## Physical Therapy Treatment Plan

**Patient Name:** Liam Thompson
**Date of Birth:** 09/15/1992
**Start of Care:** 02/12/2025
**Payer:** Private Insurance
**Hospitalization:** None

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## Diagnosis

The patient has the following diagnoses: Med – shin splints (medial tibial stress syndrome) (M76.81) with an onset date of 01/15/2025, Tx – pain in the right leg (M79.601) with an onset date of 01/15/2025, and Tx – pain in the left leg (M79.602) with an onset date of 01/15/2025.

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## Treatment Approaches

- **PT Evaluation** (Assessment of running mechanics, muscle strength, flexibility, and pain patterns in the shins)
- **Therapeutic Exercises** (Focusing on strengthening the tibialis anterior, calf muscles, and improving lower limb biomechanics)
- **Neuromuscular Reeducation** (Addressing abnormal running posture and correcting overuse mechanics to prevent re-injury)
- **Manual Therapy** (Gentle soft tissue mobilization to release tight muscles in the lower leg and improve blood flow)
- **Modalities** (Cold therapy for pain and inflammation, ultrasound therapy to promote healing)
- **Stretching and Flexibility Training** (Focusing on calf, hamstring, and quadriceps stretches to reduce tension in the lower leg)
- **Footwear and Training Modifications** (Assessment of shoes for proper arch support and modification of running routine)

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## Frequency, Duration, Intensity, Certified Period

- **Frequency:** 2 sessions per week
- **Duration:** 4-6 weeks
- **Intensity:** Low to moderate intensity focusing on strengthening and reducing pain with gradual increases in running volume and intensity
- **Certified Period:** 02/12/2025 - 03/26/2025

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## Plan of Treatment

### Short Term Goals

1. Liam will report a 30% reduction in pain (0-10 scale) during running after 4 weeks of treatment (Target: 03/12/2025).
2. Liam will demonstrate improved lower leg strength, achieving 4/5 strength in tibialis anterior and calf muscles after 4 weeks (Target: 03/12/2025).
3. Liam will improve ankle dorsiflexion range of motion (ROM) by 5° bilaterally after 4 weeks (Target: 03/12/2025).
4. Liam will demonstrate proper running form without overstriding, reducing excessive stress on the shins, after 4 weeks (Target: 03/12/2025).

### Long Term Goals

1. Liam will return to marathon training with no pain during or after runs of 5 miles or longer by the end of the treatment period (Target: 03/26/2025).
2. Liam will perform his regular training routine (including speed and distance work) with no recurrence of shin pain by the end of treatment (Target: 03/26/2025).
3. Liam will be able to run at a moderate pace for 45 minutes without exacerbating shin pain, with proper form and strength, by the end of treatment (Target: 03/26/2025).
4. Liam will have regained full strength and flexibility in both lower legs, without limitations from pain or discomfort, by 03/26/2025.

### Patient Goals

- "I want to be able to run pain-free and finish my marathon."
- "I need to improve my shin pain so I can get back to training consistently."

### Potential for Achieving Goals

- Liam shows good rehabilitation potential due to his strong motivation, active lifestyle, and commitment to following through with the plan. He has a history of being an active runner, and with the right modifications to his training and biomechanics, he has a high potential for success.

### Participation

- Liam is motivated to fully participate in therapy and is proactive in making lifestyle changes, including adjusting his running routine and addressing any footwear issues. He is highly committed to achieving his marathon goal.

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## Initial Assessment / Current Level of Function & Underlying Impairments

### Factors Supporting Medical Necessity

- **Referral:** Referred for physical therapy due to medial tibial stress syndrome (shin splints) that has been affecting his marathon training.
- **Medical History:** No significant past medical history or comorbidities, apart from the ongoing shin pain related to running.
- **Complexities:** Persistent pain despite conservative measures such as rest and self-stretching.
- **Prior Treatment:** No prior physical therapy, self-managed with stretching and rest.
- **Prior Living Situation:** Highly active, marathon training for several years.
- **Discharge Plan:** Goal to return to full training without pain and address any biomechanical factors that contribute to the shin pain.
- **Prior Level of Function (PLOF):** Full participation in marathon training before injury; independent with all ADLs.

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### Background Assessment

- **Precautions:** Avoid running on hard surfaces and steep inclines until symptoms are managed. Avoid overstriding and excessive distance until strength and flexibility improve.

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### Joint ROM / Goniometric Measurements

- **Right Ankle Dorsiflexion:** 10° (Restricted)
- **Left Ankle Dorsiflexion:** 12° (Restricted)
- **Right Knee Flexion:** 135° (Normal)
- **Left Knee Flexion:** 135° (Normal)

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### Strength / Manual Muscle Testing

- **Tibialis Anterior (Right):** 4/5 (Fair)
- **Tibialis Anterior (Left):** 4/5 (Fair)
- **Calf Strength (Right):** 4/5 (Fair)
- **Calf Strength (Left):** 4/5 (Fair)
- **Quadriceps Strength (Right):** 5/5 (Normal)
- **Quadriceps Strength (Left):** 5/5 (Normal)

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**Balance**

- **Sitting Balance:** Normal
- **Standing Balance:** Slight instability during single-leg stance on the affected leg due to pain.

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**Additional Abilities / Underlying Impairments**

- **Cardiopulmonary Function:** Normal
- **Tone and Posture:** No abnormal tone; mild tightness in calf muscles.
- **Pain and Edema:** Dull, aching pain in the shins, primarily with running and after activity.
- **Coordination:** Normal
- **Sensory Test Findings:** No sensory deficits.

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**Visual Assessment**

- **History and Analysis:** Mild swelling in both shins after long runs; visible tightness in the calf muscles. No visible bruising or redness.

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**Functional Assessment**

- **Bed Mobility:** Independent
- **Transfers:** Independent
- **Gait:** Slightly altered gait with mild limp during running due to pain in shins.
- **Functional Tasks:** Difficulty running long distances; pain exacerbated with downhill running and speed work.

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**Objective Tests / Measures & Additional Analysis**

- **Assessments:**
    - **Shin Pain Rating Scale:** 7/10 pain intensity during running, 4/10 pain intensity at rest.
    - **Running Form:** Demonstrates slight overstriding with heavy impact during foot strike, contributing to tibial stress.
- **Other:** Home Exercise Program (HEP) to include calf stretching, tibialis anterior strengthening, and running form correction.

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**Clinical Impressions**

Liam presents with medial tibial stress syndrome (shin splints), a condition that is likely exacerbated by running biomechanics, including overstriding and calf tightness. The treatment plan will focus on reducing pain and inflammation through manual therapy and modalities, improving lower leg strength, and correcting running mechanics to reduce stress on the tibia. With proper intervention, Liam has a high potential for returning to marathon training without pain.

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**Test/Measures and Outcomes**

- **Strength Testing:** Goal to achieve full strength (5/5) in tibialis anterior and calf muscles by the end of treatment.
- **Pain Reduction:** Target pain reduction to 2/10 during running and 0/10 at rest.
- **Function:** Goal to return to pain-free running, including distance and speed work.