

QUAD/PATELLAR TENDON REPAIR

DR ELRASHIDY – TRI-VALLEY ORTHOPEDICS

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

QUAD/PATELLAR TENDON RUPTURE REPAIR

- 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

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 0-30°
- 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

QUAD/PATELLAR TENDON REPAIR
DR ELRASHIDY – TRI-VALLEY ORTHOPEDICS

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

Hany Elrashidy, MD
Sports Medicine, Arthroscopy
Department of Orthopedic Surgery
Tri-Valley Orthopedic Specialists