

Alta View Sports Medicine



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Medial Patellofemoral Ligament Repair/Reconstruction

What to Expect

The patella is embedded in the quadriceps and patella tendons and acts as a pulley to increase the amount of force that can be generated by the quadriceps muscles to extend the knee. The patella slides into a groove at the end femur called the trochlea groove forming the patellofemoral joint. Several structures help stabilize the patella in the trochlea including the concavity of the trochlea, leg alignment, and ligament attachments to the patella. The medial patellofemoral ligament is a primary stabilizer that prevents the patella from shifting lateral out of the trochlea groove as the knee starts to flex. This ligament may be torn from a traumatic injury to the knee, most commonly when the patella is dislocated laterally out of the trochlea.

The initial treatment of a patella dislocation is conservative, but in the setting of a complete ligament rupture, persistent instability, or multiple dislocations, the ligament may need to be repaired or reconstructed (replaced) with a tendon graft. A knee arthroscopy is performed to evaluate the entire knee for any associated injuries and small incisions are used to perform the repair/reconstruction.

Appropriate rehabilitation is critical to the success of the procedure.

Phase 1 (0 – 2 weeks postop)

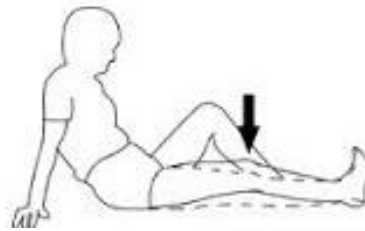
Goals: Control pain, Diminish swelling, Begin regaining knee motion,
Protect the MPFL repair/reconstruction

- Pain: You will be prescribed pain medication to use after surgery. Use as directed and wean use to as needed. You may begin taking an anti-inflammatory medication (i.e. ibuprofen, naproxen) unless medically contraindicated. Do not drive or use alcohol while taking narcotic pain medication.
- Brace: You will be placed in a hinged knee brace after surgery. It will be set at 0-60° for the first two weeks. You may remove it when resting at home with your leg straight and when icing. Ambulate and sleep in brace.
- Weight bearing:
 - Weight bear as tolerated with knee brace on at 0-30° using crutches
- Ice: Place a bag of ice or cryocuff on the knee for 30 minutes a few times each day and after therapy or home exercises.
- Dressing: Remove the ace wrap and discard all white dressings about your knee on the 3rd day after surgery
 - You may shower, but keep your knee dry until sutures are removed
 - Do not submerge knee until suture removal (no baths, pools, hot tubs)
 - Keep incisions covered with large band-aids or wrap knee with ace wrap to protect incisions during the day
- Schedule your postoperative visit for 10-14 days after surgery. At this visit:
 - Suture removal
 - Review of your surgery (bring your surgical photos) and rehab plan
 - Prescription for physical therapy

Exercises

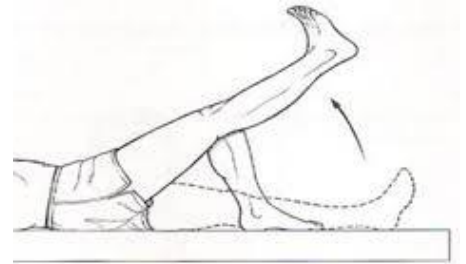
- Keep brace on set at 0-30° for all exercises.

- Quad Sets (keep knee in full extension)



- Straight leg raises

- Keep knee brace locked in extension



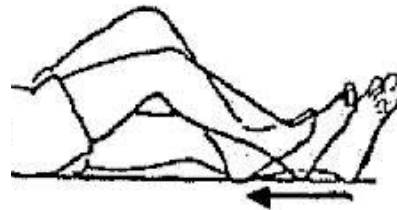
- Ankle Pumps (10 reps/hour)



- Patella mobilization (medial, superior, inferior, AVOID lateral motion)

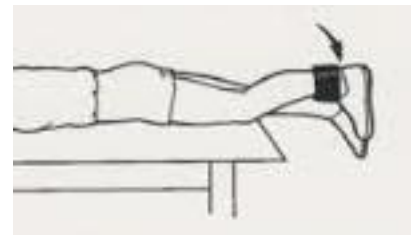
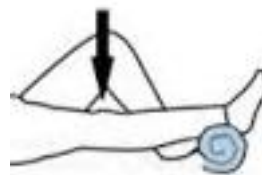
- Knee Flexion:

