

## Posterior Cruciate Ligament Reconstruction (PCLR)

### **Introduction/Aim**

A PCLR is considered in a patient with a PCL rupture and a history of instability. Patients will usually trial conservative management before proceeding to a PCLR. A PCL rupture is often the result of a high trauma injury (e.g. RTA) and as such the patient's functional status should be considered when planning their rehabilitation (active or sedentary, goals, other injuries)

The healing times of the PCL graft is longer than those of the ACL graft due to its extra articular insertion. As such, therapists are advised not to base time scales for PCLR recovery on those typically seen in a patient post ACLR.

### **Scope of practice**

This statement is aimed to guide MSK physiotherapists treating patients post PCLR.

The statement and recommendations should always be used in conjunction with the clinical reasoning skills of the physiotherapist, any specific post operative instructions and patients should always be treated on a case by case basis.

### **Evidence base**

This best practice statement is based upon the 2013 PCL Guidelines and expert opinion. See reference list from PCLR Guidelines dated 2013 (attached) and updated article list 2020

### **Physiotherapy Recommendations**

*Timescales are approximate and rehabilitation progress, at each stage, is guided by minimal swelling, resolution of pain, good muscle recruitment and no changes in ligament laxity on testing.*

#### **Phase 1 (0-6 weeks)**

*Precautions: Avoid excessive/increased posterior tibial stresses.  
No active hamstrings exercises.*

#### **Goals**

Reduce  
Inflammation

#### **Recommendations**

Ice approx 10 – 20 minutes approx 2 hourly  
Elevate when resting

Reduce posterior  
sag

Place pillow under proximal tibia at rest

Increase ROM (Aim for 90° by 6 weeks)	Brace locked at 0° and unlocked only for exercise sessions (Brace can be removed for ROM ex's under physiotherapy supervision) Prone passive knee flexion 0 - 90° Patellar mobilisations
Increase muscle strength	Isometric quadriceps, OKC quads in brace set at 0 - 60° and appropriate hip, glute and calf strengthening exercises
Progress mobility	Mobilise TWB 0-6 weeks in knee brace locked in full extension

## **Phase 2 (6-12 weeks)**

*Precautions: Avoid excessive/increased posterior tibial stresses.  
Avoid active hamstrings exercises until week 8.*

<b>Goals</b>	<b>Recommendations</b>
Aim for full range of movement	Continue to increase passive and auto assisted flexion and extension
Remove brace	Wean off brace from 6 weeks post-op
Progress weight bearing	Progress to FWB from 6-10 weeks post-op
Increase muscle strength	Gradual increase in open chain quadriceps exercises Limit closed kinetic chain exercises to 0-60° flexion (leg press, mini squats) Start active <b>unresisted</b> hamstring exercises at 8 weeks Exercise bike with no toe clips (to avoid resisted hamstrings work) and low resistance
Improve proprioception	Wobble board, trampette, or BOSU exercises

## **Phase 3 (12 weeks – 1 year)**

*Precautions: Avoid excessive/increased posterior tibial stresses*

<b>Goals</b>	<b>Recommendations</b>
Restore functional strength, endurance, neuromuscular control and confidence	Resisted isolated hamstrings may commence at 12 weeks post-op Progress proprioception *Plyometric and running drills not before 4months Functional rehabilitation

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Posterior Cruciate Ligament Reconstruction Best Practice Statement

## Key Points

- Evidence available remains variable and inconsistent and there are no RCTs comparing one programme of rehabilitation versus another.
- These recommendations should be used alongside clinical reasoning.
- If the patient is not progressing as expected, this must be discussed with a senior physiotherapist or operating surgeon/consultant
- Return to sport should be guided by a stable, non-irritable knee with full ROM, hop test results and strength of the affected limb should be >90% of the unaffected limb (assuming contralateral limb is unaffected).
- Return to sport should be guided by functional goals and not timescales.
- Use isokinetic testing *before* plyometric and running drills commence
- Driving can commence when a patient has sufficient mobility and neuromuscular control to do so, **and** has obtained advice from their insurance company. This will likely be 12 weeks.