

Physiotherapy Department

Physiotherapy advice following posterior cruciate ligament (PCL) reconstruction

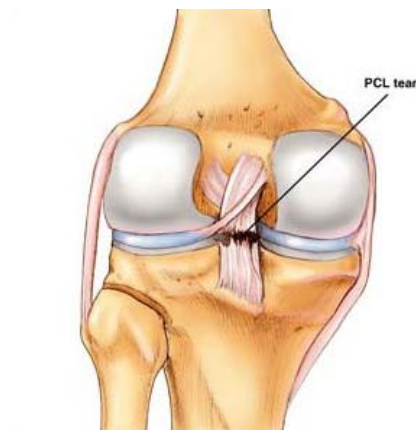
Introduction

This booklet aims to help you with your recovery following the PCL reconstruction. It includes advice and exercises, and provides guidance about what to expect.

The physiotherapy team and hospital staff will help you with your rehabilitation but it is important that you aid your recovery by:

- managing your pain and swelling
- doing your exercises regularly
- following the advice provided in this booklet.

Anatomy of the knee



The knee joint consists of the femur (thigh bone), the tibia (shin bone) and the patella (knee cap).

The knee also has ligaments that help to stabilise the joint. These include two collateral ligaments (on either side of your knee), and your ACL (anterior cruciate ligament) and PCL (posterior cruciate ligament) which cross each other inside your knee joint.

The ACL is a broad thick band which stops the shin bone from sliding forwards in relation to the thigh bone. It starts at the bottom of the thigh bone, passes down and forward, and attaches to the top of the shin bone.

The PCL is a strong thick band which stops the shin bone from sliding too far backwards in relation to the thigh bone. It starts at the back of the shin bone and attaches to the inside part of the thigh bone.

Muscles also play a vital role in supporting the knee. These include the quadriceps or quads (front thigh muscles), hamstrings (back thigh muscles), and gastrocnemius (calf muscle).

The most common causes of PCL injuries are:

- direct blow to the front of the knee when it is bent
- hyperextension of the knee (when the knee bends too far backwards) and rotational stress such as pivoting or landing from a jump.

Hamstring tendon graft surgery

During this procedure the semitendinosis and/or the gracilis muscles from the hamstrings (back thigh muscles on the inside side of your leg) are removed and then stitched together to make the graft. Small tunnels are then drilled in the tibia and femur, and the graft is pulled through and secured in place. The graft is placed as close to the original PCL as possible and acts as a substitute for the damaged PCL.

After your operation

Will I be in pain?

You may experience some pain and discomfort following your surgery. It is important that you inform medical/nursing staff if your pain relief is not adequate. When leaving hospital you will also be provided with painkillers to take home.

Will I have swelling?

Yes, it is normal to have swelling following surgery. However, excessive swelling will slow your recovery. It is therefore important that you do the following to reduce the amount of swelling in your knee:

1. Rest regularly – do not walk or stand around for long periods. Complete rest is not advised either and you should aim for short periods of activity.
2. Reduce swelling and aid pain relief by applying a cold compress (we will supply you with cryo cuff) to your knee for 10 to 15 minutes every one to two hours.
3. Keep your compression bandage on for the first 48 hours as this will help to reduce swelling.

Can I put weight on my knee?

You will not be able to put your full weight on your knee for the first six weeks after your surgery. You will be in a knee brace to limit the movement of your knee and we will give you crutches to aid your walking.

How long will I be in hospital?

Most people leave hospital the day after the operation which allows for full recovery from the anaesthetic and a session with the physiotherapist.

When leaving the hospital, you **will not** be able to drive and will therefore need to arrange your own transport or take public transport. If you take public transport, a responsible adult should accompany you home. If you leave hospital on the same day, someone should stay with you for 24 hours after your surgery.

Looking after my wound and graft

It is important that you keep your compression bandage on for the first 48 hours after surgery as this will help to reduce swelling. After 48 hours you can remove the bandage and dressings, and re-apply fresh dressings.

You may find that you have steri strips under your dressings which help to support your stitches and aid wound healing. It is advised that you leave these in place.

You should keep your wound dry and clean following surgery. We recommended a strip wash or, if you want to shower, you can wrap your leg in cellophane.

