

# Quadriceps or Patellar Tendon Repair Protocol

**Mark Ayzenberg, MD, FAAOS**

## Phase I (Post-op until week 2) Protective Phase

- Weight bearing as tolerated with crutches and knee brace locked in extension, unless otherwise directed
- Brace locked in full extension for ambulation and sleeping; removed only for exercises and hygiene
- ROM limited to 0–20 degrees when non-weight bearing
- Heel slides
- Quadriceps sets
- Patellar mobilizations
- Calf pumps
- Control swelling and pain

## Phase II (Weeks 2–8) Progressive Motion Phase

- Progress to full weight bearing in brace unless otherwise directed
- Brace locked in extension during ambulation until 6 weeks; may be discontinued at approximately 8 weeks once ROM at least 0-90 and quad control demonstrated. Ideal goal is 90 degrees flexion at 6 weeks.
- ROM progression typically as follows:
  - Weeks 2–3: 0–30 degrees
  - Weeks 3–4: 0–60 degrees
  - Weeks 4–6: 0-90, then progress as tolerated
- Advance Phase I exercises
- Add side-lying hip, core, and glute strengthening, straight leg raises in brace
- Begin weight-bearing calf raises
- Maintain cardiovascular conditioning with upper body ergometer or stationary bike as tolerated

## Phase III (Weeks 8–12) Strengthening Phase

- Full weight bearing without brace once appropriate
- Progress to full ROM
- Advance closed-chain strengthening activities
- Begin hamstring strengthening
- Initiate lunges and leg press from 0–90 degrees, low weight
- Proprioceptive and balance training
- Core and hip strengthening
- Begin stationary bike when able



#### Phase IV (Weeks 12–20) Advanced Strengthening and Return to Function

- Progress strengthening and functional activities
- Single-leg balance and neuromuscular control
- Elliptical and cycling progression
- Swimming permitted after approximately 12 weeks
- Advance to running, jumping, and sport-specific drills **after 20 weeks** once cleared by physician

#### **\*\*Special Considerations:\*\***

- Progression is criteria-based and individualized based on pain control, restoration of motion, quadriceps strength, neuromuscular control, and patient compliance.