

**DR. JASON DEVRIES**  
**MODIFIED BROSTRÖM PROCEDURE POST-OP THERAPY PROTOCOL**

\*\* Special consideration to be taken if a Microfracture Procedure is performed in conjunction with the Modified Broström Procedure. See below weight bearing and impact restrictions to be considered. \*\*

**Phase 1 – Maximum Protection Phase (0-3 weeks)**  
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Goals for Phase 1	Precautions for Phase 1
<p><b>Goals for Phase 1</b></p> <ul style="list-style-type: none"> <li>• Protect integrity of graft</li> <li>• Minimize effusion</li> <li>• ROM per guidelines</li> <li>• Prevent muscular inhibition</li> <li>• Scar tissue mobility</li> </ul>	<p><b>Precautions for Phase 1</b></p> <ul style="list-style-type: none"> <li>• No inversion or eversion</li> <li>• PROM or AROM to be performed in Phase 1</li> <li>• Boot to be worn at all times for ambulation</li> </ul>

**Post-Op Physical Therapy**

- 1<sup>st</sup> physical therapy visit to occur 2 weeks post-op
- Assessment of AROM into PF and DF only, proximal strength in NWB (hip, knee, and core), swelling, and scar tissue mobility

**Immobilization**

- **0-6 weeks:** Walking boot worn at all times, including while sleeping

**Weight Bearing**

- Full weight bearing in walking boot
- Non-weight bearing when not wearing boot (therapy, bathing, changing attire, etc.)
- **If Microfracture Procedure performed: NWB for 2-4 weeks, per physician**

**Range of Motion**

- Dorsiflexion: 0-10°
  - AROM, AAROM, PROM
- Plantarflexion: 0-20°
  - AROM, AAROM, PROM
- **NO inversion or eversion** to be performed in this phase
- **If PASS** AROM check and patient has adequate proximal strength, as well as good understanding of restrictions and HEP, begin follow-up in physical therapy at 4 weeks post-op
- **If NOT** pass AROM and proximal strength check, begin physical therapy immediately with emphasis on early ankle ROM and talocrural joint mobility

**Manual Therapy**

- Scar mobility following closure of incision
- Gentle flexibility for lower extremity musculature
- PROM/AROM ankle DF/PF within above listed ROM
- Talocrural joint mobilizations (Grades I-II) – **NO subtalar joint mobilizations**
- Emphasis on enhancing DF ROM if patient does not pass above ROM check (10°-0°-20°)

## Phase 1 – Maximum Protection Phase (0-3 weeks)

### Strengthening

- Hip and core strengthening
  - **0-3 weeks:** Multi-plane OKC SLR, straight leg bridging, etc.
  - Intrinsic foot strengthening in NWB position (i.e. toe extension, toe flexion, splaying of the toes)
  - Sub-max isometrics of the ankle initiate with neutral foot position and performed in long sitting (not inversion)

### Modalities

- Vasopneumatic compression for edema management, 2-3x/week (15-20 min)
- Cryotherapy at home, 3x per day for 20 minutes, ankle elevated above heart

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**Phase 2 – Maximum Protection Phase (3-6 weeks)**  
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Goals for Phase 2	Precautions for Phase 2
<ul style="list-style-type: none"> <li>• Protect integrity of graft</li> <li>• Minimize effusion</li> <li>• ROM per guidelines listed</li> <li>• Prevent muscular inhibition</li> <li>• Scar tissue mobility</li> </ul>	<ul style="list-style-type: none"> <li>• No inversion PROM or AROM</li> <li>• No kicking in pool for 10 weeks</li> <li>• Avoid twisting and pivoting motions for at least 12 weeks</li> <li>• Avoidance of impact activity for 10 weeks if isolated Modified Broström Procedure performed, 12 weeks if <b>Microfracture</b> procedure performed</li> </ul>

**Immobilization**

- **0-6 weeks:** Walking boot worn at all times, including while sleeping

**Weight Bearing**

- Full weight bearing in walking boot
- Non-weight bearing when not wearing boot (therapy, bathing, changing attire, etc.)
- **If Microfracture Procedure performed: NWB for 2-4 weeks, per physician**

**Range of Motion**

- Dorsiflexion: 0-10°
- Plantarflexion: 0-40°
- Initiate eversion AROM – no PROM to end range
- **NO inversion in Phase 2**

**Manual Therapy**

- Scar mobility when incisions closed
- PROM within restrictions above
- Joint mobilization to talocrural joint (Grades I-III)

**Strengthening**

- Limited ankle and foot strengthening (towel crunches, marble pick-ups, DF/PF light band strengthening, etc.)
- Lower extremity strengthening
  - Hip strengthening (continue OKC hip strengthening)
  - Quad strengthening (quad sets, leg-press, wall squats, etc.)
  - Hamstring strengthening (prone hamstring curls, physio-ball curls, etc.)
  - Core strengthening

