

## REHABILITATION FOLLOWING QUAD 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 1-7

- Brace: Locked at 0° extension with compression wrap  
Sleep in brace, ambulate in brace
- Weight bearing: Toe touch-50% WB AS TOLERATED with crutches,  
brace in full extension
- Range of motion: 0-30°, ok for CPM as tolerated
- Exercises: Ankle pumps  
Quad sets  
Patellar mobilization  
Hip abd/adductions
- Ice and elevation: max 20 minutes of each hour, elevate with 3 pillows  
under foot and ankle, nothing under knee to encourage full extension

### 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 and sleeping in brace (6 weeks total)
- Weight bearing: WBAT (USUALLY AROUND 50% body weight  
initially)
- Range of motion: PROM knee flexion only 0-45°  
Full passive knee extension  
Patellar mobilization

- Exercises: Electrical muscle stimulation to quads  
Quad sets  
Ankle pumps  
Hip abd/adductions  
Gravity eliminated SLR flexion (assisted if needed)
- Continue ice, elevation and compression

Week 3:

- Continue above mentioned exercises
- ROM: 0-60°
- Continue use of two crutches – 75-80% BW

Week 4:

- Continue all exercises listed above
- Weight bearing: Progress to WBAT
- PROM: 0-75°
- Exercises: Initiate mini-squats (0-45°)  
Initiate weight shifts  
**Initiate proprioception drills**

Weeks 5-6:

- Discontinue use of crutch by 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.    ***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  
                  \*May initiate light running months 5-6

V. ***Return to Sport Activity Phase***

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