

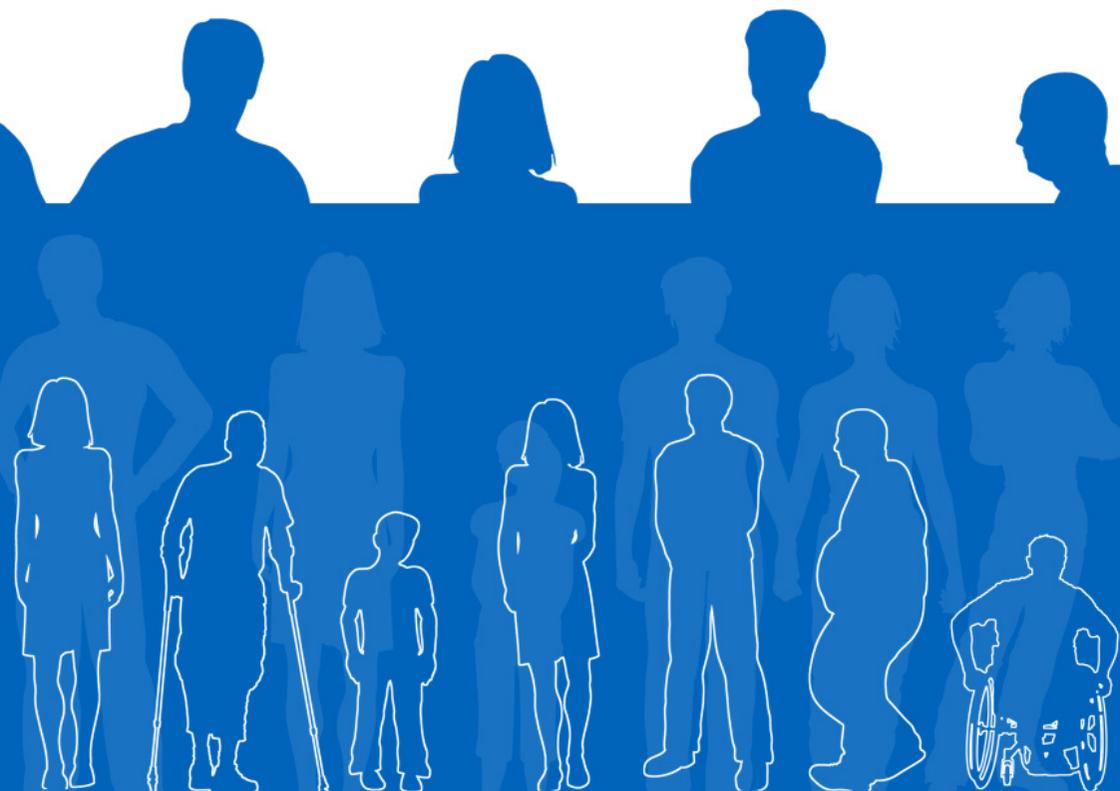


Royal National Orthopaedic Hospital



NHS Trust

A Patient's Guide to Post-Operative Physiotherapy Following Anterior Cruciate Ligament Reconstruction of the Knee



Introduction

The anterior cruciate ligament (ACL) is one of the main supporting ligaments of the knee. The ACL's main role is to keep the knee stable during rotational movements, for example, twisting, turning or side-stepping activities. It also provides important information to the muscles around the knee, which are involved in protecting the knee during activities.

Injuries to the ACL usually occur during a non-contact, twisting movement or a contact activity. A popping or snapping sensation can often be felt or heard. Pain and swelling often occurs within a few hours due to bleeding into the knee. Other injuries to the knee can occur at the same time including cartilage tears or damage to the joint surface.

If the ACL is ruptured, the knee is likely to give way. This can improve with an appropriate exercise programme supervised by a physiotherapist. However, if the symptom of giving-way does not improve and is limiting function, this can be an indication that surgery is required.

The operation

Following an ACL rupture, the surgeon may decide, after discussion with you, that reconstruction surgery is appropriate.

ACL reconstruction is an attempt to replace the stabilizing function of the ACL. The ACL reconstruction procedure involves removing the remains of the damaged ACL and replacing it with another form of soft tissue, called a graft. A number of grafts are available to replace the ACL, but usually the hamstring or patella tendon is used. The surgeon will discuss the best type of graft for you.

Expected outcome

The expected outcome following ACL reconstruction surgery is:

- Improved knee stability
- Improved function/mobility
- Reduced pain
- Full recovery and return to sport may take up to twelve months

What to expect following surgery

Walking

You will be partial weight-bearing for two weeks after your operation (putting approximately 50% of your weight through your leg). You will be provided with an appropriate walking aid, for example crutches, to help you keep the weight off your leg.

Your brace will be fully weight-bearing (putting full weight through the leg), depending upon your pain, swelling and muscle control. The physiotherapist will advise you when your muscles are strong enough for you to stop using your walking aid.

Stairs

You will be taught how to go up and down stairs with your crutches before you are discharged. The order you need to remember is:

Upstairs

Non-operated leg first
Operated leg second
Crutch last

Downstairs

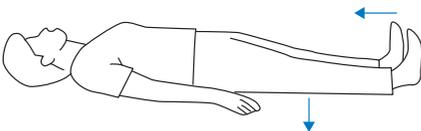
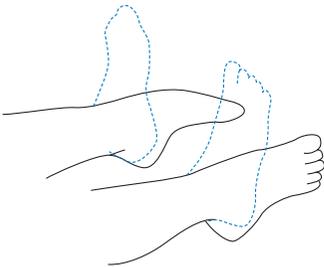
Crutch first
Operated leg second
Non-operated leg last

Brace

You may be provided with a brace if your muscles are too weak to support the knee after the operation. The physiotherapist will decide when your muscles are strong enough for the brace to be removed.

Exercises to do immediately after surgery

You will be taught exercises following your surgery. It is important that you carry out these exercises regularly every day to begin strengthening your muscles and gain movement in your knee.



Lie or sit with your legs out straight.

Pull your foot up then point it down briskly.

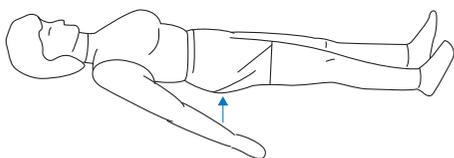
Repeat for two minutes every hour.

Lie or sit with your legs out straight.

Pull your foot up, tighten your thigh muscle and straighten your knee.

Hold for _____ seconds then relax.

Repeat _____ times.

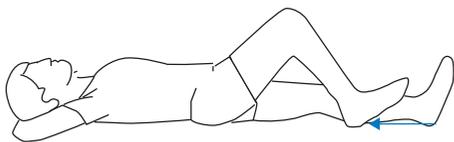


Lie or sit.

Squeeze your buttocks firmly together.

Hold for _____ seconds then relax.

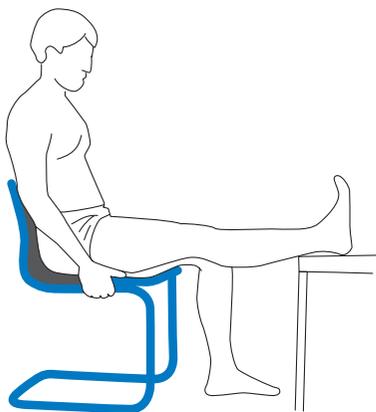
Repeat _____ times.



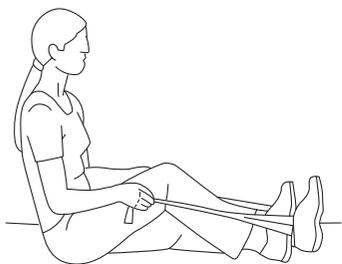
Lie or sit with your legs out straight.

Bend and straighten your knee as far as possible.

Repeat _____ times.



