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PCL Injury Non-Surgical Rehabilitation Protocol

Phase / Goals	Immobilization	ROM	Therapeutic Exercises
Phase 1 (0-2 weeks) Goals: • ROM 0-90° • Protect posterior tib sag • No quad lag	• PCL brace at all times including sleep • 20lb flat foot weight bearing in brace x 2 weeks	• PROM 0-90° – all ROM exercises performed prone or side lying x 2 weeks • Modalities PRN	• Home stretching 2-3x daily • Flexion/extension seated/calf assisted • Quad sets, SLR • Ankle pumps • No hamstring isometrics x6 weeks
Phase 2 (3-4 weeks) Goals: • Control effusion • Full PROM • Full weight bearing	• PCL brace at all times including sleep • Advance to full weight bearing	• Full PROM, begin AAROM ◦ Avoid hyperextension x 12 weeks • Modalities PRN ◦ Begin BFR	• Closed chain strengthening 0-45° • Quad sets/SLR in Brace at 0° (assist patient with this exercise until solid quad contraction developed, prevent posterior sag) 3x10 3x's/daily, may use ankle weights as they will increase anterior translation • Begin stationary bike w/ no resistance once ROM 0-120° • Can begin pool therapy, but NO kicking
Phase 3 (5-6 weeks) Goals: • FWB • Full ROM • 4+/5 quad strength	• FWB • PCL brace at all times including sleep	• Progress to full A/PROM ◦ Avoid hyperextension x 12 weeks • Patellar mobilization • Modalities PRN	• ¼ squats, leg press 0-60° light weight • Gentle sit and reach for hamstrings (no hypertext) • Start proprioception training in brace • Stationary bike with minimal resistance • Single leg stance

Phase 4 (7-8 weeks) Goals: FWB	- FWB - PCL Brace full time	- Full A/PROM - Avoid hyperextension x 12 weeks - Patellar mobilization	- Light RDL/sliders - Leg press 0-90° light weight - Squat progression - Stationary bike advance resistance - Progress from bilat leg press to unilateral w/ light weight
Phase 5 (9-12 weeks) Goals: 5/5 strength - Normal gait - Good single leg stance	- FWB - PCL Brace full-time	- Full A/PROM - Avoid hyperextension x 12 weeks	- Start plyometric/jump training - Start long lever hamstring exercises and strengthening - Isokinetic test for Quad strength difference $\leq 10\%$ and unilateral Hamstring/Quad strength ratio of 65% or better - Initiate early return to play exercises - Return to running when sufficient strength and stability (>90% quad strength and girth)
Phase 6 (13-16 weeks) Goals: Return to sport	- FWB - PCL brace during training or sport	Full A/PROM	- Start resisted dominant hamstring - Advance return to play exercises and drills - Avoid deep loaded CKC flexion until 16 weeks - Continue strength testing monthly until patient passes then perform functional testing - Dr. Flikkema to discuss prior to return to sport
Phase 7 (17-28 weeks) Goals: Full game play without instability or swelling	- FWB - PCL brace optional	Full A/PROM	- Continue strength and plyometric training - Advance game time and endurance

RETURN-TO-SPORT CRITERIA:

Full return to all sports and games

- Atleast 3 months from injury
- 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