

# TIBIAL TUBERCLE SHIFT

DR. BRADLEY BRUNER

01/01/2021

## PHASE I – MAXIMUM PROTECTION (WEEKS 0 TO 6):

### 0 TO 2 WEEKS:

- Brace locked in full extension for 3 weeks
- Touch weight bearing for 2 weeks per physician's instructions
- Ice and modalities to reduce pain and inflammation
- Aggressive patellar mobility drills
- Range of motion – 0° to 45°knee flexion
- Begin submaximal quadriceps setting

### WEEKS 2 TO 4:

- Increase weight bearing
- Continue with inflammation control
- Continue with aggressive patellar mobility
- Range of motion – 0° to 60°
- (Open brace 10° per week)
- Continue with submaximal quadriceps setting, isometric hamstring/groin and global lower leg strengthening

### WEEKS 4 TO 6:

- Progressive weight bearing per physician's instructions
- Continue with ice and aggressive patellar mobility
- Range of motion – 0° to 90° (by week 6)
- (Open brace 10° per week)
- Increase intensity with quadriceps setting

## PHASE II – PROGRESSIVE RANGE OF MOTION AND EARLY STRENGTHENING (WEEKS 6 TO 12):

### WEEKS 6 TO 8:

- Next steps depend on bone healing which will be determined with post op x-rays done at post op visits
- Full weight bearing as tolerated
- Open brace as tolerated/depending on bone healing
- Continue with swelling control and patellar 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 patellar 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

**WEEKS 10 TO 12:**

- Full ROM
- Aggressive terminal quadriceps stretching
- Advance unilateral open and closed kinetic chain strengthening
- Initiate proprioception drills
- May introduce elliptical trainer

**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
- Initiate pool running program

**PHASE IV – ADVANCED STRENGTHENING AND FUNCTIONAL DRILLS (WEEKS 16 TO 20):**

**WEEKS 16 TO 20:**

- Continue 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 **6 months post-op** per physician's release