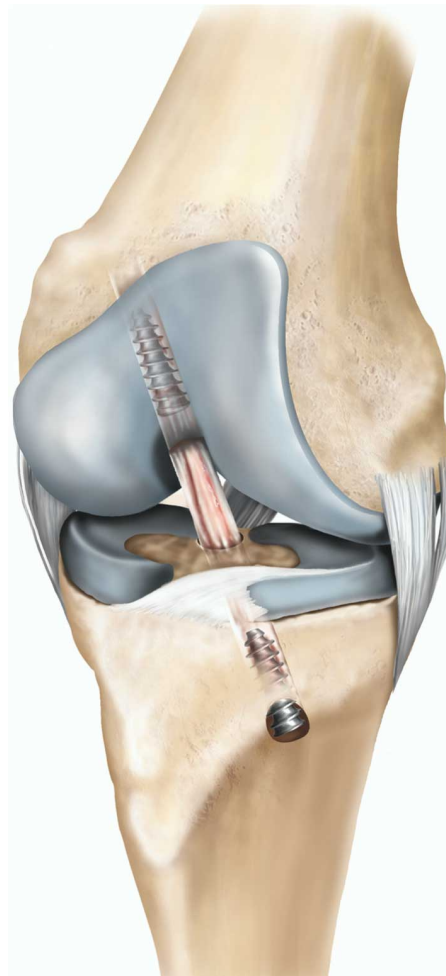
Your surgeon will replace the ACL with a piece of suitable tissue (a graft) from another area of your body. They will usually use one of your hamstring tendons. There are other options, such as donor or artificial grafts, and your surgeon can discuss these with you.

The top and bottom ends of the replacement ligament are fixed with special screws or anchors into holes drilled in the bone.

Your surgeon will close your skin with stitches or clips.

What should I do about my medication?

Make sure your healthcare team know about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.



An ACL reconstruction using a graft

How can I prepare myself for the operation?

If you smoke, stopping smoking now may reduce your risk of developing complications and will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should help to prepare you for the operation, help you to recover and improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

You can reduce your risk of infection in a surgical wound by taking the following steps:

- In the week before the operation, do not shave or wax the area where a cut is likely to be made.

- Try to have a bath or shower either the day before or on the day of the operation.
- Keep warm around the time of the operation. Let the healthcare team know if you feel cold.
- If you are diabetic, keep your blood sugar levels under control around the time of your procedure.

Speak to the healthcare team about any vaccinations you might need to reduce your risk of serious illness while you recover. When you come into hospital, practise hand washing and wear a face covering when asked.

What complications can happen?

The healthcare team will try to reduce the risk of complications.

Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you. Some risks are higher if you are older, obese, you are a smoker or have other health problems. These health problems include diabetes, heart disease or lung disease.

Some complications can be serious and can even cause death.

You should ask your doctor if there is anything you do not understand.

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

General complications of any operation

- Bleeding during or after the operation. If you get a lot of blood in your knee (a haemarthrosis), it will be swollen and painful (risk: 4 in 100). You may need another operation to wash the blood out.
- Infection of the surgical site (wound) (risk: less than 1 in 100). It is usually safe to shower after 2 days but you should check with the healthcare team. Keep your wound dry and covered. Let the healthcare team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need special dressings

and your wound may take some time to heal. In some cases another operation might be needed. Do not take antibiotics unless you are told you need them.

- Allergic reaction to the equipment, materials or medication. The healthcare team are trained to detect and treat any reactions that might happen. Let your doctor know if you have any allergies or if you have reacted to any medication, tests or dressings in the past.
- Blood clot in your leg (deep-vein thrombosis – DVT) (risk: 3 in 1,000). This can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or inflatable boots or special stockings to wear. Let the healthcare team know straight away if you think you might have a DVT.
- Blood clot in your lung (pulmonary embolus), if a blood clot moves through your bloodstream to your lungs (risk: 2 in 1,000). Let the healthcare team know straight away if you become short of breath, feel pain in your chest or upper back, or if you cough up blood. If you are at home, call an ambulance or go immediately to your nearest Emergency department.
- Difficulty passing urine. You may need a catheter (tube) in your bladder for 1 to 2 days.
- Chest infection. Your risk will be lower if you have stopped smoking and you are free of Covid-19 (coronavirus) symptoms for at least 7 weeks before the operation.

