

Patellar/Quadriceps Tendon Repair Rehab Protocol

The purpose of this protocol is to work collaboratively with the clinician and provide a guideline for the postoperative rehabilitation course of a patient that has undergone a patellar or quadriceps tendon repair. This protocol is by no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient, they should not hesitate to consult with the referring surgeon.

Please Note: The given time frames are an approximate guide for progression, achieving the clinical criteria should guide the clinician and patient through this protocol

Phase I. Maximum Protection Phase (Weeks 0 to 6)

- Patient education on brace use (locking and unlocking, and setting dial)
- ACTIVE FLEXION ONLY: 0° at 0 to 4 wks, 0-45° at 4 to 6 wks
- PASSIVE EXTENSION ONLY, Avoid active extension
- Gradually increase knee flexion ROM as directed by surgeon
- Isometric quadriceps strengthening in extension
- Gait training -- progressive weight-bearing as tolerated with crutches with brace locked in full extension, progress to WBAT, brace locked in extension

GOAL: Prevent quadriceps inhibition, Gentle Active ROM only

Phase II. Moderate Protection Phase (Weeks 6-11)

- Restore knee flexion range of motion 0 to 120° gradually
- Range of motion (ACTIVE FLEXION ONLY):
 - Week 6: 0-80 degrees
 - Week 7: 0-90 degrees
 - Week 8: 0-100 degrees
 - Week 10: 0-110 degrees
 - Week 11: 0-120 degrees
- Avoid aggressive strengthening
- Gait training -- brace unlocked with flexion stop at 60° once the patient demonstrates good quad control
- Good quad control (able to perform 20 reps of SLR without lag)

GOAL: Achieve complete active flexion, Gentle active extension, Isometric quadriceps strength

Phase III. Moderate Protection Phase (Weeks 11-16)

- Restore full knee range of motion, return to normal ADLs
- ½ squats, leg press, patella mobilization, forward step ups, proprioceptive drills
- Agility training, elliptical training
- May start transitioning towards HEP
- Advance close chain exercise program -- step program

GOAL: Improve quadriceps strength, balance and gait

Phase IV. Late Functional/Return to Sport (Weeks 16 to 24)

- Continue to advance lower extremity strengthening and flexibility
- Obtain clearance from surgeon before initiating work hardening program or sports specific rehab
- Plyometric program
- Forward running
- Agility and sport specific training

GOAL: Lack of apprehension with sport specific activities, >85% limb symmetry with hop test and isokinetic testing pain-free running

NOTE: If you have any questions or concerns regarding any of the phases or advancements in this protocol, please do not hesitate to contact our office at 781-337-5555.

Colombelli A, Polidoro F, Guerra G, Belluati A. Patellar and quadriceps tendons acute repair with suture anchors. *Acta Biomed.* 2019;90(1-S):209–213. Published 2019 Jan 14. doi:10.23750/abm.v90i1-S.8108

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Roudet, A, Boudissa, M, Chaussard, C, Ruens-Duval B, Saragaglia D. Acute Traumatic Patellar Tendon Rupture: Early and Late Results of Surgical Treatment of 38 Cases. *Orthopaedics and Traumatology: Surgery and Research.* 2015; 101(3): 307-311