- Heel Slides (brace at 0-60°)



- Knee Extension:

- Heel Prop
- Prone Leg Hang



- Cycling without resistance (15 min 2-3 times daily as tolerated)

- Set the seat to allow slight knee bend with brace on at 0-60°

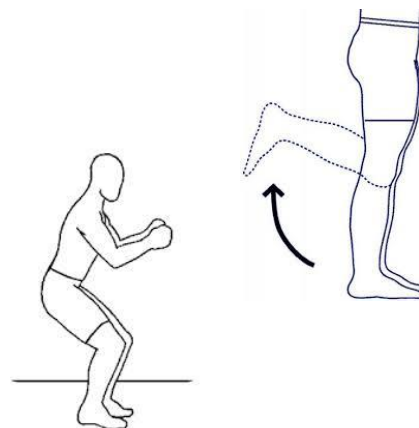
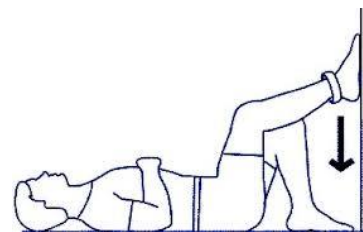
Phase 2 (2 - 6 weeks postop)

Goals: Improve range of motion, Regain leg control, Quad/Hamstring strengthening, Protect the MPFL repair/reconstruction

- Brace: Continue to use during exercises, ambulation, and sleep. Adjust settings:
 - Week 2: 0-90°, Week 3: 0-120°, Week 4+: unlocked full open
- Weight bearing:
 - Begin to wean off crutches. Discontinue crutches when you have regained a normal heel-toe gait and feel stable.

Exercises

- Continue exercises from Phase 1
- Knee Flexion (with above brace settings)
 - Wall Slides: Lie on back with foot on wall, allow gravity and nonoperative leg to assist pushing back operative leg
 - Heel Slides
- Standing hamstring curls
- Standing mini squats (avoid knee flexion > 45°)
- Balance/Coordination/Proprioception Training
 - Single leg stork balance/calf raises
 - Backward walking
 - Wobble board/BOSU balance trainer
- Stationary Bike:
 - Goal 45 min without resistance, then ok to increase resistance as tolerated



Phase 3 (6-12 weeks postop)

Goals: Regain full range of motion, Quad/Hamstring strengthening
Return to functional daily activities

- Brace: Transition to a patella stabilizing brace—use during exercises and walking
- Weightbearing: as tolerated
- Schedule a clinic visit about 3 months from surgery date

Exercises

- Continue exercises from Phase 1 & 2
- Resisted knee flexion/extension
 - Front and Lateral Lunges
 - Front and Lateral Step-Ups
 - Seated leg press (avoid knee flexion > 45°)
- Endurance Program
 - Pool program—pool walking/running, swimming (straight-leg kicks only)
 - Stationary Bike: increased duration and resistance
 - Elliptical: gradual increase duration
 - Treadmill: may begin walking program (no jogging until 3 months)
 - Stair climber machine
- Continue coordination/proprioception training
- Cardiovascular conditioning: elliptical, bike, treadmill, swimming, as tolerated

Phase 4 (3-6 months postop)

Goals: Maintain full range of motion, Increased leg strength and endurance, Return to skill activities and full sport participation

- At this point you may feel ready to get back to sports—be cautious! Cutting, pivoting, and twisting maneuvers may stress the repair/reconstruction. Progression to sports drills requires you to appropriately stabilize your knee.
- Schedule a clinic visit for 6 months from surgery date

Exercises

- Continue exercises from Phases 2 & 3
- At 3 months:
 - Wall squats (may use gym ball behind back against wall)
 - Progress to single leg wall squats
 - Stair climber machine
 - Begin treadmill jogging or on soft track (Goal of 20 min at mild pace)
- At 4 months:
 - May begin outdoor running on level surface, road biking
 - Plyometric exercises/jumping
- At 5 months:
 - Agility drills: backward running, figure of eight drills, box runs
 - Sport specific drills
 - May begin trail and stair running
 - May begin skiing groomers, golf, tennis
- At 5-6 months:
 - Criteria for return to full sport activity: full range of motion, pain free all strengthening activities, good neuromuscular control/agility, satisfactory clinical exam
 - Return to full sport participation and competition