

Rehabilitation Protocol: Tibial Shaft Fracture Repair with Intramedullary Nail

Phase 1 (Weeks 0-4)

- **Brace:** Boot for comfort if prescribed. Begin to wean from boot as tolerated.
- **Weightbearing:** Weightbearing as tolerated. Transition from walker/crutches to cane to unassisted ambulation.
- **Range of Motion:** Active, Active-Assist, and Passive ROM to hip, knee, ankle, and foot.
- **Therapeutic Exercises**
 - Quadriceps isometrics
 - Ankle pumps
 - Leg press
 - Begin stationary bicycle once patient comfort allows

Phase 2 (Weeks 4-8)

- **Weightbearing:** Work towards full weightbearing without assistive devices
- **Range of Motion:** Continue ROM exercises to all lower extremity joints
- **Therapeutic Exercises**
 - Advance lower extremity strengthening. Add leg presses.
 - Begin use of elliptical trainer
 - Okay to return to road cycling and swimming
- Modalities per PT discretion. Okay to begin blood flow restriction therapy.

Phase 3 (Weeks 8-16)

- **Weightbearing:** Full weightbearing without assistive devices
- **Range of Motion:** Maximize ROM throughout the lower extremity
- **Therapeutic Exercises**
 - Weight training
 - May begin light jogging when comfort allows
- Modalities per PT discretion.

Phase 4 (Weeks 16-26)

- **Weightbearing:** Full weightbearing without assistive devices
- **Range of Motion:** Maximize ROM throughout the lower extremity
- **Therapeutic Exercises**
 - Advance strengthening
 - Plyometrics
- Return to sports and outdoor recreation activities once cleared by Dr. Gross