

## Quadriceps Tendon Repair Physical Therapy Guidelines

The following are guidelines for Quadriceps Tendon Repair and progression is both criteria based and patient specific. Phases and time frames are designed to give the clinician a general sense of progression. Typically, we begin formal physical therapy at 14-21 days. The program should balance the aspects of tissue healing and appropriate interventions to maximize flexibility, strength, and pain-free performance of functional activities.

### **POST – OPERATIVE PHASE I (WEEKS 0-2)** **\*\*MAXIMUM PROTECTION PHASE\*\***

#### **GOALS:**

- Patient education
- Pain control
- Protection of the post-surgical knee
- Restore normal knee extension
- Eliminate effusion (swelling)
- Restore leg control

#### **PRECAUTIONS:**

- Knee Immobilizer locked for all weight bearing activities
- Weight bearing as tolerated locked in extension
- Do not flex the knee past 90°
- **MAY** remove knee immobilizer for shower. Please keep leg straight while seated in a chair

#### **TREATMENT STRATEGIES:**

- Quadriceps sets
- Straight leg raises
- 4-way leg lifts in standing with brace on for balance and hip strength
- Abdominal isometrics
- Cardiovascular Exercise

#### **MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE:**

- Pain-free gait without crutches
- No effusion (swelling)

#### **Emphasize:**

- **PROTECTING SURGICAL REPAIR**
- Patient compliance with brace wear

## Quadriceps Tendon Repair Physical Therapy Guidelines

### POST – OPERATIVE PHASE II (WEEKS 2-4)

- \*\*\*Transition from knee immobilizer to hinged knee brace
- \*\*\*Locked in extension for ambulation weightbearing as tolerated
- \*\*\*Otherwise hinged knee brace unlocked 0-45 while sitting in bed
- \*\*\*Okay for stairs at 4 inches height

### POST – OPERATIVE PHASE III (WEEKS 4-6)

- \*\*\* Hinged brace 0-go for ambulation weightbearing as tolerated

#### GOALS:

- Pain control
- Single leg stand control
- Normalize gait
- Good control and no pain with functional movements: step up/down, (between 0° and 90° of knee flexion)

#### PRECAUTIONS:

- No forced flexion with passive range of motion with knee flexion
- No activities that push weightbearing knee past 90° of knee flexion
- Avoid post-activity swelling
- No impact activities

#### TREATMENT STRATEGIES:

- Non-impact balance and proprioceptive drills
- Stationary bike
- Gait drills
- Hip and core strengthening
- Stretching for patient-specific muscle imbalances
- Quadriceps strengthening (closed chain exercises occur only between 0° and 60° of knee flexion)
- Non-impact endurance training: stationary bike, Nordic track, swimming, or cross trainer

#### MINIMUM CRITERIA FOR ADVANCEMENT:

- Normal gait on all surfaces
- Ability to carry out functional movements without unloading affected (injured) leg or pain, while demonstrating good control
- Single leg balance greater than 15 seconds

#### Emphasize:

- Good control and no pain with functional movements



New England Shoulder and Elbow Center

Sarav S. Shah, MD  
Phone: (617) 738-8642  
Fax: (617) 202-4172

### Quadriceps Tendon Repair Physical Therapy Guidelines

#### POST – OPERATIVE PHASE IV (WEEKS 6-10 weeks and Beyond)

**\*\*\* Hinged brace unlocked for ambulation weightbearing as tolerated**

#### GOALS:

- Good control and no pain with sport and work specific movements, including impact

#### TREATMENT RECOMMENDATIONS:

- Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to the other and then 1 foot to the same foot
- Movement control exercises beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities
- Strength and control drills related to sport specific movements
- Sport/work specific balance and proprioceptive drills
- Hip and core strengthening
- Stretching for patient specific muscle imbalances
- Replicate sport or work specific energy demands

#### PRECAUTIONS:

- Avoid flexion PAST 120 until week 10
- Avoid post-activity swelling
- Avoid posterior knee pain with end range knee flexion

**\*\*\*Wean out of Brace at 10 weeks\*\*\***

#### Return to Sport Criteria:

- Dynamic neuromuscular control with multi-plane activities without pain or swelling
- Strength within 90% of uninjured side
- ROM must be even bilaterally
- Single Leg balance should be comparable to uninjured side
- No swelling before activity
- Patient reported pain level at a 4 or lower
- Athlete must complete hop test and agility test before RTP

Patient Name: \_\_\_\_\_

Physician's Signature: \_\_\_\_\_ M.D. Date: \_\_\_ / \_\_\_ / \_\_\_\_