Tibial Spine Avulsion Fracture
Physical Therapy Protocol Prescription

Patient Name:

Date:

DOI:

Surgery Date:

Diagnosis: Tibial Spine Avulsion Fracture  Frequency: 2-3 visits/week  Duration: 4 months

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 30° 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 30° 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.
  - 0-90° by Week 3
  - 0-125° 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

**Concerns or questions:**

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**Physician Signature:**