

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 <ul style="list-style-type: none"> • Protect integrity of graft • Minimize effusion • ROM per guidelines • Prevent muscular inhibition • Scar tissue mobility 	Precautions for Phase 1 <ul style="list-style-type: none"> • No inversion or eversion • PROM or AROM to be performed in Phase 1 • Boot to be worn at all times for ambulation
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Post-Op Physical Therapy

- 1st 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 <ul style="list-style-type: none"> • Protect integrity of graft • Minimize effusion • ROM per guidelines listed • Prevent muscular inhibition • Scar tissue mobility 	Precautions for Phase 2 <ul style="list-style-type: none"> • No inversion PROM or AROM • No kicking in pool for 10 weeks • Avoid twisting and pivoting motions for at least 12 weeks • Avoidance of impact activity for 10 weeks if isolated Modified Broström Procedure performed, 12 weeks if Microfracture procedure performed
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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"> • Protect integrity of graft • Restore full ankle ROM • Increase neuromuscular control tasks in a safe environment • Restore full strength of ankle and lower extremity 	<ul style="list-style-type: none"> • No kicking in pool for 10 weeks • Avoid twisting and pivoting motions for at least 12 weeks • Avoidance of impact activity for 10 weeks if isolated Modified Broström Procedure performed, 12 weeks if Microfracture procedure performed

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"> • Progress single leg muscle strength, endurance, and balance • Initiate impact activity • Sport or work specific tasks 	<ul style="list-style-type: none"> • None

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 uninvolved, adequate ankle control with sport and/or work specific tasks