

Medial Patellofemoral Ligament Reconstruction With Lateral Release Rehabilitation Program

I. IMMEDIATE POST-OPERATIVE PHASE (Day 1 - Day 5)

- Goals:** Diminish swelling/inflammation (control hemarthrosis)
Diminish post-operative pain
Initiate voluntary quadriceps control
Independent Ambulation
- Brace:** Brace locked full extension for ambulation & sleeping only (POD 1 - Week 4)
- Weight Bearing:** As tolerated two crutches (approx. 50% WB)
- Swelling/Inflammation Control:** Cryotherapy
Compression Bandage
Foam donut pad placed lateral to PF joint to medially displace patella
Under compression dressing to control swelling too
Elevation & Ankle Pumps
- Range of Motion:** Full passive knee extension
Flexion to 30 degrees (Day 1 to 4)
Flexion to 45 degrees (Day 5- 7)
PROM and gentle AAROM only
Mobilize patella medially, superior & inferior
- Muscle Retraining:** Quadriceps setting isometrics
Straight Leg Raises (Flexion)
Hip Adduction
Electrical muscle stim to Quads
* NO active Knee Extension
- Flexibility:** Hamstring and Calf Stretches
PROM/AAROM within ROM limitations

II. ACUTE PHASE (Week 2-4)

- Goals:** Control swelling and pain
Promote healing of soft tissue
Promote medial displacement of patella (hip control & foot control)
Quadriceps Strengthening
- Brace:** Continue brace for ambulation only
Discontinue brace (week 4)
Consider PF brace for ambulation & sleeping (Berg PTO, Bauerfeind P3, or DJO)
PF Brace) at end of week 4
- Weight Bearing:** Progress WBAT (2 crutches for 4 weeks)

Swelling/Inflammation: Continue use of cryotherapy
Compression bandage with lateral foam donut
Elevation

Range of Motion: PROM/AAROM exercises
Patella mobilization medial, superior & inferior
Range of Motion 0 to 60-70 degrees (Week 2)
Range of Motion 0 to 75-80 degrees (Week 3)
Range of Motion 0 to 90-105 degrees (Week 4)

Muscle Retraining: Electrical muscle stimulation to quads
Quad Setting Isometrics
Straight Leg Raises (flexion)
Hip Adduction/Abduction
Hip Extension
Gentle submaximal isometric knee extension (multi-angle)

Week 4: Light Leg Press
Vertical Squats (no weight)

Flexibility: Continue Hamstring, Calf Stretches

III. **SUBACUTE PHASE - "MOTION" PHASE (Week 5-8)**

Goals: Gradual improvement in ROM
Improve muscular strength and endurance
Control forces on extension mechanism

Weight Bearing: One crutch (week 4-6)
Discontinue crutch week 6

PF Brace: Consider PF brace for ambulation & sleeping (Berg PTO, Bauerfeind P3, or DJO PF Brace)

Range of Motion: PROM 0-105/110 degrees (week 5)
PROM 0-115/125 degrees (week 6)
PROM 0-125/135 degrees (week 8)
Continue patella mobilizations medial, superior & inferior

Exercises: Continue electrical muscle stimulation to quadriceps
Quadriceps setting isometrics
Hip adduction, abduction, and extension
Vertical Squats
Leg Press
Knee Extension Light (0-60 degrees)
Bicycle (week 6-8)
Pool Program [walking, strengthening (when able)]

Flexibility: Continue all stretching exercises for LE

IV. **STRENGTHENING PHASE (Week 9-16)**

Goals: Gradual improvement of muscular strength
Functional activities/drills

Criteria To Progress to Phase IV:

1. ROM at least 0-115 degrees
2. Absence of swelling/inflammation
3. Voluntary control of quads

Exercises:

Vertical Squats (0-60 degrees)
Wall Squats (0-60 degrees)
Leg Press
Forward Lunges
Lateral Lunges
Lateral Step-ups
Knee Extension (60-0 degrees)
Hip Adduction/Abduction
Bicycle
Stairmaster machine

V. RETURN TO ACTIVITY PHASE

Goal: Functional return to specific drills

Criteria to Progress to Phase V:

1. Full Non-Painful ROM
2. Appropriate Strength Level (80% or greater of contralateral leg)
3. Satisfactory clinical exam

Exercises:

Functional Drills
Strengthening Exercises
Flexibility Exercises
Continue use of PF brace
Gradually return to functional activities