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ACL/MCL Reconstruction Rehabilitation Protocol

Phase / Goals	Immobilization	ROM	Therapeutic Exercises
Phase 1 (0-2 weeks) Goals: • ROM 0-90° • No quad lag	• Hinged Knee Brace at all times including sleep • Toe-touch weight bearing x 6 wks	• PROM 0-90° • Patellar & patellar tendon mobilization • Modalities PRN	• Home stretching 2-3x daily • Flexion/extension seated/calf assisted • Quad sets, SLR • Ankle pumps
Phase 2 (3-4 weeks) Goals: • Control effusion • Full PROM	• Hinged brace at all times including sleep • TTWB x 6 wks	• Full PROM, begin AAROM • Patellar mobilization • Modalities PRN	• Closed chain strengthening 0-45° • Quad sets/SLR in Brace at 0° • BFR – initiate post op day 15
Phase 3 (5-6 weeks) Goals: • FWB • Full A/PROM • 4/5 quad strength	• Hinged 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 • Functional ACL brace for any weight bearing activities	• 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 • Functional ACL brace for any weight bearing activities	• 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 • Wean from ACL brace	• 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 • No brace ○ May continue ACL for impact/sports	• Full A/PROM	• Start walk-run program • Stairmaster • Backward walking • Start light agility program and may progress as tolerated
Phase 8 (>29 weeks) Goals: • Return to play progression	• FWB • May use brace for sports if desired	• 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 • Dr. Flikkema to discuss prior to return to sport

RETURN-TO-SPORT CRITERIA:

Full return to all sports and games

- Atleast 9 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
- May choose to wear ACL brace for sports/recreational activities for first year after surgery