



## **Rehabilitation Following Unilateral Quadriceps Tendon Repair**

### **I. Immediate Postoperative Phase (Days 1-7)**

- Goals:
- Restore full passive knee extension
  - Diminish pain and joint swelling
  - Restore patellar mobility
  - Initiate early controlled motion
  - \*Controlled forces on repair site

#### Postoperative Days 1-4

- Brace: Drop locked brace locked at 0° extension with compression wrap  
Sleep in brace
- Weight bearing: Toe touch WB with two crutches
- Range of motion: 0-30°  
CPM 0-45° as tolerated
- Exercises: Ankle pumps  
Quad sets  
Patellar mobilization  
Hip abd/adductions
- Ice and elevation: 20 minutes of each hour at elevate

#### Postoperative Day 4-7

- Continue use of brace (sleep in brace locked)
- Weight bearing: Locked brace two crutches WBAT
- Range of motion: 0-45°  
CPM 0-75° as tolerated
- Exercises: Continue all listed exercises  
Initiate gravity eliminated SLR flexion (assisted)
- Continue ice and elevation

## **II. Maximum Protection Phase (Weeks 2 to 6)**

Goals: Control forces on healing tendon  
Gradually increase knee flexion  
Restore full passive knee extension  
Restore patellar mobility  
Retard muscular atrophy

### Week 2:

- Brace: Continue use of locked brace (6 weeks)  
Sleep in brace (6 weeks)
- Weight bearing: WBAT (usually 50-75% BW)
- Range of motion: PROM knee flexion only 0-60°  
Full passive knee extension  
Patellar mobilization
- Exercises: Electrical muscle stimulation to quads  
Quad sets  
Ankle pumps  
Hip abd/adductions  
Gravity eliminated SLR flexion
- Continue ice, elevation and compression

### Week 3:

- Continue above mentioned exercises
- ROM: 0-75°
- Continue use of two crutches – 75-80% BW

### Week 4:

- Continue all exercises listed above
- Weight bearing: Progress to one crutch (at 28 days)
- PROM: 0-75°
- Exercises: Initiate mini-squats (0-45°)  
Initiate weight shifts  
Initiate proprioception drills

### Weeks 5-6:

- Discontinue use of crutch at 5 weeks postop
- Unlock brace for ambulation at 6 weeks
- Range of motion: PROM  
Week 5: 0-80°  
Week 6: 0-90°
- Exercises: Initiate pool exercise program  
Active knee extension 90-30°  
Multi-angle isometrics knee extension (subnex)  
Continue all exercises listed above  
Initiate anti-gravity SLR flexion
- Continue ice, compression and elevation as needed

### **III. Moderate Protection Phase (Weeks 7-16)**

Goals: Control forces during ambulation and ADL's  
Progress knee flexion ROM  
Improve lower extremity muscular strength  
Restore limb confidence and function

### Weeks 7-10:

- Brace: Use postop brace unlocked for ambulation until 7-8 weeks  
(or until determined safe)  
Discontinue sleeping in brace
- Range of motion: Week 7: 0-95/100°  
Week 8: 0-100/105°  
Week 10: 0-115°
- Exercises: \*Gradually increase muscular strength  
Straight leg raises (flexion)  
Hip abd/adduction  
Knee extension 90-0  
½ squats  
Leg press  
Wall squats  
Front lunges  
Lateral lunges  
Calf raises  
Hamstring curls (restricted ROM)  
Proprioception drills

Bicycle  
Pool program

Weeks 12-16:

- Range of motion: Week 12: 0-125°
- Exercises: \*Continue all exercises listed above  
Initiate lateral step-ups  
Initiate front step-downs  
Initiate backward lunges  
Walking program  
\*No sports!

**IV. Light Activity Phase (Months 4-6)**

Goals: Enhancement of strength, endurance  
Initiate functional activities  
Improve tensile strength properties of tendon

- Exercises: Continue strengthening exercises  
Continue emphasis on eccentrics and functional exercises  
\*May initiate plyometrics (month 5)  
\*May initiate agility drills (lateral shuffle) month 5  
\*If appropriate!  
\*May initiate light running months 5-6

**V. Return to Sport Activity Phase (Months 7-9)**

Criteria to Return to Activities:

1. Satisfactory clinical exam
2. Satisfactory strength
3. Proprioception test 80% > of opposite leg
4. Appropriate rehab progression

Goals: Gradual return to full-unrestricted sports  
Continue strength program  
Continue functional/agility drills

Exercises: Continue strengthening exercises  
Continue agility program  
Continue sport specific training