

## **Ronak M. Patel, MD**

# **Distal Patellar Realignment Tibial Tubercle Osteotomy Rehabilitation Guidelines**

### **Acute/Immediate Post-Operative Phase 0-4 weeks**

#### Guidelines

- Bracing: Extension Lock Splint (ELS) locked at zero 24 hours per day; can be removed only for exercises (except SLRs). Ice-Man or ice application for pain and swelling.
- WB status: NWB x1 week; TTWB 0-4
- PROM: 0-90 degrees goal by POW 4
- Exercises: Quadriceps sets (full extension), SLRs – flexion (assisted), abduction, extension and adduction (in brace locked in extension), patellar mobility - gentle, calf and hamstring stretching (seated only), ankle pumps, heel prop/prone hang for knee extension, PROM supine or seated, may start bike without resistance at ~POW 2 (0-90 degrees only)

### **Moderate Protection Phase 4-6 weeks**

#### Guidelines

- WB status: TTWB
- Bracing: Continue
- ROM: As tolerated
- Exercises: Continue isometric quad strengthening, SLRs, resisted ankle strengthening in NWB and HS curls 0-90 degrees, core stability activities, gait training

### **Moderate Protection Phase 6-8 weeks**

#### GOALS:

- Full knee flexion and extension ROM
- Good quadriceps control
- Good proprioceptive control
- Normal gait pattern

#### Guidelines

- WB status: Progress to WBAT
- Bracing: Discontinue brace when patient has adequate quad control (not before POW 6)
- ROM: as tolerated
- Exercises: Continue quad strengthening, ROM and stretching, begin closed chain activities in small range flexion (0-45 degrees) with bilateral LE, progress to greater knee flexion range, heel raises bilateral, step-ups, bilateral leg press (light weight), proprioception activities bilateral → unilateral, hamstring curls

### **Minimal Protection Phase (Progressive ROM/Strengthening) 9-12 weeks**

#### GOALS:

- Light cardiovascular progression
- Good hip, knee and ankle strength compared to contralateral leg

#### Guidelines

- Exercises: progress above bilateral activities to unilateral, increase proprioceptive challenges, may start light running if pain-free, good strength and no effusion at ~week 12

**Return to Activity Phase**

- Exercises: Slowly progress to treadmill walking, resisted biking, running (as strength, ROM and pain/swelling allow) progress proprioception activities as tolerated, begin hop/agility when good alignment and LE control is present\*
- \*May use single leg hop for distance testing (Cincinnati hop tests) for side-to-side comparison  
80% is goal to begin light agility and cutting

\*\*Modalities as needed for pain control and quadriceps strengthening are permitted.