Patella / Quadriceps Tendon Repair Rehabilitation Program

The Gundersen Sports Medicine Patella / Quadriceps Tendon Repair Rehabilitation Program is an evidence-based and soft tissue healing dependent program allowing patients to progress to vocational and sports-related activities as quickly and safely as possible. Individual variations will occur depending on the surgical technique and the patient’s response to treatment.

Phase I: Maximum Protection (week 0 to 6):

- 0 – 2 weeks:
  - Partial weight bearing, brace locked in full extension
  - Range of motion – 0 to 30 degrees knee flexion
  - Ice and modalities to reduce pain/effusion/inflammation
  - Aggressive patella mobilizations
  - Begin submaximal quadriceps setting

- 2 to 4 weeks:
  - Progress to WBAT with brace locked at 0, progressing off crutches by week 4
  - Range of motion – 0 to 60 degrees
  - Continue with pain/effusion/inflammation control
  - Continue with aggressive patellar mobility
  - Continue with submaximal quadriceps setting

- 4 to 6 weeks:
  - WBAT with brace locked at 0.
  - Range of motion – 0 to 90 degrees by week 6
  - Continue with pain/effusion/inflammation control
  - Continue with patella mobility
  - Increase intensity with the quadriceps setting

Phase II: Progressive Range of Motion and Early Strengthening (Week 6 to 12)

- 6 to 8 weeks:
  - WBAT brace unlocked 0-45/60 deg at week 6, increase to 90 deg at week 7. Use crutches initially. D/C crutches when demonstrates heel to toe normal gait pattern with good quadriceps control.
  - Continue with swelling control and patella mobility
  - Gradually progress to full range of motion
  - Begin multi-plane straight leg raises 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

Adapted from Rosenberg Cooley Metcalf, Park City Utah
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8 to 10 weeks:
- Wean out of brace. Crutches as needed
- Continue with patella mobility drills
- Normalize gait pattern
- Restore full ROM
- Progress open and closed kinetic chain program from bilateral to unilateral
- Increase intensity of stationary bike
- Begin treadmill walking program forward and backward
- Begin elliptical trainer

10 to 12 weeks:
- Full ROM
- Terminal quadriceps stretching
- Advanced unilateral open and closed kinetic chain strengthening

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

12 – 16 weeks:
- Advanced 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/addiction; avoid lunges and knee extensions.
- Begin multi-directional functional cord program

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

16 to 20 weeks:
- May begin leg extension; 30 to 0 degrees 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)

20 – 24 weeks:
- 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