

**Blake M. Bodendorfer, MD**  
**1 Edmundson Place Suite 500**  
**Council Bluffs, IA 51503**  
**712-323-5333**  
**16221 Evans Plaza**  
**Omaha, NE 68116**  
**402-991-9958**  
[bbodendorfer@millerortho.com](mailto:bbodendorfer@millerortho.com)  
[omahasportsdoc.com](http://omahasportsdoc.com)



## **ANKLE SYNDESMOSIS REPAIR (TIGHTROPE) POSTOPERATIVE REHABILITATION**

### **General Rehabilitation Principals**

- 6 Week Period of Protected and Progressive Weight-bearing
- Early Resolution of Tissue Irritability/Effusion
- Progressive Loading into Dorsiflexion and Multi-Directional Movements
- Gradual Return of Functional Strength & Conditioning
- Criteria-Based Return to Cutting/Pivoting Activity after 8-10 weeks

### **Week 0 - 6**

#### Precautions

- Limited weight bearing Day 0 - 5 in a Fiberglass Cast
- Transition to AirCast Boot Week 3 through Week 6
- AirCast Boot removed for showering or when at rest
- Continue to monitor and reduce swelling

### **Week 6**

#### Precautions

- Continue use of AirCast Boot for Standing Exercise/Ambulation
- Avoid Biking with Ankle Positioned in Dorsiflexion
- Avoid Isotonic Strengthening into Dorsiflexion

#### Interventions (Follow Pain Monitoring Model\*)

- (PRICE): Protect, Rest, Ice, Compression and Elevation as needed
- Plantar Grade Stationary Biking without AirCast Boot (NO RESISTANCE)
- Progress sitting Heel/Forefoot Raises 20-30RM Load (No Strengthening into Dorsiflexion)
- Other Isotonic Strengthening from Plantar Grade through Plantarflexion (Sagittal Plane Only)
- Standing Proprioceptive Exercises
- 4-Way SLR/ Non-Weight Bearing Exercises for larger lower limb muscles (Glute, Quad, Ham)

## **Week 7**

### Precautions

- Wean from AirCast Boot per Pain Monitoring Model\*
- Gradually Progress Dorsiflexion AROM (No Aggressive Stretching)
- Progression of Exercise per Tissue Tolerance/Effusion Control

### Interventions (Follow Pain Monitoring Model\*)

- (PRICE): Protect, Rest, Ice, Compression and Elevation as needed
- Stationary Bike without AirCast Boot (Gradual Progression of Resistance Intervals)
- Begin Alter-G Return to Running Program\*\* (50% Weight Bearing ONLY)
- Progress Seated Heel/Forefoot Raises 15-20RM Load (Avoid Aggressive Loading in Dorsiflexion )
- Other Isotonic Strengthening from Limited Dorsiflexion through Plantarflexion (No Stretching)
- Shallow DL Squatting Progression (Limit End-Range Dorsiflexion)
- Static, Double and Single Leg, Standing Proprioceptive Exercises (No CKC Single Leg Dorsiflexion)
- Continue 4-Way SLR/ Non-Weight Bearing Exercises

## **Week 8**

### Precautions

- Avoid Combined Dorsiflexion+Eversion AROM/Strengthening
- Gradually Progress Multi-Planar AROM (No Aggressive Stretching)
- Progression of Exercise per Tissue Tolerance/Effusion Control
- NO DISTAL Tibiofibular Mobilizations

### Interventions (Follow Pain Monitoring Model\*)

- (PRICE): Protect, Rest, Ice, Compression and Elevation every 2 hours as needed
- Increasing Intensity of Stationary Bike Resistance Intervals per Pain Monitoring Model\*
- Introduce Multi-Planar AROM/ Open Chain Strengthening (No Dorsiflexion+Eversion)
- Continue Alter-G Return to Running Program\*\* (50-75% Weight Bearing ONLY)
- Mobilizations to the Superior Tibiofibular, Talocrural, Subtalar, Mid/Forefoot Joints
- Other Isotonic Strengthening from Limited Dorsiflexion through Plantarflexion
- Begin Standing Double/Single Leg Heel Raise Program per Tissue Tolerance
- Progressive Standing Proprioceptive Exercises

## **Week 9**

### Precautions

- Initiate Light Dorsiflexion Stretching (NO AGGRESSIVE STRETCHING)
- Gradually Progress Weight Bearing Strengthening into Dorsiflexion (No Dorsiflexion+Eversion)
- Avoid Tissue Irritability/Increasing Effusion with Return to Running Program\*\*
- Avoid Tissue Irritability/Increasing Effusion with Multi-Planar Weight Bearing Exercise
- NO DISTAL Tibiofibular Mobilizations

- No Multi-Planar Plyometric Exercise

Interventions (Follow Pain Monitoring Model\*)

