

## PCL + Posterolateral Corner (PLC) Reconstruction Rehabilitation Protocol

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The goals of this protocol are to protect the reconstructions while preventing knee stiffness, so early Passive ROM exercises are very important. In addition, preventing excessive anterior and/or posterior tibia translation is also very important.

| Phase / Goals                                                                                                                                                                                                                                                               | Immobilization                                                                                                                                                                                                 | ROM                                                                                                                                                                                                                                                                                                                                                                                                                | Therapeutic Exercises                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Phase 1 (0-2 weeks)</b><br>Goals: <ul style="list-style-type: none"> <li>• SLR x 20 without lag</li> <li>• Normal gait mechanics</li> <li>• PROM: 0 → 90°</li> <li>• Hold wall slides x 2 weeks</li> <li>• No varus stress, hyperextension or tibial rotation</li> </ul> | <ul style="list-style-type: none"> <li>• Toe touch weight bearing x 6 weeks</li> <li>• Brace locked in full extension during ambulation and sleep</li> <li>• PCL brace at all times including sleep</li> </ul> | <ul style="list-style-type: none"> <li>• Begin PROM 0 – 90 deg</li> <li>• Avoid hyperextension and tibial rotation</li> <li>• Patellar mobilization all directions</li> </ul> Modalities: <ul style="list-style-type: none"> <li>• NMES if unable to perform SLR without lag</li> <li>• Hi-volt estim for edema control/ IFC/ice estim for pain control</li> <li>• Cryocuff/Game Ready Compression/ Ice</li> </ul> | <ul style="list-style-type: none"> <li>• Bike for ROM (rocking)</li> <li>• Flexion: heel slides, seated knee flex</li> <li>• Extension: heel prop, prone hang</li> <li>• Long sitting HS stretch</li> <li>• Quad sets, glut sets</li> <li>• SLR x4 with assist until no lag</li> <li>• Standing TKEs</li> <li>• Ankle pumps</li> <li>• Calf raises on leg press</li> <li>• Limit knee varus (i.e. no side lying hip abd or side stepping)</li> <li>• No hamstring isometrics for 6 weeks</li> </ul> |
| <b>Phase 2 (3-6 weeks)</b><br>Goals: <ul style="list-style-type: none"> <li>• Minimal joint effusion</li> <li>• Avoid isolated active hamstring exercises</li> <li>• No varus stress, hyperextension, posterior tibial sag or tibial rotation</li> </ul>                    | <ul style="list-style-type: none"> <li>• Toe touch weight bearing</li> <li>• Brace unlocked, 0-90</li> <li>• PCL brace at all times including sleep</li> </ul>                                                 | <ul style="list-style-type: none"> <li>• Begin full A/PROM as tolerated</li> </ul> Modalities: <ul style="list-style-type: none"> <li>• Cont. above</li> <li>• Scar STM when incision healed</li> <li>• Patellar mobs all directions</li> <li>• Gentle prone quad stretch/knee flex</li> <li>• Manual assist extension/passive stretch</li> <li>• HS STM for extension assist</li> </ul>                           | <ul style="list-style-type: none"> <li>• Continue above</li> <li>• Heel slides/wall slides/seated assist flexion</li> <li>• Quad sets/SLR in Brace at 0° (assist patient with this exercise until solid quad contraction developed, prevent posterior sag)</li> <li>• BFR – initiate post op day 15</li> <li>• Glut sets, clams/mini-hydrants/glut pushes</li> <li>• No hamstring isometrics for 6 weeks</li> <li>• ***No open chain HS x 4 months</li> </ul>                                       |

