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ACL/PCL/MCL Reconstruction Rehabilitation Protocol

Phase / Goals	Immobilization	ROM	Therapeutic Exercises
Phase 1 (0-2 weeks) Goals: • ROM 0-90° • Protect posterior tib sag • No quad lag	• Knee immobilizer until POD 3-5 when swelling allows for PCL brace • PCL brace at all times including sleep • Toe-touch weight bearing x 6 wks	• PROM 0-90° – all ROM exercises performed prone x 6 weeks • Patellar & patellar tendon mobilization • 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	• PCL brace at all times including sleep • TTWB x 6 wks	• Full PROM, begin AAROM ◦ PRONE x 6 wks • Patellar mobilization • Modalities PRN	• 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 • BFR – initiate post op day 15
Phase 3 (5-6 weeks) Goals: • FWB • Full A/PROM • 4/5 quad strength	• PCL brace at all times including sleep • TTWB x 6 wks	• Progress to full A/PROM • Patellar mobilization • Modalities PRN	• Begin stationary bike w/ no resistance once ROM 0-120° • ¼ squats, leg press 0-60° light weight • Gentle sit and reach for hamstrings (no hypertext) • Start proprioception training in hinged brace • Can begin pool therapy, but NO kicking

Phase 4 (7-8 weeks) Goals: FWB	• Wean from crutches, advance to full weight bearing • PCL brace full-time	• Full A/PROM • Patellar mobilization	• Stationary bike with no resistance • Small forward step-ups • Toe/heel raises • Progress from bilat leg press to unilateral w/ light weight • Continue with strengthening from phase 3
Phase 5 (9-12 weeks) Goals: • 5/5 strength • Normal gait • Good single leg stance	• FWB • PCL Brace full-time	• Full A/PROM	• Double knee bends. Double leg bridges • Reverse lunge static holds • Stationary bike, water walking • Leg press 0-90° light weight • Mini squats 0-45°, progress to single leg wall squats • Stationary bike (resistance at 10 wks), water walking
Phase 6 (13-16 weeks) Goals: • 45 min aerobic endurance	• FWB • PCL brace full-time	• Full A/PROM	• Treadmill walking, aqua jogging, alter-G • Elliptical, rowing • Balance squats • Single leg deadlift • Leg press (max. knee flexion 70) • Continue to progress strengthening from phase 5
Phase 7 (17-28 weeks) Goals: • Begin running progression • Initiate agility exercises	• FWB • PCL brace full-time	• Full A/PROM	• Start walk-run program at 20 weeks • Stairmaster • Backward walking • Start light agility program and may progress as tolerated
Phase 8 (>29 weeks) Goals: • Return to play progression	• FWB • DC full-time brace ○ PCL brace for sports activities until 12 months post op	• Full A/PROM	• Start plyometric/jump training. Agility exercises • Isokinetic test for Quad strength difference $\leq$ 10% and unilateral Hamstring/Quad strength ratio of 65% or better • Continue strength testing monthly until patient passes then perform functional testing • No cutting/pivoting x 9 months • Dr. Flikkema to discuss prior to return to sport

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