

POSTEROLATERAL CORNER

RECONSTRUCTION

PATIENT INFORMATION SHEET

Introduction

This information sheet is designed to explain the anatomy and function of the posterolateral complex (PLC), what can happen as a result of injury, a description of the surgery to reconstruct these structures and the rehabilitation thereafter.

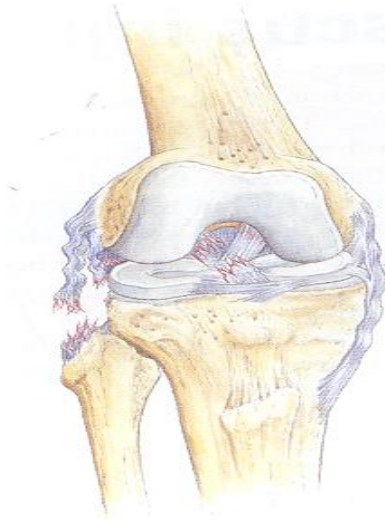
Most but not all reconstructions of the PLC are performed in association with reconstruction of another of the knee ligaments. If this is the case please also refer to the information sheet relating to the other ligament(s) as well.

Anatomy of the Posterolateral Complex

The posterolateral compartment of the knee is a complex arrangement of ligaments, joint capsule and muscles. This arrangement acts as both a static and a dynamic stabilizer of the knee, controlling outward rotational movement backwards of the tibia (shin) on the femur (thigh). This movement can be imagined with the knee bent, keeping your thigh still and turning your foot outwards.

Posterolateral Corner Injury

Although PLC injury is uncommon, it is often associated with other ligament damage in the knee, such as the cruciate ligaments. The mechanism of injury is often the knee pushed back on itself with the lower leg turned out or a direct blow. As a result of injury the knee may become extremely unstable giving way on twisting or pivoting activities. There may be an altered walking pattern the knee and may feel unstable



Rupture of the Anterior Cruciate Ligament and the Posterolateral Complex

Posterolateral Complex Reconstruction

If you are undergoing a PLC reconstruction in conjunction with other ligament reconstruction please read the relevant information sheet which gives more full details about your proposed operation. However the description given below is usually indicative of what a PLC reconstruction entails.

There are two principal choices for the graft used to reconstruct the PLC. If possible, it is probably best to use the hamstring tendons from either the leg which is undergoing the surgery or alternatively the hamstrings from the other leg if the first set are needed for another ligament to be reconstructed (e.g. the anterior or posterior cruciate ligaments). The grafts when taken from the patient's own body are referred to as *autograft*. However, if not enough graft is available or the hamstrings are unsuitable, an autograft can be taken from another area or a graft can be taken from another person – this is termed *allograft*.

There are advantages and disadvantages of both autograft and allograft but most surgeons would agree that if possible it is best to use autograft. Autograft is safe in that it is free from the risk of infection and has the least chance of “rejection” – it is also cheap!

However its supply is limited and there can be some consequences in the short and longer term from taking the graft. Allograft has the advantage of a plentiful supply but has the disadvantages of possible risks of infection, increased graft “rejection” and expense.

In South Africa, I don't use allografts, as there is a possible risk of infection, or the graft, if treated to kill infection, can be weakened

The choice of graft will be discussed with you in detail and please feel free to ask any questions at any stage about this topic, which understandably may be very important to you.

The operation itself of PLC reconstruction involves a larger (up to 10cm) curvilinear cut on the outer aspect of the knee. The operation strictly speaking is not in the knee but on the outside of the joint. If the hamstring tendons are used, there will also be a small incision on the inner aspect of the knee, where they are harvested.

The graft, of whatever type, is placed through the head of the fibula (the smaller of the two bones of the leg) and secured in the outer aspect of the femur using a screw device. There will also be a “branch” of graft going from front to back on the tibia (the large lower leg bone)



Reconstruction of the Posterolateral Complex of the Knee

Post-operative Rehabilitation

As it is likely that you are having a PLC reconstruction in conjunction with a cruciate ligament reconstruction, the PLC reconstruction will alter the operative protocol of the cruciate ligament reconstruction as stated in the patient information leaflet relating to that particular operation.

PLC plus Anterior Cruciate Ligament (ACL) Reconstruction

Your knee will be placed in a brace on day one allowing a full range of movement. You will usually be requested to remain in this brace for **12 weeks** after surgery.

You will need to be **non-weight bearing** during this first six weeks i.e. you will need to avoid putting any weight through your operated leg. The new PLC ligament can be damaged or stretched if excessive strain is placed on it in this early phase.

On removal of the brace at 12 weeks you can then follow the normal post-operative protocol for the ACL reconstruction.

PLC plus Posterior Cruciate Ligament (PCL) Reconstruction

Your knee will be placed in a brace on day one allowing a full range of flexion but the brace will be locked to limit the final **20 degrees of full extension**.

You will need to be **non-weight bearing** for **6 weeks** i.e. during this time you should not put any weight through your operated leg as this may damage the new PLC ligament.

To protect the posterior cruciate ligament graft (not the PLC) you will need to avoid **actively** flexing (bending) your knee for **6 weeks** as

active contraction of the hamstring muscles may harm the graft by placing it under too much strain.

AT 6 weeks you can then follow the normal post-operative protocol for PCL reconstruction, continuing to wear the brace for another 6 weeks.

Complications of Posterolateral Complex reconstruction

The risks and complications for PLC reconstruction are essentially the same as for cruciate ligament reconstruction. However there is one added risk with this procedure;

- Peroneal nerve palsy – there is a small but recognised risk to the nerve which controls the muscle action of pulling the foot upwards i.e. lifting the foot and toes as you walk. At surgery the nerve is identified and protected and should not be cut; however formation of a large bruise (haematoma) around the area of the nerve may result in altered function of this nerve. If this bruising does occur, the function of the nerve usually returns but this may take several months. On very rare occasions this does not return and thus this can be a profound complication, which although rare needs to be appreciated.

IT IS RECOMMENDED THAT YOU DO NOT UNDERTAKE ANY FLIGHTS FOR AT LEAST 6 WEEKS POST-OPERATIVELY, DUE TO THE RISK OF CLOTS IN THE DEEP VEINS OF THE CALF (DVT-DEEP VEIN THROMBOSIS). PLEASE DISCUSS WITH ME IF YOU HAVE QUESTIONS REGARDING THIS OR OTHER ASPECTS OF YOUR SURGERY.

Once again, I must stress that this is a guide and covers most of the aspects of this condition, but if you have any other specific queries please discuss them with me at any time prior or after your surgery. Thank you for reading this. I hope it has been helpful.