

Rehabilitation Following Quadriceps Tendon Repair

I. Immediate Postoperative Phase (Days 1-10)

II.

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

- 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°
- Exercises: Ankle pumps
Quad sets
Patellar mobilization
Hip abd/adductions

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: PWB (usually 50%BW)
- Range of motion: PROM knee flexion only 0-30
progress to 60 by week 4
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% BW
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Week 4:

- Continue all exercises listed above
- Weight bearing: FULL with crutches (at 28 days)
- PROM: 0-75°
- Exercises:
 - 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
 - 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