



**Proximal or Distal Patellar Realignment
(Medial Reefing)
With or without Lateral Release
With or without semitendinosus reconstruction**

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General Guidelines

- No CKC exercises for 6 weeks
- Same rehabilitation protocol is followed for proximal and distal realignments, except for weight-bearing limitations as noted
- After a combined proximal and distal realignment, the protocol for distal realignment is used.

Phase I: Weeks 1-6

Goals:

- Protect fixation and surrounding soft tissues
- Control inflammatory process
- Regain active quadriceps and VMO control
- Minimize adverse effects of immobilization through CPM and heel slides in the allowed ROM
- Full knee extension
- Patient education regarding the rehabilitation process, independent with HMP

Range of motion:

- 0-2 weeks: 0°-30° of flexion
- 2-4 weeks: 0°-60° of flexion
- 4-6 weeks: 0°-90° of flexion

Brace

- 0-4 weeks: locked in full extension for all activities except therapeutic exercises and CPM use; locked in full extension for sleeping
- 4-6 weeks: unlocked for sleeping, locked in full extension for ambulation

Weight Bearing

- As tolerated with 2 crutches for proximal realignment
- 50% PWB for distal realignment procedure

Therapeutic Exercises

- Quad sets and isometric adduction with biofeedback/electrical stim for VMO (no ES for 6 weeks with proximal realignment)
- Heel slides 0°-60° for proximal realignment, 0°-90° for distal realignment
- CPM for 2 hours, twice daily, from 0°-60° for proximal realignment, 0°-90° for distal realignment
- NWB calf and hamstring stretching
- SLR x 4 in brace locked in extension (can be done standing)
- Resisted ankle theraband x 4 directions
- Patellar mobilization when tolerated with respect to pain
- Aquatic therapy (if available) at 3-4 weeks with emphasis on gait

Phase II: Weeks 6-8

Criteria for progression to phase 2

- Good quad control
- 90° flexion
- No active signs of inflammation

Goals

- Increase flexion ROM
- Avoid overstressing fixation
- Increase quad and VMO control for restoration of normal patellar tracking
- Independent with HMP

Weight Bearing

- WBAT with 2 crutches

Brace

- Discontinue use for sleeping, unlock for ambulation when good quad control established, as allowed by physician

Therapeutic Exercises

- Continue exercises, with progression toward full flexion with heel slides
- Progress to WB calf stretches
- D/C CPM if knee flexion at least 90°
- Continue Aquatic therapy
- Balance/proprioception exercises: SLB, BAPS, etc.
- Stationary bike, low resistance, high seat
- Wall slides progressing to mini-squats, 0°-45°

Phase III: 8 weeks – 4 months

Criteria for progression to Phase 3

- Good quad tone and no extension lag with SLR
- Non-antalgic gait pattern
- Good dynamic patellar control with no evidence of lateral tracking or instability

Weight Bearing

- D/C crutches when the following criteria are met:
 - No extension lag with SLR
 - Full extension
 - Non-antalgic gait pattern (may use one crutch or can until gait is normalized)

Therapeutic Exercises

- Step ups
- Stationary bike, moderate resistance
- Four way hip in standing
- Leg press 0°-45°
- Swimming, stairmaster for endurance
- Toe raises
- Hamstring curls
- Treadmill with emphasis on normalization of gait
- Continue proprioception exercises
- Continue flexibility exercises for calf, hamstring, add ITB and quads as indicated

Phase IV: 4-6 months

Criteria for Progression to Phase 4

- Good to normal quad strength
- No evidence of patellar instability
- No soft tissue complaints
- Clearance from physician to begin more concentrated sport specific CKC activities
- Resume full or partial activity

Goals

- Normal quad strength
- Functional strength and proprioception 85% of the uninvolved side as determined by sport specific functional testing
- Return to appropriate activity level
- Independent with final progressive HMP

Therapeutic Exercises

- Functional progression of CKC sport specific activities

Return to Sport:

Proximal:	4 months
Distal:	5-6 months