Patient information

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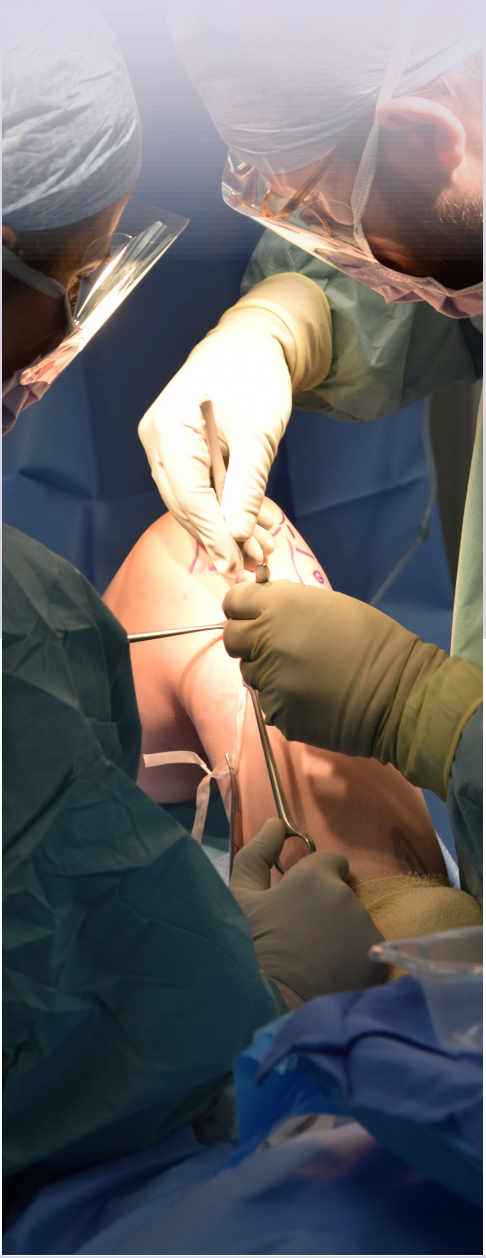


Anterior Cruciate Ligament (ACL) Reconstruction Surgery

Important information for all orthopaedic patients undergoing ACL surgery.

Golden Jubilee University National Hospital
Agamemnon Street
Clydebank, G81 4DY
☎: 0141 951 5000
www.nhsgoldenjubilee.co.uk

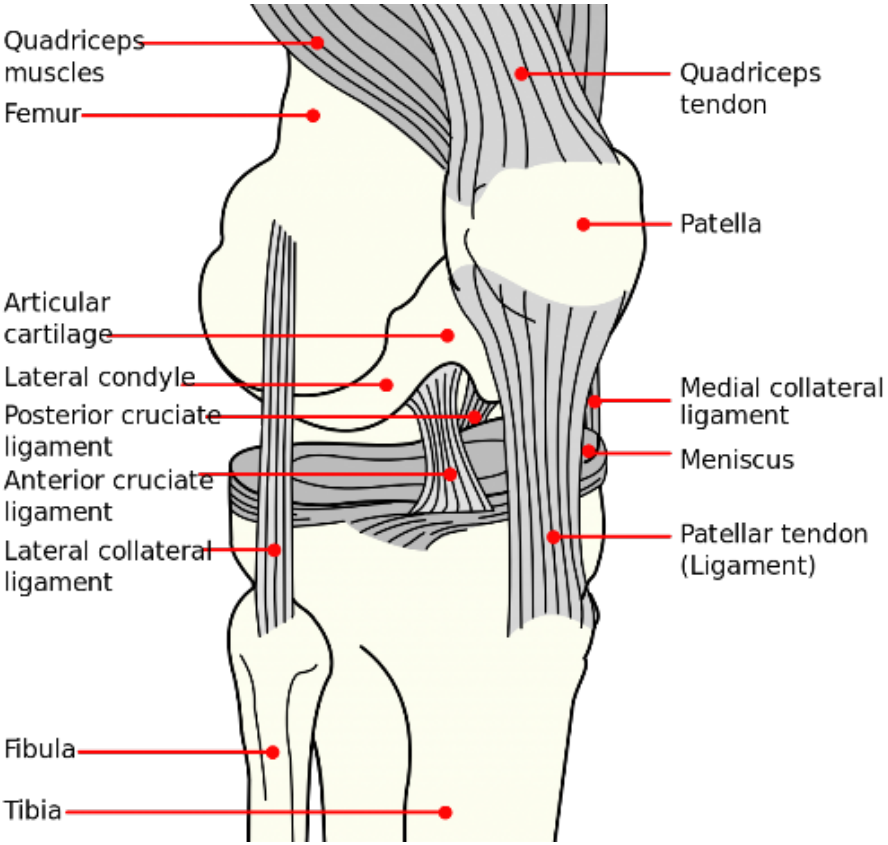
Reviewed: March 2024
Next review: March 2025
Version 5