**Aquatics**

- Initiate aquatic therapy program when incisions closed
- Focus on normalizing gait pattern at reduced body weight (<50%)

## Phase 2 – Maximum Protection Phase (3-6 weeks)

### Neuromuscular Control

- Double leg balance tasks
- Stable surfaces only

### Modalities

- Vasopneumatic compression for edema management, 2-3x/week (15-20 min)
- Cryotherapy at home, 3x per day for 20 minutes, ankle elevated above head

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**Phase 3 – Moderate Protection Phase (6-12 weeks)**

Goals for Phase 3	Precautions for Phase 3
<ul style="list-style-type: none"> <li>• Protect integrity of graft</li> <li>• Restore full ankle ROM</li> <li>• Increase neuromuscular control tasks in a safe environment</li> <li>• Restore full strength of ankle and lower extremity</li> </ul>	<ul style="list-style-type: none"> <li>• No kicking in pool for 10 weeks</li> <li>• Avoid twisting and pivoting motions for at least 12 weeks</li> <li>• Avoidance of impact activity for 10 weeks if isolated Modified Broström Procedure performed, 12 weeks if <b>Microfracture</b> procedure performed</li> </ul>

**Immobilization/Weight Bearing**

- **6-8 weeks (WBAT):** Soft ankle orthosis (ASO, impact, etc.) to be purchased for gradual progression out of walking boot
- **8-12 weeks (WBAT):** Soft ankle orthosis (ASO, impact, etc.) to be worn when walking on uneven surfaces, busy environments, and during all athletic or sporting activities

**Range of Motion**

- Restore full ankle ROM in all planes (can begin inversion)

**Manual Therapy**

- Scar mobility when incisions closed
- Joint mobilization to talocrural joint (Grades I-III)
  - Emphasis on enhancing DF ROM to reach 10°
  - Gentle rear foot glides to be added in this phase

**Strengthening**

- Stationary bike or elliptical
- AROM of ankle in all planes (sitting rocker board, ½ foam roller rocks, BAPS board, etc.)
- Ankle and foot strengthening (band strengthening, bent and straight knee heel raises, supinated single leg stance, etc.)
- Lower extremity strengthening
  - **Weeks 6-9:** Focus on CKC activities in the sagittal plane
  - **Weeks 9-12:** Progression to multi-directional CKC activities as able (based on observed single leg strength and dynamic stability)

**Aquatics**

- Continue aquatic therapy program PRN

**Neuromuscular Control**

- Continue proprioception training
  - **Weeks 6-9:** Focus on stable surfaces with decreasing UE support and progression to SL balance
  - **Weeks 9-12:** Progression to unstable surfaces, perturbations, and/or dual tasking (double leg → single leg)

**Modalities**

- Vasopneumatic compression for edema management, 2-3x/week (15-20 min)
- Cryotherapy at home, 3x per day for 20 minutes, ankle elevated above heart

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**Phase 4 – Return to Active Phase (12-24 weeks)**  
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Goals for Phase 4	Precautions for Phase 4
<ul style="list-style-type: none"> <li>• Progress single leg muscle strength, endurance, and balance</li> <li>• Initiate impact activity</li> <li>• Sport or work specific tasks</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>

**Brace**

- PT to transition out of the brace as able with ROM, strength, and proprioceptive gains

**Weight Bearing/Range of Motion**

- Full weight bearing without restriction
- Restore full ankle ROM in all planes

**Manual Therapy**

- Restore lower extremity flexibility
- AROM and PROM in all planes, as needed
- Joint mobilization to talocrural joint (Grades III-IV), as needed

**Strengthening**

- Stationary bike or elliptical
- Unilateral gym strengthening program (single leg calf raises, single leg squats, eccentric leg press, step-up progression, multi-directional lunges)
- Initiate impact activities
  - **10+ weeks:** Initiation to impact exercise, sub-maximal bodyweight → maximal (pool, GTS, plyo-press, Alter G), sagittal plane jogging only
  - **12+ weeks:** Multi-directional agility drills, cutting, pivoting, and plyometrics
- If **Microfracture Procedure** performed, sub-maximal impact not to start until 12 weeks, sagittal plane jogging at 12 weeks, multi-directional agility at 14 weeks
- Core strengthening

**Neuromuscular Control**

- Advanced proprioception
- Unstable surfaces
- Perturbations
- Dual tasking
- Add sport/work specific balance tasks as able

**Modalities**

- Cryotherapy after activity
- Soft ankle orthosis (ASO, impact, etc.) to be continued during all athletic or sporting activities

## Phase 4 – Return to Active Phase (12-24 weeks)

### Return to Function Testing

- **Week 12-16:** per physician approval, criteria to pass: pain-free, full ROM minimal joint effusion, 5/5 MMT strength, jump/hop testing at 90% compared to unininvolved, adequate ankle control with sport and/or work specific tasks