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| <b>Phase 3 (7-12 weeks)</b><br>Goals: <ul style="list-style-type: none"> <li>• Maintain full AROM</li> <li>• No open chain HS x 4 months</li> <li>• Limit knee varus</li> <li>• No tibial external rotation</li> </ul>        | <ul style="list-style-type: none"> <li>• Progress to FWB</li> <li>• PCL Brace full time</li> </ul>                                                       | <ul style="list-style-type: none"> <li>• Full A/PROM</li> </ul> Manual: <ul style="list-style-type: none"> <li>• Joint mobs PRN for full flex and ext ROM</li> <li>• Patellar mobs/ Scar STM with extractor</li> </ul> Modalities: <ul style="list-style-type: none"> <li>• Ice/stim PRN</li> </ul> | <ul style="list-style-type: none"> <li>• Stationary bike with no resistance</li> <li>• LE stretches</li> <li>• Wall sits/squats &lt;60° flex, progress to ball toss with wall sit and SL squat</li> <li>• Total gym SL leg press, calf raise</li> <li>• Step ups/lateral step over's- progress to faster pace</li> <li>• No open chain HS x 4 months</li> </ul>                                                                        |
| <b>Phase 4 (13-16 weeks)</b><br>Goals: <ul style="list-style-type: none"> <li>• Jogging without pain/swelling</li> <li>• SL jump w/o difficulty</li> <li>• Functional Knee Test results &gt;75% (taken at week 16)</li> </ul> | <ul style="list-style-type: none"> <li>• PCL Brace full time</li> </ul>                                                                                  | <ul style="list-style-type: none"> <li>• Full A/PROM</li> <li>• Avoid tibial external rotation</li> </ul>                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• Continue everything in phase 3</li> <li>• Begin elliptical and stair master</li> <li>• May begin swimming</li> <li>• SL dead lift and RDLs</li> </ul>                                                                                                                                                                                                                                         |
| <b>Phase 5 (17-20 weeks)</b><br>Goals: <ul style="list-style-type: none"> <li>• Sport-specific training without pain or swelling</li> <li>• Functional Knee Test results &gt;85% (taken at week 20)</li> </ul>                | <ul style="list-style-type: none"> <li>• PCL Brace full time</li> </ul>                                                                                  | <ul style="list-style-type: none"> <li>• Continue Full A/PROM</li> <li>• Modalities PRN</li> </ul>                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Increase walk-jog progression</li> <li>• Figure 8 running patterns</li> <li>• Gym-program activities</li> <li>• Sport-related strengthening</li> <li>• Can begin isolated resisted hamstring exercises</li> <li>• Otherwise progress per standard PCL protocol</li> </ul>                                                                                                                     |
| <b>Phase 6 (20-28 weeks)</b><br>Goals: <ul style="list-style-type: none"> <li>• Functional Knee Test Results &gt;90% (taken at week 24)</li> </ul>                                                                            | <ul style="list-style-type: none"> <li>• PCL Brace full time</li> </ul>                                                                                  | <ul style="list-style-type: none"> <li>• Continue Full A/PROM</li> </ul>                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Begin walk-jog progression week 20 if full ROM/no edema/full strength and can perform SL hops x10 pain-free (SUPERVISED)</li> <li>• No contact</li> <li>• No cleats</li> <li>• No competition</li> <li>• Gym-program activities</li> </ul>                                                                                                                                                    |
| <b>Phase 7 (&gt;29 weeks)</b>                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• FWB</li> <li>• DC full-time brace</li> <li>• PCL brace for sports activities until 12 months post op</li> </ul> | <ul style="list-style-type: none"> <li>• Full A/PROM</li> </ul>                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>• Start plyometric/jump training</li> <li>• Isokinetic test for Quad strength difference <math>\leq 10\%</math> and unilateral Hamstring/Quad strength ratio of 65% or better</li> <li>• Continue strength testing monthly until patient passes then perform functional testing</li> <li>• No cutting/pivoting x 9 months</li> <li>• Dr.Flikkema to discuss prior to return to sport</li> </ul> |

**RETURN-TO-SPORT CRITERIA:**

*Full return to all sports and games*

- Atleast 10 months from surgery
- No functional complaints, full range of motion & no effusion
- Confidence when running, cutting, jumping at full speed
- >90% isometric quadriceps strength
- >90% contralateral values on hop tests
- >90% Quad Index LSI with Biodex or HHD
- >90% Quad peak torque/body weight on Biodex (if applicable)
- Excellent ACL-RSI
- Wear PCL brace for sports/recreational activities for first year after surgery