The Tibial Spine Avulsion Fracture Rehabilitation Program* allows patients to progress to vocational and sports-related activities as quickly and safely as possible. Individual variations will occur depending on surgical technique and the patient’s response to treatment. Please contact us at 1-800-362-9567 ext. 58600 if you have questions or concerns.

General Program Overview:
• Focus on the protection of fixation in Phase I (0-6 weeks postop).
• Brace: 8 weeks total
  ◦ Weeks 0-2: Toe-Touch Weight Bearing (Full Extension)
  ◦ Weeks 3-4: Partial Weight Bearing (Full Extension, d/c crutches after 4 weeks)
  ◦ Weeks 5-6 WBAT (Full Extension)
  ◦ Weeks 7-8 (Unlock brace in 30⁰ increments, unlocked and off after week 8)
• Sleep with brace ON & LOCKED in extension for 3 weeks.
• Crutches: 4 weeks total (0-2 TTWB, 3-4 PWB, 5-6 WBAT)

Phase I: Weeks 0-6
Goals:
◦ Protect fracture fixation with the use of brace and specific exercises.
  ◦ Minimize effects of immobilization, inflammation & edema (ice x2 weeks)
  ◦ Advance to Full WB, wean off crutches, obtain motion

Brace:
◦ Weeks 0-4: Brace locked in full extension for ambulation & sleeping.
◦ Weeks 5-6: WBAT in extension. OK to d/c brace when sleeping.
◦ Weeks 7-8: Begin unlocking in 30⁰ increments every 3-4 days. Unlock by the start of Week 8 and d/c after Week 8.

Weight-Bearing:
◦ Weeks 0-2: TTWB
◦ Weeks 3-4: PWB
◦ Weeks 5-6: Wean from crutches as patient demonstrates normal gait mechanics and improved quad control.

Range of Motion:
◦ AAROM → AROM as tolerated
◦ Maintain full extension and work on progressive knee flexion.
  • 0-90⁰ by Week 3
  • 0-125⁰ by Week 6

Exercises:
◦ Patellar mobilization/scar mobilization
◦ Quad sets, Hamstring curls, Heel slides
◦ Non-weight bearing stretching of Gastro-Soleus
◦ Straight-leg raise with brace in full extension until quad strength returns (no extension lag)
Phase II: Weeks 7-12

Goals:
◦ Maintain full extension, obtain full flexion
◦ Increase hip, quadriceps, hamstring and calf strength
◦ Increase proprioception

Brace:
◦ Begin unlocking in 30° increments (every 3-4 days) after Week 6. Unlocked when weight bearing by the start of Week 8.
◦ Discontinue after Week 8 (once patient has full extension and no lag).

Exercises:
◦ Begin stationary bike
◦ Continue with ROM/flexibility exercises as appropriate
◦ Closed chain extension exercises
◦ Weight bearing Gastroc-Soleus stretching
◦ Toe raises, start proprioception program

Phase III: Weeks 13-18

Exercises:
◦ Begin straight-ahead, treadmill running after Week 12
◦ Continue flexibility and ROM exercises as appropriate for patient
◦ Progressive hip, quad, hamstring and calf strengthening
• Mini-Wall Squats (0-60°)
• Lateral Lunges & Step-Ups
• Hip Abduction/Adduction
• Short-Arc Leg Press
• Cardiovascular/endurance training via stair master, elliptical and bike
• Advance proprioceptive activities and agility drills

Phase IV: Months 5-6 - Return to Sport

Exercises:
◦ Progress flexibility/strength program based on individual needs/deficits
◦ Initiate plyometric program as appropriate for patient’s athletic goals
◦ Agility progression including:
• Side steps + Crossovers, Figure 8 and Shuttle Running
• One & Two Leg Jumping
• Cutting/Accelerative/Deceleration/Springs, Agility Ladder Drills
◦ Continue progression of running distance based on patient needs
◦ Sport-specific drills as appropriate for patient
◦ Gradual return to activity as tolerated

*This protocol is from:

SLUCare
Physician Group

Christopher Kim, MD, Scott G. Kaar, MD
Department of Orthopaedic Surgery
Sports Medicine and Shoulder Service