About this booklet

The purpose of this booklet is to provide you with advice and general guidance to help in the recovery process after your Anterior Cruciate Ligament (ACL) Reconstruction Surgery.

All information provided in this booklet is for guidance only and is not exhaustive. Detailed, personalised instruction will be provided by your surgeon, nursing staff and physiotherapist.

What is an Anterior Cruciate Ligament (ACL)?



A ligament is a tough band of tissue that holds bones together, providing stability by controlling the amount of movement at a joint. The ACL runs diagonally through the inside of the knee, if injured you may not be able to control twisting movements of the lower leg.

Causes of injury

The ACL is often injured during sporting activities such as football, rugby, skiing, tennis or basketball. It can be injured with direct contact (a blow to the outside of the knee) but more often without contact during a sudden stop and twisting motion.

At the time of injury, it is common to feel or hear a ‘pop’ or ‘snap’ associated with pain and immediate swelling. If the ACL is injured the knee may be unstable and prone to giving way. It is also possible to injure other structures within the knee, either at the time of ACL injury or as a consequence of the knee repeatedly giving way.

How is an ACL rupture diagnosed?

Diagnosis is usually made by the knee being examined and asking questions about how the injury was sustained. An MRI and x-ray can also be useful to identify any associated injuries.

Options following ACL rupture

The options following injury will depend on the extent of injury and the impact it is having on your quality of life. Many people will manage to live without a functioning ACL and with appropriate rehabilitation it is possible to compensate for ACL rupture by maintaining good muscle tone.

If your knee does not feel particularly unstable and you do not have an active lifestyle, you may decide that surgery is not necessary. If the ruptured ACL is not surgically reconstructed there remains an increased risk of re-injuring the knee and associated structures (particularly the medial collateral ligament and cartilage).

If your knee is unstable and affecting your quality of life, then you may wish to be considered for ACL reconstructive surgery. Before having the surgery, you will need to wait for the swelling to go down and may benefit from physiotherapy to regain full range of movement and strengthen the muscles around the knee. Optimising the muscle function in the knee can ensure a more successful outcome after surgery.

What is ACL reconstructive surgery?

The goal of surgery is to restore the function of the ruptured ligament, providing stability for the knee joint. The remains of the ruptured ligament are removed and replaced with a tendon from another area of the leg. Most surgeons use a graft from either the hamstring or the patellar tendon. The grafts are obtained through an incision and the ACL reconstruction is carried out arthroscopically which involves several small incisions around the knee.

Complications of surgery

In more than 80% of cases, ACL surgery results in restored function in the knee. However, there can be complications with any surgery. Your knee may not be exactly like it was before and you may still experience some pain and swelling. The most common complication is local numbness in the skin near to the incision, there may also be some numbness to the inside of the lower leg. There are other, rarer risks including infection and deep vein thrombosis.

Before surgery

The Patient Coordination Centre (PCC) will send you an appointment to attend a consultation clinic to see an Orthopaedic surgeon who will discuss your surgery and it's risks and benefits with you. You will be asked to sign a consent form to allow surgery to go ahead.

You may also be given an appointment to attend a pre-assessment clinic on the same day as the consultation clinic or on a different day. A pre-assessment involves a Nurse Practitioner (NP) assessing your fitness for surgery by asking questions about your medical history, carrying out vital signs (heart rate, blood pressure, temperature, respiratory rate, oxygen levels) height, weight and a tracing of your heart (ECG) if required. Blood samples and an x-rays may also be required. The NP will also answer any questions you may have.

