

# REHABILITATION GUIDELINES AFTER PATELLAR REALIGNMENT

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*The intent of this protocol is to provide the therapist with guidelines of the post-operative rehabilitation course after a patellar realignment. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The therapist should consult the referring physician with any questions or concerns.*

**FREQUENCY:** Weeks 0-4: 3x/week. Weeks 4-16: 2x/week. Weeks 16-24: 1x/week.

## **INDIVIDUAL CONSIDERATIONS:**

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### **PHASE I (0-6 weeks)**

#### ***Goals***

- Control inflammation and pain
- Protect soft tissue and tubercle fixation

- CPM to 90 degrees
- Full active extension and 90 degrees of flexion
- Achieve quadriceps control

### ***Brace***

- Locked in extension for 6 weeks during ambulation
- Sleep with brace locked for 4 weeks, then discontinue for sleep
- May remove for CPM and exercises except straight leg raises

### ***Weight-Bearing Status***

- Weight-bearing as tolerated with crutches and brace locked in extension

### ***Therapeutic Exercises***

- Straight leg raises in all planes (use brace locked in extension for SLRs)
- Heel slides to 90 degrees, calf pumps, quadriceps sets
- Electrical stimulation and biofeedback to regain quad function
- Patellar mobilization
- Ankle ROM and resistive exercises with sports tubing (Theraband)

## **PHASE II (6-8 weeks)**

### ***Criteria***

- Good quad set, straight leg raise without extension lag
- 90 degrees of knee flexion
- Full extension

### ***Goals***

- Increase ROM
- Establish normal gait with unlocked brace

### ***Brace/Weight-bearing status***

- Continue with full weight bearing
- Use crutches and unlock brace for ambulation
- May discontinue crutches and brace when normal gait pattern and quad control is achieved

### ***Therapeutic Exercises***

- Increase ROM
- Progress to SLRs without brace
- Mini-squats (0-45 degrees)
- Stationary Bike (high seat, low tension)
- Closed chain extension (leg press:0-45 degrees)
- Pool walking/jogging
- Toe raises
- Hamstring and gastroc/soleus stretches
- Proprioception
  - Mini-tramp standing
  - Stable and unstable platform (BAPS) with eyes open and closed
  - Standing ball throwing and catching

### **PHASE III (8-12 weeks)**

#### ***Criteria***

- Normal gait
- Full range of motion
- Sufficient strength and proprioception to initiate functional activities

#### ***Goals***

- Improve confidence in the knee
- Protect the patellofemoral joint
- Progress with strength, power, and proprioception

#### ***Brace/Weight-Bearing Status***

- Discontinue brace and crutches

#### ***Therapeutic Exercise***

- Continue with flexibility exercises
- Hamstring curls
- Mini-squats and leg press to 60 degrees
- StairMaster, elliptical trainer, cross-country ski machine, lap swimming
- Stationary bike, increase resistance
- Step-up, start 2 inches and increase to 8 inches

- Continue to work on proprioception and balance (lateral slide board, ball throwing and catching on unstable surface)
- Treadmill walking

### **PHASE IV (12-24 weeks)**

#### ***Criteria***

- Full, pain-free range of motion
- No patellofemoral irritation
- Sufficient strength and proprioception to progress to recreational activities

#### ***Goals***

- Return to unrestricted activity by 6 months

#### ***Therapeutic Exercises***

- Progress with flexibility and strengthening program
- Advance with closed chain exercises
- Begin pool jogging and progress to running on land
- Begin to incorporate cutting drills into agility training
- Advance heights with plyometric conditioning
- Sports specific drills (start a 25% on speed and advance as tolerated)

#### ***Criteria for Return to Sports***

- Full range of motion
- No effusion
- Quad and hamstring strength 90% of contralateral side
- No patellofemoral symptoms