

Proximal and Distal Realignment Patellofemoral 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 for ambulation only (POD 1 - Week 4)
- Weight Bearing:** As tolerated two crutches (approx. 50% WB)
- Swelling/Inflammation:** Cryotherapy
Compression Bandage
Foam donut pad placed lateral to PF joint to medially displace patella
Elevation & Ankle Pumps
- Range of Motion:** Full passive knee extension
Flexion to 45 degrees (Day 1 to 4)
Flexion to 60 degrees (Day 5)
PROM and gentle AAROM only
Mobilize patella medially
- Muscle Retraining:** Quadriceps setting isometrics
Straight Leg Raises (Flexion)
Hip Adduction
* 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 realignment tibial tuberosity
Promote medial displacement of patella
Quadriceps Strengthening
- Brace:** Continue brace for ambulation only
Discontinue brace (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 lateral
Range of Motion 0-75 degrees (Week 1-3)
Range of Motion 0-90 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

Range of Motion: PROM 0-115 degrees (week 5)
 PROM 0-125 degrees (week 6)
 PROM 0-125/135 degrees (week 8)
 Continue patella mobilizations laterally

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
Stairstepper machine
*** Consider PF brace to stabilize patella(Bauerfeind P3 or DJ
PF brace)**

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