Your assessment will be discussed with an anaesthetist if necessary, or you may see a consultant anaesthetist at this appointment. You may also see a pharmacist who will go over your routine drugs with you and advise you of any drugs you need to stop taking temporarily prior to your surgery.

You will discuss your rehabilitation programme with a physiotherapist who will ask you to provide details on where you would like to be referred to for rehabilitation. The physiotherapist will show you how to use your elbow crutches to walk well and show you the technique for using the stairs safely with your crutches.

You will be shown exercises to do which will strengthen your muscles prior to your operation. To have a successful outcome, you must commit to regular physiotherapy after your surgery.

What do I need to bring on the day of my surgery?

- Please bring sensible flat shoes with a closed back. Do not bring open back shoes, flip flops or high heels.
- Please remove all nail polish/gel nails.
- Bring loose/comfortable clothing as you may have a large bandage on your wound which needs to be kept dry. Do not wear jeans or tight inelastic trousers.
- If you were given crutches at the clinic before your operation, please bring them into hospital with you as you will use these after your surgery.

Day of surgery admission

You will be admitted to the Surgical Admission Unit (SAU) on level 2 of the Surgical Centre. The PCC will send you an admission time. This may be early in the morning to allow staff to prepare you for theatre. Some patients will be able to be discharged home a few hours after surgery, however some patients may also be kept in overnight. This will be a decision taken by the surgeon and/or anaesthetist.

You will be required not to eat for 6 hours before your surgery. You may be able to sip 150 mls of clear water up until your procedure/surgery time. 150mls is approximately a small cupful for fluids. This is called SipTilSend, you will be given a leaflet explaining the process at pre-assessment.

Sipping clear still water before your procedure/surgery will help to keep you hydrated and reduce possible headaches, nausea and anxiety. It is very important that you do not drink any more than 150mls of clear water each hour, drinking too much fluid may delay your surgery.

For some patients, SipTilSend may not be appropriate and in this situation the Anaesthetic team, the Pre-assessment staff and/or the SAU staff will advise you to follow different fasting instructions

You will be introduced to your nurse, who will complete paperwork, discuss the procedure with you and answer any questions.The nurse will ask you to change into the hospital gown and paper pants provided.

You may meet the ward doctor or Advanced Nurse Practitioner (ANP), who may examine you and ask some more questions. You will meet your surgeon and anaesthetist, who will ask you questions and answer any queries you may have. You may be prescribed a pre-medication tablets, which the nurse will give you before you go to theatres.

Nursing staff will check your vital signs (heart rate, blood pressure, respiratory rate, Oxygen levels and temperature) on a monitor. At the designated time, you will be escorted to theatre, where you will be met by theatre staff and the anesthetist.

You will have a needle inserted into a vein to allow for any required drugs or an anaesthetics to be given. Following this you will be taken into theatres.

After surgery

When your surgery has finished, you will be taken to the recovery area until it is time for you to return to the SAU. On return to SAU, a nurse will monitor your vital signs and wound(s) on a regular basis.

You will be given something light to eat and drink. Once you have met the discharge criteria, i.e. you have had something to eat and drink, you do not feel nauseated or are vomiting, you have passed urine and any pain is reasonably well controlled, you will be discharged home. Discharge home will be a minimum of 2 hours after your return from surgery.

Your wound will have a dressing in place, which will remain in place for 7 days unless there are any signs of infection, e.g. unusual leakage, heat, increased pain or swelling or feeling unwell. If you have any concerns about your wound post discharge, please call 0141 951 5554 for advice.

You may be given medication to take home, this may include painkillers. Nursing staff will advise you on how and when to take this medication.

Please arrange transport home prior to coming in for your surgery/ procedure. You must have a responsible adult collecting you and you must have someone staying overnight with you on the night of your surgery.

Try to ensure the vehicle you travel home in is large enough for you to put your foot up on the back seat while sitting and wearing a seatbelt. You must not go home by public transport.

If you are to remain in hospital overnight, you will be transferred to the ward either after theatre or after a short time in SAU. Instructions in regards discharge from the ward will be discussed with you by ward staff.

If you require a fit note for your employer, please inform the nursing staff as soon as possible.

