



# GOLDEN STATE ORTHOPEDICS & SPINE

## QUAD/PATELLAR TENDON REPAIR

### **OVERVIEW**

- Focus on protection of fixation and repair in primary phase (Weeks 0 -6)
- Supervised Physical Therapy for 3-4 months
- OK to shower on post-op day 3. **NO bathing/soaking knee** until cleared by physician
- Sleep with brace locked in extension x 3-4 weeks
- Weight-bearing as tolerated by end of Week 1/start of Week 2
- 6 weeks of WBAT with knee locked in full extension.
- Begin obtaining gradually increasing passive knee flexion from Weeks 4-6: Goal to obtain **full ROM of knee** (when not WB) **by end of Week 6**

### **Phase I – Maximum Protection (Weeks 0 to 6)**

#### **Weeks 0 to 3:**

- Brace locked in full extension when ambulating x 6 weeks
- 50% weight bearing for 1-2 weeks, WBAT after. Wean off crutches at 3-4 weeks.
- Ice and soft-tissue modalities to reduce pain and inflammation
- Patella and patella tendon mobility drills
- **Range of motion (PROM):** 0° to 30° knee flexion from Week 0 thru 3. Lower extremity to remain LOCKED in full extension with WB x 6 weeks
- Quad isometrics in full extension, Hip abduction SLRs
- Ankle ROM and gastroc-soleus strengthening with tubing/T-bands

#### **Weeks 4 to 6:**

- Full weight bearing (in brace locked at 0°). Patient should be off of crutches
- Continue patella/patella tendon mobility
- **Obtain Full PROM:** Increase 30 per week starting in Week 4 until full passive range of motion achieved (by end of Week 6). Maintain WBAT IN EXTENSION in brace.

### **Phase II – Progressive ROM & Early Strengthening (Weeks 6 to 12)**

#### **Weeks 6 to 8:**

- Full weight bearing, maintain full PROM knee flexion (120)
- **Open brace** gradually with weight-bearing (30 per week, 0-90 by Week 8)
- Continue with edema and inflammation control, patella mobility
- Gradually progress to full ROM in WB (**unlocked and d/c by Week 10**)
- Begin quadriceps setting and normalize gait pattern
- Begin AAROM knee extension after Week 6, AROM after Week 8
- Begin multi-plane straight leg raises & closed kinetic-chain strengthening program with focus on quality VMO function.
- Initiate open kinetic-chain & progress to closed kinetic-chain multi-plane hip strength
- Begin stationary bike: Start with no resistance and low knee flexion angle and slowly advance and initiate pool program



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## **QUAD/PATELLAR TENDON REPAIR**

### **Weeks 8 to 10:**

- Continue to unlock brace, wean out by Week 10
- Continue with patella mobility drills
- Normalize gait pattern and restore/maintain full ROM
- Begin short arc quadriceps contraction 0-3
- Progress open & closed kinetic chain program from bilateral to unilateral
- Increase intensity on stationary bike and begin treadmill walking program

### **Weeks 10 to 12:**

- Full ROM
- Terminal quadriceps stretching
- Advance unilateral open and closed kinetic chain strengthening
- Initiate proprioception drills
- May introduce elliptical trainer
- OK to begin progressive resistive exercise (avoid open chain or terminal resisted knee extension)
- OK to begin light jogging at Week 12
- Proprioceptive exercises

### **Phase III: Progressive Strengthening (Weeks 12 to 16)**

#### **Weeks 12 to 16:**

- Advance open and closed kinetic chain strengthening
- Increase intensity on bike, treadmill, and elliptical trainer
- Increase difficulty and intensity on proprioception drills
- Begin gym strengthening: leg press, hamstring curls, abduction/adduction; avoid lunges and knee extensions
- Begin multi-directional functional cord program

### **Phase IV: Advanced and Functional Strengthening (Weeks 16 to 20)**

#### **Weeks 16 to 20:**

- May begin leg extensions; 30° to 0°
- Continue pool running program and advancing land running as tolerated

### **Phase V – Plyometric Drills & Return to Sport (Weeks 20 to 24)**

#### **Weeks 20 to 24:**

- Advance gym strengthening
- Progress running/sprinting program
- Begin multi-directional field/court drills
- Begin bilateral progressing to unilateral plyometric drills
- Follow-up appointment with physician
- Sports test for return to competition