Specific complications of this operation

- Break of your kneecap (patella) during or after the operation (risk: 1 in 100). This can only happen if your surgeon uses a patellar tendon graft. The bone where the graft is taken from becomes weaker. If your kneecap breaks, you may need another operation.
- Damage to nerves around your knee, leading to weakness, numbness or pain in your leg or foot (risk: 3 in 1,000). This usually gets better but may be permanent.

- Infection in your knee (risk: less than 3 in 1,000). You will usually need another operation to wash out your knee and a long course of antibiotics. Infection can cause permanent damage.
- Discomfort in the front of your knee, around the scar where the lower end of the graft is fixed (risk: 3 in 10). This is not usually too troublesome but it can make it difficult for you to kneel.
- Loss of knee movement, preventing full bending (risk: 2 in 100) or straightening (risk: 1 in 10). This usually improves with physiotherapy but you may need another operation.
- Your knee keeps giving way, if the ligament graft fails caused by it gradually stretching or a further sports injury (risk: 1 in 10).
- Severe pain, stiffness and loss of use of your knee (complex regional pain syndrome - CRPS). The cause is not known. You may need further treatment including painkillers and physiotherapy. Your knee can take months or years to improve. Sometimes there is permanent pain and stiffness.

Consequences of this procedure

- Pain. The healthcare team will give you medication to control the pain and it is important that you take it as you are told so you can move about as advised.
- Unsightly scarring of your skin.

How soon will I recover?

In hospital

After the operation you will be transferred to the recovery area and then to the ward. You may have an x-ray to check the position of the ligament graft. At first your knee will be swollen and it takes hard work to get it to bend.

Good pain relief is important to help you to recover. If you are in pain, let the healthcare team know.

Keep your wound dry for 4 to 5 days, and use a waterproof dressing when you have a bath or shower. The healthcare team will tell you if you

need to have any stitches or clips removed, or dressings changed.

You should be able to go home the same day or the day after. However, your doctor may recommend that you stay a little longer.

If you are worried about anything, in hospital or at home, contact the healthcare team. They should be able to reassure you or identify and treat any complications.

Returning to normal activities

If you had sedation or a general anaesthetic and you go home the same day:

- A responsible adult should take you home in a car or taxi and stay with you for at least 24 hours.
- Be near a telephone in case of an emergency.
- Do not drive, operate machinery or do any potentially dangerous activities (this includes cooking) for at least 24 hours and not until you have fully recovered feeling, movement and co-ordination.
- Do not sign legal documents or drink alcohol for at least 24 hours.

To reduce the risk of a blood clot, make sure you carefully follow the instructions of the healthcare team if you have been given medication or need to wear special stockings.

You will need to use walking aids until you can walk well without them. Your surgeon may want you to wear a knee brace for a few weeks. Once your knee is settling down you will need to start physiotherapy exercises.

The healthcare team will tell you when you can return to normal activities. It is important to follow the instructions they give you during your rehabilitation. In particular, do not return to sports until you are told that it is safe to do so.

Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, ask the healthcare team or your GP for advice.

Do not drive a car or ride a bike until you can control your vehicle, including in an emergency, and always check your insurance policy and with the healthcare team.

The future

Most people make a good recovery after an ACL reconstruction but this takes hard work.

It is unlikely that your knee will ever be as good as it was before the original injury.

Mild stiffness is common for the first year or two but is not usually troublesome.

Summary

If your knee continually gives way after an ACL rupture, reconstruction offers the chance of improving the stability of your knee in everyday life and in sporting activities. You may be able to return to a level of sport that otherwise would not be possible.

Surgery is usually safe and effective but complications can happen. You need to know about them to help you make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

Acknowledgements

Reviewers

Bill Donnelly (MBBS, BMedSci, FRACS)

Stephen Milner (DM, FRCS (Tr & Orth))

Illustrator

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