

# Quadriceps/Patellar Tendon Repair Postoperative Protocol

**Craig Vosburgh, MD**  
**Orthopedic and Sports Medicine**  
[kutopeka.com/ortho](http://kutopeka.com/ortho)

**Patient Name:**

**Date of Surgery:**

Brace locked at 0° for ambulation for 6-8 weeks with crutches

Initial Visit: Dressing change

Start PT at 3-4 weeks

*May start WBAT with brace locked in extension*

At 6 weeks typically can open the brace 0-90° with ambulation with crutches, unless otherwise specified

**Precautions:** Avoid impact loads/sudden activation (eccentric load)

**Goals:** A/AAROM 90-100° by 6 weeks, 0-110° by week 8, 0-130° by week 10, and 0-135° by week 12

**Week 1-4**

No active ROM knee extension

PROM knee ext to 0°

AROM/AAROM knee flexion - very gently

Gradually unlock brace for sitting as PROM knee flexion improves

**Exercises:**

Ankle pumps

Patellar mobilizations

Hamstring stretch sitting

Gastroc stretch with towel

Heelslides

Quad sets- may add E-stim for re-education at 2-3 weeks upon MD approval

Patellar mobilization- all directions

SLR all directions, active assistive flexion - start at 3rd post-op week - do not allow lag - use E-stim as needed after 2-3 weeks. If unable to achieve full extension, perform SLR in knee immobilizer

## **Week 5**

Gradually increase A/AAROM knee flexion

### **Exercises:**

Submaximal multi-angle isometrics (30-50% only)

Continue knee flexion ROM - rocking chair at home

Active SLR 4 way - no weight for flexion - watch for extensor lag - increase resistance for hip abduction, adduction, and extension.

Add aquatic therapy if available. Move slowly so water is assistive and not resistive

### **Aquatic therapy exercises:**

With knee submerged in water, knee dangling at 80-90° - slowly actively extend knee to 0°

Water walking in chest deep water

SLR 4 way in the water with knee straight

Knee flexion in water

## **Weeks 6-8**

**Brace** - unlock for sitting to 90° at 6 weeks. If quad control is sufficient at 8 weeks, unlock brace 0-90° for ambulation with crutches and gradually open brace as ROM improves. Progress to ambulation at 8 weeks with no crutches as quadriceps strength allows. D/C crutches and brace at 8-12 weeks depending on patient's quadriceps control. Emphasize frequent ROM exercises.

**Goals** - Gradually increase P/A/AAROM during weeks 6-8

### **Exercises:**

Total gym semi-squats level 3-4

Gradually increase weight on all SLR, if no lag present

Week 6- bike (begin with rocking and progress to full revolutions)

Week 6- closed chain terminal knee extension with theraband

Week 6- SAQ (AROM)

Week 7- LAQ (AROM)

Week 8- SAQ (gradually increase resistance)

Week 8- LAQ (gradually increase resistance)

Week 8- weight shifts

Week 8- balance master and/or BAPS - with bilateral LE weight bearing

Week 8- cones

## **Weeks 9-10**

### **Exercises:**

Total gym level 5-6

Bilateral leg press - concentric only - no significant load work until 12 weeks

Weight shift on mini tramp

Toe rises

Treadmill - concentrate on pattern with eccentric knee control

**Weeks 11-16****Exercises:**

Leg press - gradually increase weight and begin unilateral leg press at week 12

Wall squats

Balance activities: unilateral stance eyes open and closed, balance master

Standing mini squats

Step-ups - start concentrically, 2" to start and progress as tolerated

Week 16 - lunges

Week 16 - stairclimber/elliptical machine

**Criteria to start running program**

Patient is able to walk with a normal gait pattern for at least 20 minutes without symptoms and performs ADL's pain-free

ROM is equal to uninvolved side, or at least 0-125°

Hamstring and quadriceps strength is 70% of the uninvolved side isokinetically

Patient without pain, edema, crepitus, or giving-way