



## Foot Fusions:

### Talonavicular, Subtalar, Double (TN and STJ), Triple (TN, STJ, CC)

#### Phase 1- Early Protective Phase (0-10 weeks)

##### Goals for phase 1

- Minimize effusion
- ROM at home starting at weeks 6-8, instructed by MD
- Follow weight bearing schedule to ensure healing and minimize inflammation

##### Brace and Weight bearing

- 0-2 weeks: NWB in a splint
- 2-6 weeks: NWB in a cast
- 6-10 weeks: Wean into WBAT in a CAM boot
- 10-14 weeks: Wean into WBAT in an articulating Axiom brace

##### AROM

- ROM exercises at weeks 6-8 instructed by MD office (plantar flexion and dorsiflexion)

##### Modalities

- Cryotherapy at home, 3 x per day for 20 minutes each with ankle elevated above heart

##### Criteria for progression to

##### Phase 2

- MD clearance to begin Outpatient Physical Therapy
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#### Phase 2 – Intermediate Phase (10-14 weeks)

##### Goals for phase 2

- Start Outpatient PT at 10-12 weeks post-op (PT to last 6-8 weeks total)
- WBAT out of boot and into shoe with Axiom brace
- Minimize effusion
- Increase core, hip and knee strength
- Safe gait with/without walking aid
- Scar tissue mobility

##### Criteria for progression to Phase 3

- Full weight bearing in brace pain-free
- Tolerate ankle isotonic pain-free

##### Brace and Weight bearing

- Axiom brace on during all weight bearing activities per MD recommendation, including PT
- Work on WBAT weaning from boot and into Axiom brace to gradually increase time and distance without compensation

##### AROM

- Plantar flexion to equal uninvolved if possible
- Dorsiflexion may be increased due to Achilles lengthening
- Midfoot ABD and ADD 10-15 degrees

##### Manual Therapy

- Scar massage
- Grade 1, 2 joint mobilizations to **unfused joints**

##### Strengthening

- Stationary bike
- Progressive hip, ankle and core strengthening
- Ankle strengthening: start isometric and work up to gentle isotonic
- Foot intrinsic strengthening

##### Proprioception

- Low level balance and proprioceptive exercises starting with double leg on a stable surface using UE support as needed

##### Gait Training

- Resume normal gait mechanics

##### Aquatics

- Initiate aquatic therapy program when incisions are closed and patient is safe to get in and out of the pool.

##### Modalities

- Heat for stiffness as needed
- Cryotherapy after activity
- Other modalities as needed for pain and swelling



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#### Phase 3 – Intermediate Phase(14-16 weeks)

##### Goals for phase 3

- Full weight bearing without compensation
- Wean from Axiom articulated brace at 14-16 weeks
- Wear brace for "high risk" activity

##### Criteria for progression to Phase 4

- Normal ankle PROM
- Normal Gait

##### Brace and Weight bearing

- Wean from Axiom articulated brace at 14-16 weeks under PT guidance
- Axiom brace used for patient comfort only after weaning period is complete. Patient may choose to wear for "high risk" activity
- May require a rocker bottom shoe (optional)

##### AROM

- LE flexibility restored

##### Strengthening

- Bilateral heel raises progressing to unilateral heel raises
- Continue with PRE LE and core strength and to tolerance

##### Proprioception

- Stable surface decreasing UE support and progression to single leg balance
- Progression to unstable surfaces, perturbations and or dual tasking

##### Gait Training Advanced

- Ambulation without a walking aid, without compensation

##### Modalities

- Heat for stiffness as needed
- Cryotherapy after activity
- Other modalities as needed for pain and swelling



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#### Phase 4 – Return to Function (16+ weeks)

##### Goals for phase 4

- Progress single leg muscle strength, endurance and balance
- Return to Sport or work specific tasks
- Full strength

##### Criteria for return to work, function, sport

- **Criteria:**
- pain-free
- full ROM
- minimal joint effusion
- 5/5 MMT strength
- jump/hop testing at 75% compared to uninvolved
- display adequate ankle control with sport and/or work specific tasks

##### Brace and Weight bearing

- Axiom brace used for patient comfort only after weaning period is complete. Patient may choose to wear for "high risk" activity

##### 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

##### Proprioception

- Advanced proprioception on un-stable surfaces with perturbations and/or dual tasking,

##### Modalities

- Cryotherapy after activity

##### Work related activities

- Week 20-24: **Return to function testing** if required by MD

##### Sport related activities

- add sport specific balance tasks as able
- 20 weeks start impact activities (running, cutting and jumping)
- 20 + weeks Return to Functional Testing (optional)

This protocol was updated and reviewed by Dr. Devries and Dr. Scharer of BayCare Foot & Ankle Center and Stacy Eck PTPT on 01/19/16

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#### References

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