



Information for
patients and
carers

Posterior Cruciate Ligament

Conservative Brace Management

This leaflet aims to explain your operation and how to take care of your repaired knee correctly after the procedure. The surgery involved will be specific to you and it is important that you follow the care and instructions of your healthcare professional. The information below is therefore only provided for general guidance.

How does the knee work?

The diagram below shows several structures within the knee which helps to support the weight of your body. It consists of two joints; one joint connects the thigh bone (femur) to the shin bone (tibia), and the other the kneecap (patella) to a groove within the lower aspect of the thigh bone. The main movements of the knee are bending and straightening but it also provides a small amount of rotation.

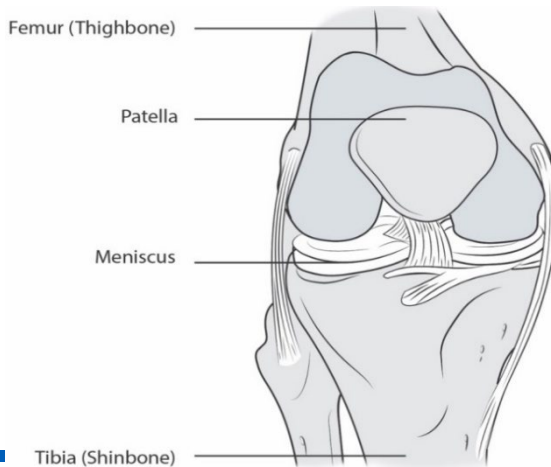
There are several structures within the knee joint, these include:

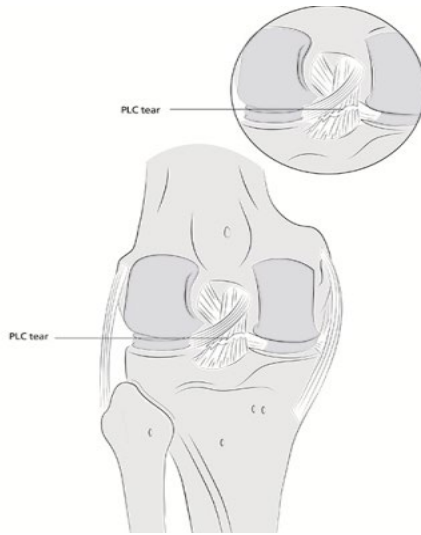
Bones which support the knee.

Muscles which create movement at the knee.

Ligaments which help to stabilise the knee.

Cartilage which protects the bones and allows for smooth movements of the knee.





Posterior Cruciate Ligament (PCL)

Situated at the back of the knee, the PCL is a major stabilising ligament in the knee. It is made up of two bundles which connect the thigh bone (femur) and shin bone (tibia).

The PCL prevents the tibia from excessive backwards movement in relation to the femur and also limits rotation and side to side movement.

Injuries to the PCL are far less common than the ACL. They are more prevalent in road traffic accidents than sport. They have been shown to respond well to careful Physiotherapy management with the use of a brace to provide the necessary support.

What does bracing involve?

The PCL has a natural ability to heal and regain normal function after injury and does not usually require an operation. Positioning of the PCL during the rehabilitation process is important as it is exposed to variable forces when the knee bends. Leaving the ligament to heal without a brace can lead to poor healing, chronic instability and dysfunction.

We currently use the Ossur Rebound Dynamic Force brace. This applies a dynamic force to the calf when the knee bends. As your knee approaches ninety degrees the brace pushes the shin bone forwards to relieve the force on the PCL.

It does this is to allow some healing and protection to the PCL structure. Studies have shown using a dynamic force brace over a period of time can allow and aid healing of the ligament.

The physiotherapy or orthotic team will provide and fit your brace in the initial stages after injury. It may need adjusting as swelling reduces, so the fit of the brace will be monitored for this purpose and to relieve any pressure or irritation.

The brace must be worn 24 hours a day for four months. It can be removed for showering purposes only.

At four months post injury you will be re-assessed for brace removal.

Physiotherapy rehabilitation

For the first two weeks post injury you will require walking aids to limit weight bearing on the injured leg. This reduces the load on the knee joint and provides some initial protection. You should follow the PRICE regime (protection/rest/ice/compression/elevation). Ice wrapped in a towel or cloth can be applied for 15-20 minutes and repeated every 2-3 hours. Do not apply ice directly to your skin.

After your initial physiotherapy review you should join our knee rehabilitation class. This is a physiotherapy led group session that is individualised to your treatment goals.

Depending on the types of activity or sport that you aim to resume, full rehabilitation can take several months. This requires great commitment. Attending physiotherapy appointments/ classes regularly is key to ensuring that you reach your full potential.

Initially the exercises will be designed to improve your range of movement, initiate muscle activity and control pain and swelling. Later exercises involve increased intensity, and focus on improving strength, endurance, and stability.

During your rehabilitation, you will be asked to complete some physical tests as well as questionnaires to measure your progress. These enable your physiotherapist to assess when you are ready to safely progress to at each stage of rehabilitation and ultimately when you are ready to return to sport. If we have any concerns, we can directly liaise with the orthopaedic consultants at any time during your rehabilitation journey.

It is very important to follow the physiotherapist's guidance in order to avoid the risk of further injury and be able to resume your planned activities or sports as quickly as possible.

Complications

Pain.

Pain thresholds and pain levels vary from person to person and you will be prescribed painkillers to help reduce any discomfort. Using your medication correctly to keep your pain under control in the early phases of your rehabilitation is important. It will particularly help you to perform the exercises prescribed by your physiotherapist. You will need to consult your own GP (doctor) for further pain medication should this be needed.

Blood clots

Clots can form in the lower leg (DVT) following surgery and carry the risk of travelling through the blood stream to the lungs (PE). You will need to seek urgent medical attention if you develop calf pain and swelling, chest pain, difficulty breathing or coughing up blood.

Stiffness

It is important that you follow your physiotherapist's advice to help reduce the chance of stiffness occurring.

Poor healing

This may occur if you stop wearing the brace as instructed.

Skin Integrity

Regularly check your leg where the brace has contact with the skin. The orthotic team and physiotherapists will provide you with advice on how to maintain skin hygiene. We need to be aware of any signs of pressure sores.

Instability

Knee instability may continue after injury. Your physiotherapy rehabilitation will help to improve this.

Contact details

Should you require further advice or information please contact the Physiotherapy Department at Royal Preston Hospital on **01772 522876** or at Chorley Hospital on **01257 245757**.

Sources of further information

www.lancsteachinghospitals.nhs.uk

www.nhs.uk

www.accessable.co.uk

www.patient.co.uk

All our patient information leaflets are available on our website for patients to access and download:

www.lancsteachinghospitals.nhs.uk/patient-information-leaflets

Lancashire Teaching Hospitals NHS Foundation Trust is not responsible for the content of external internet sites.

Follow us on social media @lancshospitals

Lancashire Teaching Hospitals is a smoke-free site. Smoking is not permitted anywhere on any of our premises, either inside or outside the buildings. Our staff will ask you about your smoking status when you come to hospital and will offer you support and advice about stopping smoking this will include Nicotine Replacement Therapy to help manage your symptoms of withdrawal and the opportunity to speak to a nurse or advisor from the specialist Tobacco and Alcohol Care Team. If you want to stop smoking, you can also contact the Quit Squad Freephone 0800 328 6297.

Please ask a member of staff if you would like help in understanding this information.

This information can be made available in large print, audio, Braille and in other languages.

Department: Physiotherapy

Division: Diagnostics & Clinical Support

Production date: March 2023

Review date: March 2026

JR 946 v1