A physiotherapist will check that you are safe to walk with your crutches and that you are happy with the technique for using stairs with your crutches. The physiotherapist will also show you some exercises to start now that you have had your operation and discuss any concerns you may have regarding your rehabilitation.

You may be required to wear a brace, depending on your Surgeon's advice. Some reasons for this include if the surgeon has repaired your meniscus or carried out work on your articular (gliding) cartilage.

If you require a brace the physiotherapist will fit this before you are able to get out of bed. It is likely that the brace will limit how much you can bend your knee; how much it will be limited will be decided by your consultant.

When resting with your leg elevated and fully supported you may remove the splint. The splint must be on at all other times. Your knee may be painful and swollen. You will be advised to follow P.O.L.I.C.E. Guidelines below and apply ice to your knee at regular intervals to reduce swelling and pain.

P.O.L.I.C.E. guidelines

Protect:	Use of elbow crutches to walk well.
Optimal Loading:	It is important to take weight through your leg to stimulate the healing process. The right level of activity can help to manage swelling.
Ice:	Apply ice for 20 minutes to reduce swelling. Always place ice pack over a damp cloth to protect your skin from an ice burn and ensure at least 20 minutes in between applications for circulation.
Compression:	You will have a compression bandage in situ. Usually this is removed after 24 hours. Follow advice from your nursing staff.
Elevation:	To control your swelling, elevate your leg (toes above your nose) for 30 minute periods. Ensure your whole leg is supported with 3 or 4 pillows from your heel downwards. Lie back on your bed.

You will be seen at a review clinic, GP surgery or by the District Nurse 2 weeks after your surgery to remove your stitches. The surgeon will decide when your next appointment will be depending on how you are progressing.

Review after surgery

Driving
You should not drive for 4 to 6 weeks following surgery, this will be confirmed by your consultant. It is recommended that you contact your insurance company and inform them of your surgery. It is also advised that you attempt an emergency stop prior to returning to drive.

Returning to work
Return to work is dependent on the nature of your occupation. You should discuss this with your Consultant and Physiotherapist.

As a general rule if your work is:

- Sedentary/ desk work 1-2 weeks
- Light/ General Office Based 2-4 weeks
- Medium 3 months
- Heavy/ roof/ ladders 4-5 months

Returning to sport

How quickly you return to sport depends on the sport you wish to participate in.

The following are recommendations; you should speak to your consultant if you have any specific questions:

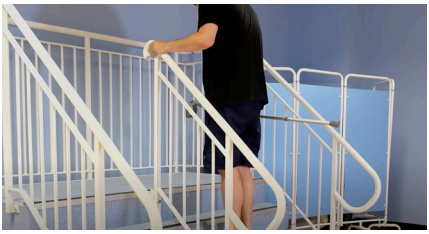
- Regular exercise 1-2 months
- Light sport/ non-competitive 3-4 months
- High performance/ contact sport 12 months

You are advised to participate at a lower level of competitive activities for 3 to 4 months before returning to higher level competitive activities. A good warm-up is advisable to help prevent re-injury to the knee.

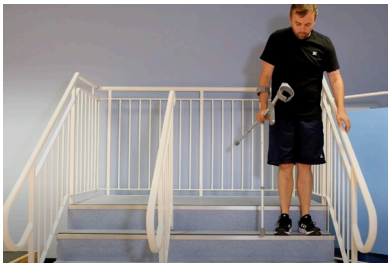
General advice

The graft is at its weakest between 6 and 12 weeks after your operation, so it is important to take care during this period when carrying out activities. In order to protect the graft site, twisting and kneeling should be avoided for the first 4 to 6 months after your operation.

Walking up and down stairs

Walking up stairs	
	• Stand close to the stairs.
	• Hold onto the handrail with 1 hand and the crutch/crutches with the other hand.
	• First take a step up with your healthy leg.
	• Then take a step up with your affected leg.
	• Then bring your crutches up onto the step. **Always go 1 step at a time.**

Walking down stairs

	• Stand close to the stairs and hold onto the handrail with 1 hand and the crutch/crutches with the other hand.
	• First put your crutch 1 step down.
	• Then take a step with your affected leg.
	• Then take a step down with your healthy leg onto the same step as your affected leg. **Always go 1 step at a time.**

