



QUADRICEPS TENDON REPAIR POST-OPERATIVE PROTOCOL

PHASE I – MAXIMUM PROTECTION

WEEKS 0-2:

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

WEEKS 2-4:

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

WEEKS 4-6:

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

PHASE II – PROGRESSIVE RANGE OF MOTION AND EARLY STRENGTHENING

WEEKS 6-8:

- Brace: Open brace to 45°- 60° of flexion week 6, 90° at week 7
- Full weight bearing
- Continue with swelling control and patella mobility
 - Exercises:
 - 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 8-10:

- Brace: Wean out of brace
 - Exercises:



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- 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 10-12:

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

PHASE III – PROGRESSIVE STRENGTHENING

WEEKS 12-16:

- Exercises:
 - 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 16-20:

- Exercises:
 - 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 20-24:

- Exercises:
 - Advance gym strengthening
 - Progress running/sprinting program
 - Begin multi-directional field/court drills
 - Begin bilateral progressing to unilateral plyometric drills
 - Sports test for return to competition
- Other Considerations:
 - Follow-up appointment with physician at 6 months