Suezie Kim, MD
Orthopedic Surgeon • Sports Medicine

Procedure: _____

PT PROTOCOL

Medial Patellofemoral Ligament (MPFL) Reconstruction

Rehabilitation Protocol

Weight-Bearing Status

ONLY IF DIFFERENT FROM PROTOCOL BELOW

Weight-bearing and bracing below reflect isolated MPFL reconstruction without a bony realignment procedure. Be aware of additional restrictions if a concomitant procedure (e.g., tibial tubercle osteotomy, cartilage procedure) was performed. Follow the weight-bearing status in the phases below unless a different status is indicated here.

☐ Non-weight-bearing ☐ Toe-touch / partial weight-bearing ☐ Weight-bearing as tolerated

Brace / precautions: _____

1	2	3	4	5	6
Weeks 0–2	**6 Weeks**	**12 Weeks**	**16 Weeks**	**3–5 Months**	**6+ Months**
Protect repair; PWB→WBAT progression, restore quad control	Brace discontinued per criteria; restore full ROM & normalize gait	Full WB; begin cardio (elliptical/stairclimber)	Begin plyometrics/agility program	Interval running; sport-specific training	Unrestricted return to sport

Milestones above are goals, not guarantees; progression is criterion-based.

Phase 1 Weeks 0–2

Weight-Bearing: Brace locked, partial weight-bearing (0–1 week), progressing to weight-bearing as tolerated with crutches (per MD), week 1 on.

Range of Motion: PROM. Heel slides, prone hangs/heel prop for extension. Goal: flexion ≥90° by end of phase.

Brace: Locked initially; may unlock when the patient can walk without increased pain, effusion, or gait deviation.

Therapeutic Exercises

- Ankle pumps.
- Quad sets (consider NMES if quad activation is poor).
- Calf raises.
- Straight leg raise (do not perform with an extension lag).
- Hip abduction.
- Standing hamstring curl.

Phase 2 Weeks 3–6

Weight-Bearing: Weight-bearing as tolerated.

Range of Motion: Maintain full extension; restore flexion to match the contralateral side.

Brace: Unlock once the patient can perform a straight leg raise without an extension lag. Discontinue by 6 weeks (or per surgeon) once gait is normalized.

Therapeutic Exercises

- Stationary bicycle.
- Gentle patellar mobilization (only if stiffness present).
- Ball squats, wall slides, mini-squats, 0–60°.
- Single-leg standing balance: static progressing to dynamic, stable progressing to unstable surfaces.

Phase 3 Weeks 7–12

Weight-Bearing: Full weight-bearing without an assistive device.

Range of Motion: Full; gentle stretching of all muscle groups.

Therapeutic Exercises

Progress to next phase once: no effusion or pain after exercise, normal gait, ROM equal to the contralateral side, and quad/hamstring/glute strength index ≥70%.

- ~8 weeks: elliptical, stair climber, flutter-kick swimming, pool jogging.
- Gym strengthening: leg press, seated/standing hamstring curl, hip abductor/adductor, hip extension, roman chair, seated calf machine.
- Proximal strengthening: bridges (double/single leg, physioball), lateral band walk, standing clamshell/fire hydrant, hamstring walkout.
- Squat to chair, lateral lunges, Romanian deadlifts (single and double leg).
- Single-leg progression: leg press, slide-board lunges, split squats, step-ups (with march, lateral, step-downs), single-leg squats, single-leg wall slides.
- Balance/proprioception: progress single-limb balance with perturbation training.

Phase 4 Weeks 13–16

Goal: Safely progress strengthening and begin bilateral plyometrics and agility work.

Therapeutic Exercises

Progress to next phase once quad/hamstring/glute index ≥80%, hamstring/quad ratio ≥66%, and hop testing ≥80% vs. the contralateral side with good landing mechanics.

- Progress intensity (weight) and volume (repetitions) of strengthening exercises.
- Phase I plyometrics and agility: bilateral, full-weight-bearing plyometrics progressing to single-leg.
- Continue single-limb balance progression with perturbation training.

Phase 5 Months 3–5

Goal: Safely initiate a sport-specific training program.

Therapeutic Exercises

Progress to unrestricted return when quad/hamstring/glute index ≥95%, hamstring/quad ratio ≥66%, hop testing ≥95%, Lysholm >90, KOOS-sports >90, and IKDC subjective score >93, with medical clearance.

- Interval return-to-running program.
- Progress plyometric and agility program (Phase II–III), with a functional brace if prescribed.

Phase 6 6+ Months

Goal: Unrestricted return to sport.

Therapeutic Exercises

- Multi-plane sport-specific plyometric and agility programs.
- Include hard cutting and pivoting depending on the individual's sport.
- Progress non-contact practice → full practice → full play (approximately 6–7 months).