

Medial Patellofemoral Ligament Reconstruction (MPFL) Rehabilitation & Return to Play Protocol

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PHASE I (0-6 week)

Goals

- Protect fixation and surrounding soft tissue
- Regain active quadriceps, VMO, and glute control.
- Full knee extension
- Minimize the adverse effects of immobilization through range of motion exercises from 0-90.

A. Brace

- Week 0-2: Locked in extension when ambulating and sleeping. Unlock for all therapeutic exercises and range of motion exercises.
- Week 2-4: Locked in extension when ambulating, partial weight bearing, and sleeping. Unlock for all therapeutic exercises and range of motion exercises.
- Week 4-6: Unlock brace for sleeping. Continue with brace locked in full extension for ambulation.

B. Weight-Bearing Status

- Week 0-2: Non-Weight Bearing with crutches.
- Week 2-4: Partial Weight Bearing with crutches.
- Week 4-6: Full Weight Bearing

C. Therapeutic Exercises

- Quad sets and isometric adduction with biofeedback for VMO
- Heel slides to 0-90 degrees of flexion starting at 2 weeks.
- ROM exercises for 2 hours, twice daily, start 0-60 advance to 90
- Non weight-bearing gastrocnemius/soles, hamstring stretches
- Straight leg raises in all planes (use brace locked in extension initially until quad strength is good enough to prevent an extension lag)
- Resisted ankle ROM with theraband
- NO Patellar mobilization!
- Begin aquatic therapy at 3-4 weeks with emphasis on gait.

PHASE II (6- 8 weeks)

D. Criteria

- Good quad set
- 90 degrees of knee flexion

E. Goal

- Increase range of flexion
- Avoid overstressing fixation
- Increase quadriceps and VMO control for restoration of proper patellar tracking.

F. Brace/Weight-bearing status

- Week 6-8: Discontinue use of brace while sleeping. Unlocked for ambulation.
- Week 6-8: Weight bearing as tolerated with crutches.

G. Therapeutic Exercises

- Continue exercises as noted above. Progress towards full flexion with heel slides
- Progress to weight bearing gastrocnemius/ soles stretching
- Discontinue CPM if knee flexion is at least 90 degrees
- Begin aquatic therapy, emphasis on normalizing gait
- Balance exercises (single- leg standing, KAT)
- Remove brace for SLR exercises
- Stationary Bike (high seat, low tension)
- Short arc quadriceps exercises in pain-free (0-20, 60-90 of flexion), emphasize movement quality
- Wall slides progressing to mini-squats (0-45 of flexion)

PHASE III (8 weeks- 4months)

H. Criteria

- Good quadriceps tone and no extension lag with SLR
- Non-antalgic gait pattern
- Good dynamic patellar control with no evidence of lateral tracking or instability

I. Goals

- Continue improvement for quadriceps strength
- Progress with strength, power, and proprioception

J. Brace/Weight-bearing status

- May discontinue use of crutches when: no extension lag with SLR, full extension, non-antalgic gait pattern.
- May use one crutch or cane until gait is normalized

K. Therapeutic Exercise

- Step ups, begin at 2" and progress towards 8
- Stationary bike, add moderate resistance
- 4-way hip for flexion, adduction, abduction, extension
- Leg press 0-45 of flexion
- Closed kinetic chain terminal knee extension with resistive tubing or weight machine
- Swimming
- Stairmaster for endurance
- Toe raises
- Hamstring curls
- Treadmill walking with emphasis on normalization of gait
- Continue proprioception exercises
- Continue flexibility exercises for gastro/sole and hamstrings, ass iliotibial band and quadriceps as indicated.

PHASE IV (4 months+)

L. Criteria

- Good to normal quadriceps and glute strength
- No patellofemoral irritation or instability
- No soft tissue complaints
- Normal gait pattern
- Clearance from physician to begin more concentrated closed kinetic chain exercises and resume full or partial activity.

M. Goals

- Continue improvements in quadriceps and glute strength
- Improve functional strength and proprioception
- Return to appropriate activity level

N. Therapeutic Exercises

- Progress of closed kinetic chain activities
- Jogging in pool with wet vest or belt
- Functional progression sport-specific activities of work hardening as appropriate.