The graft undergoes various changes once inside the knee. Please remember that the graft is the weakest for six to 12 weeks after surgery so extra care should be taken during this time, especially in the shower.

What should I watch out for at home?

If you experience any of the signs below, please contact your GP or go to your nearest A&E department:

- your knee being more swollen or redder/hotter than normal
- new numbness, tingling or discolouration in your foot which last for more than 24 hours
- temperature above 37°C
- oozing wound
- persistent calf pain or swelling.

Physiotherapy

Before you go home, a physiotherapist may bend your knee gently to 60 degrees to ensure your knee is moving well. Apart from that your knee will remain extended in the brace.

The physiotherapist will teach you some important exercise and how to walk with crutches. Once confident on your crutches, you will be shown how to go up and down the stairs.

Exercises (weeks 1-2)

It is important that you start these exercises immediately and find time to do them at least **three** to **four** times a day.

1. Static quads

Sit or lie with your leg straight and then contract/tighten your quads (front thigh muscles) as hard as you can by pushing your knee downwards (Fig. 1). Hold for 5 seconds and then relax. Repeat 10 times.



2. Straight leg raise

Start by contracting your quads just like the static quad exercise above. Then lift your leg off the ground as shown in the picture below (Fig. 2). Repeat 10 times.



3. Calf stretch

Sit up in the bed with your legs out in front of you. Put a towel around your foot. Gently pull your ankle towards you and feel the stretch in your calf (see Fig. 3). Hold for 30 seconds. Repeat 5 times.



4. Hamstring stretch

Follow the same instructions as the calf stretch, but this time lean forward (Fig. 4). You should feel the stretch at the back of your leg. Hold for 30 seconds and repeat 5 times.



5. Knee cap mobilisations

Sit with your leg straight and slowly move your knee cap from side to side and up and down (Fig. 5). Hold for 5 seconds in each direction. Repeat 3-4 times a day.



6. Hip abduction

Hold on to a stable surface. Lift your operated leg out to the side. Keep your trunk straight throughout the exercise (Fig. 6).



7. Hip extension

Hold on to a stable surface. Bring your operated leg backwards, with your knee straight. Do not lean forward (Fig. 7).



Follow-up

You will be seen by a physiotherapist two weeks after leaving hospital. He/she will check your range of movement and exercises to ensure that you have the correct technique. You will also receive a new exercise programme.

You will need to visit your GP 10 to 14 days after your surgery for a wound check.

An appointment with your surgeon will be arranged for you six weeks after your surgery. At this time, you will start wearing a new brace which will allow you to bend your knee to 60 degrees. You should also be able to put your full weight on the knee as pain allows.

Appointments at King's

We have teamed up with King's College Hospital in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at King's. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Contact us

If you have any questions regarding your surgery or physiotherapy, please contact the elective orthopaedic physiotherapy team on **020 7188 5991**.

Alternatively, you can bleep the team by calling the hospital switchboard on **020 7188 7188** and asking for a bleep desk. Ask for bleep **0498** and wait for a response. This will connect you to the team directly.

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Patient Advice and Liaison Service (PALS)

To make comments or raise concerns about the Trust's services, please contact PALS. Ask a member of staff to direct you to the PALS office or:

e: 020 7188 8801 at St Thomas' **t:** 020 7188 8803 at Guy's **e:** pals@gstt.nhs.uk

Knowledge & Information Centre (KIC)

For more information about health conditions, support groups and local services, or to search the internet and send emails, please visit the KIC on the Ground Floor, North Wing, St Thomas' Hospital.

t: 020 7188 3416

Language support services

If you need an interpreter or information about your care in a different language or format, please get in touch using the following contact details.

t: 020 7188 8815 **fax:** 020 7188 5953

NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

Become a member of your local hospitals, and help shape our future

Membership is free and it is completely up to you how much you get involved. To become a member of our Foundation Trust, you need to be 18 years of age or over, live in Lambeth, Southwark, Lewisham, Wandsworth or Westminster or have been a patient at either hospital in the last five years.

To join, please call 0848 143 4017, email members@gstt.nhs.uk or visit www.guysandstthomas.nhs.uk

Leaflet number: 3805/VER1

Date published: October 2013

Review date: October 2016

© 2013 Guy's and St Thomas' NHS Foundation Trust