- Increasing Intensity of Stationary Bike Resistance Intervals per Pain Monitoring Model\*
- Progress Return-to-Running Program\*\* to Full Weight Bearing per Pain Monitoring Model\*
- Mobilizations to the Superior Tibiofibular, Talocrural, Subtalar, Mid/Forefoot Joints
- Progress Multi-Planar AROM/Open Chain Strengthening • Progressive CKC, Multi-Planar, Resistance Exercise (No Dorsiflexion+Eversion)
- Progressive Multi-Planar Standing Proprioceptive Exercises (No Dorsiflexion+Eversion)
- Begin Sport-Specific Return to Activity Progression per Tolerance

**Week 10**

Precautions

- Stretching ALLOWED with respect to Pain Monitoring Model\*
- No Aggressive Dorsiflexion + Eversion Strengthening/Plyometric
- Avoid Aggressive DISTAL Tibiofibular Mobilizations

Interventions (Follow Pain Monitoring Model\*)

- Progress Multi-Planar AROM/Progressive Resistance Exercise (Protected Dorsiflexion+Eversion)
- Continue Return-to-Running Program\*\*
- Mobilizations to the Superior/Distal Tibiofibular, Talocrural, Subtalar, Mid/Forefoot Joints
- Initiate Light, Multi-Planar Plyometric Exercise/Drills (No Aggressive Multi-Planar Plyometrics)
- Continue Multi-Planar Standing Proprioceptive Exercises

**Week 11+**

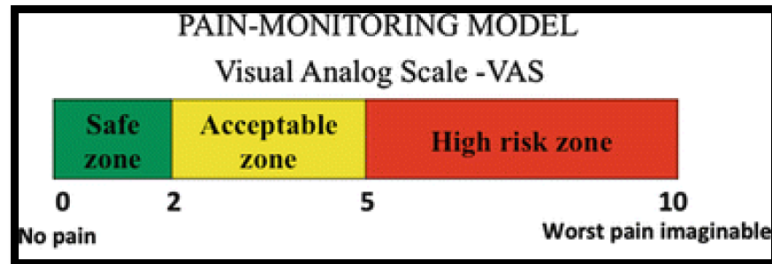
Precautions

- Protected Return to Play Progression per Tissue Irritability, Effusion, and Functional Status
- Progressive Increase in Plyometric Exercise per Pain Monitoring Model\*

Interventions (Follow Pain Monitoring Model\*)

- Continue Multi-Planar AROM/Progressive Resistance Exercise (Protected Dorsiflexion+Eversion)
- Continue Return-to-Running Program\*\*
- Mobilizations to the Superior/Distal Tibiofibular, Talocrural, Subtalar, Mid/Forefoot Joints
- Increase Intensity of Multi-Planar Plyometric Exercise/Drills
- Continue Multi-Planar Standing Proprioceptive Exercises Return to Activity Criteria
- Minimum of 8-12 Weeks of Tissue Healing Time Since Surgery
- Managed Tissue Irritability per Pain Monitoring Model\*

- Resolving Joint Effusion (Non-Reactive Effusion to Activity)
- Functional/Closed-Chain Dorsiflexion Range-of-Motion (Activity Dependent)
- Adequate Functional Strength for Joint Protection and Task Performance
  - o 90% LSI on Hop Testing for Level 1 Sports
  - o Y-Balance Anterior Reach within 4-6cm



- Pain Monitoring Model Guidelines**
- 1) Pain Should be Managed at a **3-5/10 or Less** with Exercise
  - 2) Pain Should NOT Increase after Exercise **Above a 3-5/10**
  - 3) Pain Should NOT be **INCREASED** the Next Morning After Exercise
  - 4) Pain and Stiffness **Should Improve** Week to Week

<b>Alter-G/Treadmill Return to Running Progression**</b>		
Week	Weight Bearing (WB)	Walk-Run Protocol*
Week 6	Alter-G 50% WB	2-Minute Walk, 1-Minute jog at 5-6/10 Effort   10-15 Minute Workout
Week 7	Alter-G 50-75% WB	1-Minute Walk, 2-Minute jog at 5-6/10 Effort   15-20 Minute Workout
Week 8	Alter-G 75%-FULL WB	1-Minute Walk, 3-Minute jog at 6-7/10 Effort   15-20 Minute Workout
Week 9	FULL/Treadmill	1-Minute Walk, 3-Minute jog at 6-7/10 Effort   20-30 Minute Workout
Week 10	FULL/Treadmill	1-Minute Walk, 4-Minute jog at 6-8/10 Effort   20-30 Minute Workout
Week 11+	FULL/Treadmill	Progress toward 20-30 minute jog at 8-10/10 Effort

\*Allow 1-2 Days of Rest Between Running Progression Workouts, **Reduce Volume/Intensity** if Pain/Effusion Present