When sitting, ensure your knee is fully supported and elevated high on a stool.

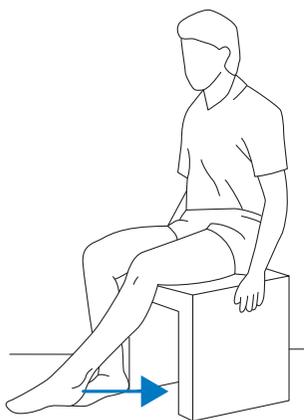


Sit with your legs out straight.

Bend your operated leg and put a rubber exercise band around your foot.

Push in to the band and straighten your knee.

Repeat _____ times.



Sit in a chair.

Bend your knee as far as possible.

Repeat _____ times.

Things to look out for

It is important to monitor the size, colour, sensation and warmth of your leg after your operation.

Swelling

You can expect some swelling after surgery. To help manage your swelling you will need to follow the principles of **PRICE**.

P - protection. The physiotherapist will guide you on how to adjust your lifestyle to protect the knee in the first few weeks following surgery.

R - rest. For the first few weeks after your surgery it is important to rest. Gradually increase your walking as your pain and swelling allows.

I - ice. Ice can be used to help manage your swelling. It should not be used if you have any numbness around the knee or a circulatory disorder. If using ice, it should be kept wrapped in a towel and only applied for up to 20 minutes at a time. Make sure that you review the skin while the ice is in place to monitor any adverse effects or signs of a burn. If there is any evidence of a marked redness/burn or it is too painful, then remove the ice immediately.

C - compression. A tubigrip bandage, if supplied by the physiotherapist or nurse, can be worn to apply compression to your knee and help to manage your swelling. If using a tubigrip bandage, remove it when in bed at night. If there is any increased pins and needles, numbness or changes to the colour of your skin when wearing the tubigrip bandage, then remove it immediately.

E - elevation. Rest with your leg raised high on a footstool with the knee fully supported to help drain the excess fluid.

Wound healing

If blood supply to the area is not good, wounds may be slower to heal. If a wound continues to ooze or becomes excessively red, hot or swollen, despite following the advice in this leaflet, then seek medical attention from your GP.

Infection

Infection can occasionally occur in a small percentage of patients. Minor infections normally settle after a short course of antibiotics. If the infection is severe, then it is possible that further surgery may be required to remove infected tissue and a prolonged course of antibiotics may be necessary.

Numbness or tingling

This can occur around the operation site as a result of minor nerve damage. More often this is temporary, however, occasional patchy numbness or increased sensitivity may be permanent.

Scarring

Any surgery will leave a scar and occasionally this can cause pain and irritation. If this happens, please inform the consultant.

Blood clots

Deep Vein Thrombosis (DVT) or Pulmonary Embolus (PE) is rare. If you become breathless, develop chest pain or if you develop an excessively hot, painful, swollen calf, seek immediate medical attention at your local A & E.

SEEK MEDICAL ASSISTANCE ASAP IF YOU EXPERIENCE SEVERE PAIN, MASSIVE SWELLING, EXCESSIVE NUMBNESS OR PINS AND NEEDLES.

Follow up

Following your operation, ongoing physiotherapy will be arranged for you in your local area. Your local physiotherapist will guide you through your rehabilitation. You will also be seen by the doctors in clinic following your surgery.

General advice

Exercises should be pain-free. If your knee hurts or swells excessively then you may have done too much. Try cutting down the repetitions of exercises and follow the swelling management advice.

You should not progress to the next stage of rehabilitation until you are comfortable at your current level.

If you have followed the above advice and your symptoms are not improving/getting worse, then seek medical attention from your GP or in an emergency, go to your local A & E Department.

If you have any queries about your physiotherapy, please contact your local physiotherapist or the Physiotherapy Department at the Royal National Orthopaedic Hospital on 020 8909 5820.

If you have any comments regarding this leaflet please contact the Clinical Governance Department on 020 8909 5628.

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