PCL and Posterolateral Corner Rehab Protocol

Rehabilitation after combined PCL and posterolateral corner reconstruction

Physiotherapy after combined posterior cruciate ligament and posterolateral corner reconstruction. Associate Professor Chinmay Gupte, PhD, FRCS (Tr & Orth). Version 2026. Last reviewed: [MONTH] 2026.

Combined PCL and posterolateral corner reconstruction carries two sets of restrictions at once. You take half your weight through the leg for three weeks and wear an immobiliser holding the knee straight for the first two, then a dynamic PCL brace. Rotation and hamstring restrictions run to four months, and return to sport is usually beyond twelve months.

> **Why this protocol is stricter than either operation alone.** The posterior cruciate ligament stops the shin sliding backwards. The posterolateral corner, made up of the fibular collateral ligament, the popliteus tendon and the popliteofibular ligament, resists the knee opening outwards and the shin rotating outwards. Reconstructing both means protecting against both at once, and where the two protocols differ, this one takes the more restrictive.
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> For isolated injuries see the PCL reconstruction rehab protocol or PCL injury treated without surgery. If your ACL was also reconstructed, further restrictions apply and the ACL rehab protocol is read alongside this one.

The four restrictions that define this protocol

1. **50% weight bearing for the first three weeks** with crutches, then progressing towards full
2. **No isolated hamstring contraction.** The hamstrings pull the shin backwards, straight onto the PCL graft. [CONFIRM: four months, extended from the three months used for an isolated PCL, in line with posterolateral corner practice]
3. **No tibial external rotation.** Avoid turning the shin or the foot outwards, particularly when sitting, for four months [CONFIRM]
4. **No varus stress.** Nothing that pushes the knee outwards, and no crossing the legs

Alongside these: no unsupported knee flexion, since gravity drags the shin backwards, and range of movement work is done lying face down. Support the whole limb when the leg is straight, and sleep with a pillow under the upper shin.

Recovery timeline at a glance

Phase	Timing	Weight bearing	Brace	Focus
1	0 to 2 weeks	50%	Immobiliser locked in full extension, off only for range work	Protect both reconstructions, full extension, quadriceps activation, prone range
2	2 to 6 weeks	50% to 3 weeks, then progress to full	Dynamic PCL brace	Gait, range of movement, early strengthening in the brace
3	6 to 12 weeks	Full	Dynamic PCL brace	Range towards full, closed chain strength, single leg control
4	3 to 6 months	Full	Out of daytime use at 12 weeks, night wear to 6 months	Strength, hamstring and rotational work introduced at 4 months
5	6 to 12 months	Full	None	Running, agility, sport specific work
6	From 12 months	Full	Functional brace for sport if prescribed	Staged return to sport on testing

Phase 1: 0 to 2 weeks

Bracing and weight bearing

Immobiliser in full knee extension, worn at all times other than when working on range of movement or doing quadriceps exercises. **50% weight bearing with crutches.**

FOR YOU

Half your body weight through the leg means the crutches are doing real work rather than just steadying you. The immobiliser holds the knee straight and comes off only for your range of movement and quadriceps exercises.

Two habits matter more than any exercise. Keep the leg fully supported when it is straight, so the calf never hangs. And do not turn your foot outwards when you sit, which is the position people fall into without noticing and the one the corner reconstruction cannot tolerate.

FOR YOUR PHYSIOTHERAPIST

- Prone passive range of movement only, avoiding hamstring guarding [CONFIRM: permitted range in the first two weeks]
- Patellar mobilisations in all planes
- Quadriceps sets, progressing to straight leg raise in the brace
- Ankle pumps and calf work with the knee in extension
- Hip work avoiding external rotation of the limb
- Electrical stimulation where quadriceps control is poor
- Ice, compression and elevation for swelling
- Upper body conditioning to maintain fitness

Criteria to progress

- Full knee extension
- Good quadriceps control, with no lag on straight leg raise
- No signs of active inflammation
- Wound healed and swelling settled

Phase 2: 2 to 6 weeks

Bracing and weight bearing

The dynamic PCL brace replaces the immobiliser at two weeks, applying a constant forward force to the upper shin. **50% weight bearing continues to three weeks, then progresses towards full** [CONFIRM: rate of progression]. Strengthening is done in the brace.

FOR YOU

The brace change at two weeks is the first real step. It does the job the PCL graft is not yet strong enough to do on its own, and it is worn day and night at this stage.

FOR YOUR PHYSIOTHERAPIST

- Graded loading from 50% at three weeks towards full
- Gait retraining, watching for a posterolateral thrust in stance
- Progress range towards full
- Closed chain strengthening within the brace: wall slides and leg press within a controlled range
- Standing four way hip work, avoiding external rotation
- Stationary bike set up to minimise hamstring work: foot forward on the pedal, no toe clips, seat slightly high
- Single leg balance with the knee slightly flexed once weight bearing allows
- Still no isolated hamstring work, no tibial external rotation, no varus stress

Criteria to progress

- Full weight bearing with a normal gait and no posterolateral thrust
- No effusion, swelling or pain after exercise
- Range of movement approaching the other side

Phase 3: 6 to 12 weeks

Full weight bearing, dynamic PCL brace continuing day and night. Progress range towards full, build closed chain strength and single leg control. The rotational and hamstring restrictions still apply throughout.

Phase 4: 3 to 6 months

> **The brace comes out of daytime use at twelve weeks** [CONFIRM], with night wear continuing to six months as in the isolated PCL protocol. **Isolated hamstring work, tibial external rotation and rotational loading may be introduced from four months** [CONFIRM], built gradually rather than started at load.