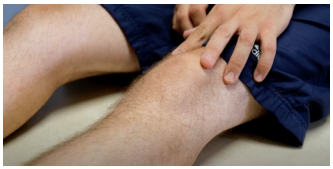
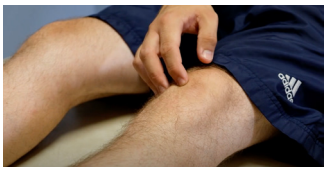
You can watch the video on the link below or you can scan the QR code on your smart device:

https://www.youtube.com/watch?v=t0xf7lXv_bY

Immediate post-operative exercises (days 1-7)

You will need to work with a physiotherapist following your surgery. The physiotherapists on the ward will send a referral to your local health care setting so that you can continue with your rehabilitation closer to home. This should ideally commence within 7-14 days of your surgery. If you have not been contacted by your local physiotherapist within 7 days please let us know by phoning 0141 951 5121.

The following exercises should be done immediately following your surgery. You should continue with these exercises until your local physiotherapist tells you otherwise. You should also continue to use your elbow crutches to walk well until your local physiotherapist tells you otherwise.

Exercise 1: Knee cap mobilisation	
	• Sit in a chair or bed with your leg straight and relaxed.
	• Take hold of you knee cap and move it side-to-side for 2-3 minutes.
	• Move it up and down for 2-3 minutes. • Do this exercise 4 times a day. • If your knee cap will not move, you may not be fully relaxed. • You may find it easier to relax sitting in bed rather than a chair.

Exercise 2: Flexion in sitting

- Sit in a chair with your back supported.

- Slide your heel towards you and bend your knee as much as you can.
- Hold for 10 seconds.
- Repeat this 10 times.
- Do this exercise 4 times a day.

Exercise 3: Extension

- Sit with your foot on a raise or stool with your knee unsupported. Allow the weight of your leg to straighten the knee.
- Hold for 10 minutes.
- Do this exercise 2 times a day.

Exercise 4: Extension in lying

- Lie face down on a bed with your legs hanging over the edge.
- You should lie on the bed so that your body is supported from mid-thigh up.
- Let the weight of your leg straighten your knee.
- Hold for 10 minutes.
- Do this exercise twice a day.

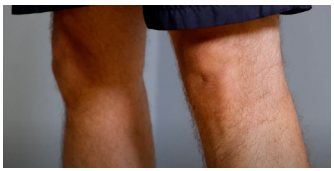
Exercise 5: Ankle pumps

- Sit up in a chair or in bed. Straighten your leg.
- Bend your ankle slowly towards your shin. Hold for 2 seconds.

- Point your toes away from your shin.
- Hold for 2 seconds.
- Repeat this 10 times.
- Do this exercise 4 times a day.

Exercise 6: Quads set

- Stand up with your feet hip width apart.



- Tighten your thigh muscle and press your knee straight.
- Hold for 5 seconds.
- Repeat this 10 times.
- Do this exercise 4 times a day.

Exercise 7: Hamstring set

- Sit in a chair or in bed with your knee slightly bent.

- Contract your hamstring muscle without moving your knee by digging your heel into the ground.
- Hold for 5 seconds. Repeat 10 times.
- Do this 4 times a day.

Exercise 8: Quads set and straight leg raise	
	• Sit up in bed. • With a raise under your heel, tighten your thigh muscle until your leg is straight.
	• If you can get the knee fully straight, then slowly lift your leg up 6 inches. • Do not let your leg roll in. • Hold for 5 seconds. • Repeat this 10 times. • Do this exercise 4 times a day.

You can watch the video on the link below or you can scan the QR code on your smart device:
https://www.youtube.com/watch?v=m8oBQ-PL0-E

Contact

The Arthroplasty Outcomes Team is available:
Monday to Friday 8.30am-4.30pm

Helpline: 0141 951 5521

This number takes you directly to an answering machine only, but it is checked regularly and is the best way to contact the Arthroplasty Team.

Please leave a message on the answering machine with your name, date of birth or CHI number, telephone number, and a short message. One of the Arthroplasty Team will return your call as soon as possible. If we do not return your call within 1 working day, please contact us again as we may not have picked up your details correctly.

If you require an urgent reply out of hours, please contact the Hospital Switchboard on 0140 951 5000 and ask to be put through to the orthopaedic wards.

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