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## Rehabilitation Following Unilateral Patellar Tendon Repair for An Incomplete Tear

### 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, ambulate in brace
- **Weight bearing:** Toe touch-25% BW WB with 2 crutches,  
brace in full extension
- **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

- **Brace:** Continue use of brace (sleep in brace locked)
- **Weight bearing:** Locked brace two crutches,  
continue toe-touch- 25-50% WB
- **Range of motion:** 0-45°  
CPM 0-75° as tolerated
- **Exercises:** Continue all listed exercises  
Initiate gravity eliminated SLR flexion (assisted)
- **Ice and elevation:** 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 (4-6 weeks)  
Sleep in brace (4-6 weeks)
- **Weight bearing:** PWB with 2 crutches ( ~50% BW)
- **Range of motion:** PROM knee flexion only 0-75°  
Full passive knee extension  
Patellar mobilization
- **Exercises:** Electrical muscle stimulation to quads  
Quad sets  
Ankle pumps  
Hip abd/adductions  
Gravity eliminated SLR flexion
- **Ice and elevation:** Continue ice, elevation and compression

**Week 3:**

- **Exercises:** Continue above mentioned exercises
- **Range of motion:** ROM: 0-90°
- Continue use of two crutches – 100% BW

**Week 4:**

- **Exercises:** Continue all exercises listed above
- **Weight bearing:** Progress to WBAT
- **Range of motion:** PROM: 0-90-100°
- **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: 0-105°  
Week 6: 0-115°
- **Exercises:** Initiate pool exercise program  
Active knee extension 90-30°  
Multi-angle isometrics knee extension (submax)  
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: 0-95/125°  
Week 8: 0-125°  
Week 10: 0-135°
- **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 deg or greater
- **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