

Tibial Spine Avulsion Repair Rehabilitation Protocol

Phase I (Weeks 0-2): TTWB, 0-90 ROM

- **Weightbearing:** Toe touch weight bearing (x 4 weeks)
 - **Hinged Knee Brace:**
 - Locked in full extension for ambulation and sleeping (**Weeks 0-4**)
 - **Range of Motion** – AAROM→AROM
 - 0-90° weeks 0-2
 - Goals: 0-90° by end of week 2
 - **Therapeutic Exercises**
 - Quad/Hamstring sets
 - Heel slides
 - Non-weightbearing stretch of the Gastroc/Soleus
 - Straight-Leg Raise with brace in full extension until quad strength prevents extension lag
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Phase II (Weeks 2-4): TTWB, ROM as tolerated

- **Weightbearing:** Toe touch weight bearing (x 4 weeks)
 - **Hinged Knee Brace:**
 - Locked in full extension for ambulation and sleeping (**Weeks 0-4**)
 - **Range of Motion** – AAROM→AROM (as tolerated)
 - Goals: 0-125° by end of week 6
 - **Therapeutic Exercises**
 - Quad/Hamstring sets
 - Heel slides
 - Non-weightbearing stretch of the Gastroc/Soleus
 - Straight-Leg Raise with brace in full extension until quad strength prevents extension lag
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Phase III (Weeks 4-6): PWB→WBAT

- **Weightbearing:** Start partial weightbearing and progress to full weightbearing by 6 weeks without crutches
- **Hinged Knee Brace:**
 - Locked in full extension for ambulation and sleeping (**Weeks 0-4**)
- **Range of Motion** – Maintain full knee extension – work on progressive knee flexion
- **Therapeutic Exercises**
 - Closed chain extension exercises
 - Hamstring curls
 - Toe raises
 - Balance exercises
 - Progress to weightbearing stretch of the Gastroc/Soleus
 - Begin use of the stationary bicycle

Phase IV (Weeks 6-8): WBAT, unlock and wean brace

- **Weightbearing:** Full weightbearing
 - **Hinged Knee Brace:**
 - Unlock brace Week 6
 - Discontinue brace use when patient has achieved full extension with no evidence of extension lag **or** by week 8
 - **Range of Motion** – Maintain full knee extension – work on progressive knee flexion
 - **Therapeutic Exercises**
 - Closed chain extension exercises
 - Hamstring curls
 - Toe raises
 - Balance exercises
 - Progress to weightbearing stretch of the Gastroc/Soleus
 - Begin use of the stationary bicycle
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Phase V (Weeks 8-16): Jogging at 12 weeks

- **Weightbearing:** Full weightbearing
 - **Range of Motion** – Full/Painless ROM
 - **Therapeutic Exercises**
 - Advance closed chain strengthening exercises, proprioception activities
 - Begin use of the Stairmaster/Elliptical
 - **Can Start Straight Ahead Running at 12 Weeks**
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Phase VI (Months 4-6): Gradual Return to Sports

- Gradual return to athletic activity as tolerated
- Maintenance program for strength and endurance