FOR YOUR PHYSIOTHERAPIST

- Gym based strengthening: leg press, hip machines, squat to chair, lateral lunges
- Single leg progression: single leg press, step ups, lateral step ups, step downs, single leg squats
- Romanian deadlift once hamstring loading is permitted, which keeps hamstring force close to vertical at a small knee flexion angle
- Bridges progressing to single leg bridges
- Balance and proprioception with perturbation
- Conditioning: treadmill walking, pool jogging, swimming with **no breaststroke or frog kick**
- [CONFIRM: whether resisted open chain knee extension machines are permitted at any stage, which some posterolateral corner protocols exclude entirely]

Criteria to start running and impact work

- Full pain free range of movement
- Quadriceps, hamstring and hip strength at 80% of the other leg by dynamometer [CONFIRM THRESHOLD]
- No pain or swelling after exercise
- No varus or rotational instability on examination
- Surgeon clearance

Phase 5: 6 to 12 months

No high impact, cutting or twisting activity before this phase. Running is introduced through an interval programme, then plyometrics and agility, straight line first, then lateral, then multiplanar.

- Interval running programme on even ground
- Plyometric progression from double leg to single leg
- Change of direction work introduced late, once rotational control is demonstrated
- Sport specific conditioning
- A functional brace may be prescribed for impact work

Phase 6: from 12 months, return to sport

Return to sport after a combined reconstruction is later than after either operation alone, usually beyond twelve months. The return is staged through non contact practice, full practice, then competition.

Return to sport battery [CONFIRM THRESHOLDS: as used in the isolated PCL protocol]

- **Strength:** quadriceps, hamstring and gluteal index at 90% or more of the other leg
- **Hamstring to quadriceps ratio:** 66% or more
- **Hop tests:** 90% or more, with good landing mechanics
- **Stability:** no varus or posterolateral rotatory instability on examination
- **Patient reported outcome:** KOOS sport above 90%, IKDC above 93
- **Psychological readiness** assessed formally
- **Clinical:** no effusion, full range of movement, running programme completed without pain or swelling
- **Surgeon clearance**

Everyday milestones

Activity	Typical timing
50% weight bearing on crutches	0 to 3 weeks
Out of the immobiliser, into the dynamic PCL brace	2 weeks
Progressing to full weight bearing	From 3 weeks
Crutches discarded	When gait is normal without a posterolateral thrust
Out of the brace during the day	12 weeks [CONFIRM]
Night brace stops	6 months, if tolerated to that point
Driving	Self certified, and not before full weight bearing. See the driving section
Desk based work	[CONFIRM. Often possible early, limited by transport and by keeping the leg supported]
Manual work	[CONFIRM. Usually after full weight bearing and out of the daytime brace]
Running	From 6 months, on meeting the criteria
Return to sport	Usually beyond 12 months

Driving after surgery

Driving is self certified. There is no fixed date at which you are allowed to drive. You may drive when you can perform an emergency stop and any evasive manoeuvre without your operated knee hindering the movement. Only you can judge that, and it varies considerably between people.

As a guide:

- **Operated right knee:** we would not usually advise driving before 6 weeks
- **Manual car, either knee:** we would not usually advise driving before 6 weeks

- **Operated left knee in an automatic car:** often possible earlier, once you can meet the test above

In addition, you cannot drive at 50% weight bearing or in an immobiliser locked in extension, so driving does not start before 3 weeks at the very earliest.

You should also be off opioid painkillers and anything else affecting your reactions, and able to get in and out of the car independently. Try the emergency stop in a stationary car first, then in a quiet car park before driving on the road.

Tell your insurer. Driving before you are medically fit can invalidate your policy if you are involved in an accident. **The DVLA usually does not need to be told** about recovery from surgery, unless you are still unable to drive three months afterwards or your surgeon advises it.

Frequently asked questions

How long does recovery take after PCL and posterolateral corner reconstruction?

Half weight bearing for three weeks, then progressing to full. The immobiliser comes off at two weeks and the dynamic brace out of daytime use at twelve weeks. Running follows from six months on meeting the criteria, and return to sport is usually beyond twelve months.

How much weight can I put through my leg?

Half your body weight for the first three weeks, using crutches, then progressing towards full. Two reconstructions are healing at once, so load is introduced gradually rather than all at once.

Why must I not turn my foot outwards?

The posterolateral corner resists the shin rotating outwards. Turning the shin or foot out, particularly when sitting, loads the reconstruction in exactly the direction it was rebuilt to resist. The restriction runs to four months.

Why can I not use my hamstrings?

The hamstrings pull the shin backwards, which is the movement the PCL exists to prevent. Isolated hamstring work is avoided for four months after a combined reconstruction, longer than after an isolated PCL reconstruction.

How long do I wear a brace?

An immobiliser holding the knee straight for the first two weeks, then a dynamic PCL brace. The brace comes out of daytime use at twelve weeks and is worn at night until six months if tolerated.

Is this the same as PCL reconstruction on its own?

No. An isolated PCL reconstruction has no rotational restrictions and a shorter hamstring restriction. This protocol adds the posterolateral corner restrictions on top, and takes the more restrictive option where the two differ.

References

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About this protocol

Rehabilitation protocol for combined posterior cruciate ligament and posterolateral corner reconstruction, used by Associate Professor Chinmay Gupte, PhD, FRCS (Tr & Orth), MA (Oxon), BMBCh (Oxon), consultant knee and sports injury surgeon, London. Version 2026. Last reviewed [MONTH] 2026. Next review due [MONTH] 2027.

Weight bearing, bracing and restriction periods are set by the operating surgeon. Where the isolated PCL protocol and standard posterolateral corner practice differ, this document takes the more restrictive of the two.

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This protocol is a general guideline and does not replace the specific instructions given by your own surgeon and physiotherapist. If you are being treated elsewhere, please share this document with your physiotherapist together with your operation note.