Medial Knee Reconstruction Protocol

Restrictions:
• NWB & Long lever hinged knee brace 0-90° for 6/52.
• No knee extension machine for 12/52.
• Jogging from 16/52.

0 – 2 Weeks
Goals: Control pain and swelling; preserve patellofemoral mobility.
• Check for evidence of distal neurovascular deficit, DVT or infection.
• POLICE protocol for management of pain and swelling/effusion.
• NWB for 6 weeks.
• Long lever brace fitted ROM 0-90° to be worn at all times apart from washing/dressing and to perform ROM exercises.
• Gentle passive/active-assisted ROM between 0-90° (CPM if available).
• Emphasize full extension.
• Patella mobilisation (superior/inferior, medial/lateral).
• TAQ’s, SLR in brace (30 reps 4-5x daily).
• Precautions: Avoid valgus and internal/external rotation of the knee.

2 – 6 Weeks
Goals: Resolve effusion; SLR no lag; ROM 0-115° by 6/52 post-op.
• ROM = Full extension, progress flexion as tolerated.
• Brace to be worn when mobile and when sleeping.
• NWB hip/lumbo-pelvic muscle maintenance exercises.
• Prone or standing hamstring curls.
• Static bike no resistance from 4 weeks.

6 – 8 Weeks
Goals: Restore full ROM and normal walking.
• WBAT with 2 EC’s, progress to FWB if no limp by 8 weeks.
• Open brace to allow full ROM.
• Double leg closed kinetic chain (CKC) exercises ≤70° of knee flexion.
• Start double legged perturbation exercises (e.g. wobble board).
• Continue to progress hip/lumbo-pelvic exercises.

8 – 12 Weeks
Goals: Restore normal gait; able to perform single-leg squat of 45° knee flexion with normal mechanics.
• FWB, no restrictions.
• Wean of brace as confidence allows from 12 weeks.
• Progress CKC exercises (≤70° flexion) and perturbation exercises to single leg as able.
• Add bilateral support for large muscle group weight training.
• Start static bike with light resistance.
• Precautions: No use of knee extension machine.

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12 – 16 Weeks
Goals: Able to perform single-leg squat of 60° knee flexion with normal mechanics.
• No Brace.
• Progress weight training to single leg.
• Progress difficulty of perturbation and neuromuscular exercises.
• Progress cardiovascular exercise with bike, walking, flutter kick swimming.

16 – 20 Weeks
Goals: Good lower extremity alignment with closed-kinetic chain and impact drills.
• Consider brace for dynamic activities only.
• Directional lunging.
• Basic agility/footwork drills.
• Basic double leg plyometric drills.
• Dynamic and directional challenge to lower extremity proprioception and balance drills.
• Interval jogging (straight line, no hills).

20 Weeks +
Goals: Return to sport when >90% LSI for quadriceps strength, hamstrings strength and battery hop tests (e.g. hop for distance, hop for time, cross over hop).
• Continue weight training.
• Progress plyometric drills.
• Progress speed/intensity of agility drills.
• Initiate acceleration/deceleration/cutting drills.
• Sport-specific drills.

References:
