

## 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