



## Dr. Brandon Scharer

### Modified Broström Procedure

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 (0-6 weeks)

### Goals for Phase 1

- Protect integrity of graft
- Minimize effusion
- ROM per guidelines
- Prevent muscular inhibition
- Scar tissue mobility

### Precautions

- No inversion or eversion PROM or AROM to be performed in Phase 1
- Boot to be worn at all times for ambulation

### Immobilization/Weight Bearing

- Weeks 0-2: Splint, NWB
- Weeks 2-4: Cast or boot patient dependent, NWB
- Weeks 4-6: Boot, WBAT in the boot
- Weeks 4-6: Non-weight bearing when not wearing boot (therapy, bathing, changing attire, etc.)
- Weeks 4-6: May remove boot at night and with bathing, when icing and elevating in safe environment.

### Range of Motion

- Dorsiflexion: 0-10°
- Plantarflexion: 0-20°
- **NO inversion or eversion** to be performed in this phase

### Manual Therapy

- Scar mobility following closure of incision
- Gentle flexibility for lower extremity musculature
- PROM/AROM ankle DF/PF within above listed ROM
- Joint mobilization (Grades I-II)
  - Emphasis on enhancing DF ROM if patient does not pass above ROM check (10°-0°-20°)

### Strengthening

- Quadriceps/Glut setting
- Hip strengthening
  - Weeks 0-3: Multi-plane OKC SLR, straight leg bridging, etc.
- Core strengthening

### Modalities

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



## Phase 2 – Maximum Protection Phase (6-8 weeks)

### Goals for Phase 2

- Protect integrity of graft
- Minimize effusion
- ROM per guidelines listed
- Prevent muscular inhibition
- Scar tissue mobility

### Precautions

- 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

### Weight Bearing

- Transition out of boot at 6 weeks
- WBAT in shoe with soft ankle orthosis (ASO)

### 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
- Gentle flexibility using deep tissue mobilization for lower extremity musculature
- PROM within restrictions above
- Joint mobilization to talocrural joint (Grades I-III)
  - Emphasis on enhancing DF ROM to reach 10°

### 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%)

### Neuromuscular Control

- Double leg balance tasks with soft ankle brace
- Progress from stable to unstable surfaces as appropriate
- Allow UE support for balance as needed

### Modalities

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



## Phase 3 – Moderate Protection Phase (8-12 weeks)

### Goals for Phase 3

- Protect integrity of graft
- Restore full ankle ROM
- Increase neuromuscular control tasks in a safe environment
- Restore full strength of ankle and lower extremity

### Precautions

- 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

### Weight Bearing

- Soft ankle orthosis (ASO) to be worn when walking on uneven surfaces, busy environments, and during all athletic or sporting activities

### Range of Motion

- AROM ankle DF, PF, eversion, and inversion
- Do NOT force inversion range of motion
- Restore full ankle ROM in all planes

### Manual Therapy

- Scar mobility when incisions closed
- Gentle flexibility using deep tissue mobilization for lower extremity musculature
- PROM in all planes with focus on restoring full ROM
- Joint mobilization to talocrural joint (Grades I-III)
  - Emphasis on enhancing DF ROM to reach 10°
  - Gentle rearfoot 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 & straight knee heel raises, supinated single leg stance, etc.)
- Lower extremity strengthening
  - Weeks 8-9: 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
- Focus on normalizing gait pattern at reduced body weight

### Neuromuscular Control

- Continue to progress with proprioception training
  - Progression to more challenging/unstable surfaces, perturbations, and/or dual tasking (Double leg → Single leg)

### Modalities

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



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

### Goals for Phase 4

- Progress single leg muscle strength, endurance and balance
- Initiate impact activity
- Sport or work specific tasks

### Return to Function Testing

- Week 12-16: per MD 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

### Weight Bearing/Range of motion

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

### Manual Therapy

- Restore lower extremity flexibility
- 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, AlterG), 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
  - Un-stable 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

This protocol was reviewed and updated by Brandon Scharer, DPM, Sarah Burton, NP, and Katelyn Peterson, PT on 2/7/2025.

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