



**Central Indiana Orthopedics**

INVESTED IN KEEPING YOU ACTIVE

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## **QUAD TENDON REPAIR REHABILITATION PROTOCOL**

The intent of this protocol is to provide the clinician with a guideline of the post-operative rehabilitation course of a patient that has undergone a quadriceps tendon repair. It 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/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient please consult with Dr Camilleri.

Please reference the exercise progression sheet for timelines and use the following precautions during your treatments. Thank you for progressing all patients appropriately and please fax all progress notes to Dr. Camilleri's office or hand deliver with the patient. Successful treatment requires a team approach and we value your care for the patient as well as your input. Please contact Dr. Camilleri at any time with your input on how to improve the therapy protocol.



**Phase I – Maximum Protection (Weeks 0 to 6):**

**0 to 2 weeks:**

- Brace locked in full extension for 6 weeks
- Partial weight bearing for 2 weeks
- Ice and modalities to reduce pain and inflammation
- Aggressive patella mobility drills
- Range of motion – 0° to 30° knee flexion
- Begin submaximal quadriceps setting

**Weeks 2 to 4:**

- Weight bearing as tolerated; progressing off of crutches
- Continue with inflammation control
- Continue with aggressive patella mobility
- Range of motion – 0° to 60°
- Continue with submaximal quadriceps setting

**Weeks 4 to 6:**

- Full weight bearing
- Continue with ice and aggressive patella mobility
- Range of motion – 0° to 90° (by week 6)
- Increase intensity with quadriceps setting

**Phase II – Progressive Range of Motion and Early Strengthening (Weeks 6 to 12):**

**Weeks 6 to 8:**

- Full weight bearing
- Open brace to 45°- 60° of flexion week 6, 90° at week 7
- Continue with swelling control and patella mobility
- Gradually progress to full range of motion
- Begin multi-plane straight leg raising and closed kinetic chain strengthening program focusing on quality VMO function.
- Initiate open kinetic chain progressing to closed kinetic chain multi-plane hip strengthening
- Normalize gait pattern
- Begin stationary bike
- Initiate pool program



## **Weeks 8 to 10:**

- Wean out of brace
- Continue with patella mobility drills
- Normalize gait pattern
- Restore full ROM
- Progress open and closed kinetic chain program from bilateral to unilateral
- Increase intensity on stationary bike
- Begin treadmill walking program forward and backward
- Begin elliptical trainer

## **Weeks 10 to 12:**

- Full ROM
- Terminal quadriceps stretching
- Advance unilateral open and closed kinetic chain strengthening

## **Phase III – Progressive Strengthening (Weeks 12 to 16):**

### **Weeks 12 to 16:**

- Advance open and closed kinetic chain strengthening
- Increase intensity on bike, treadmill, and elliptical trainer
- Increase difficulty and intensity on proprioception drills
- Begin gym strengthening: leg press, hamstring curls, ab/adduction; avoid lunges and knee extensions
- Begin multi-directional functional cord program

## **Phase IV – Advanced Strengthening and Functional Drills (Weeks 16 to 20):**

### **Weeks 16 to 20:**

- May begin leg extensions; 30° to 0° progressing to full ROM as patellofemoral arthrokinematics normalize
- Begin pool running program advancing to land as tolerated

## **Phase V – Plyometric Drills and Return to Sport Phase (Weeks 20 to 24):**

### **Weeks 20 to 24:**

- Advance gym strengthening
- Progress running/sprinting program
- Begin multi-directional field/court drills
- Begin bilateral progressing to unilateral plyometric drills
- Follow-up appointment with physician
- Sports test for return to competition