

Ankle Fusion, Tibiotalocalcaneal (TTC) Fusion and Pantalar Fusion

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

- 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 a lace up non articulating ASO brace

PROM

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

Criteria for progression to Phase 2

- Clearance from Physician to start Physical Therapy

Other considerations

- Fusion Position:
0-5 degrees valgus, neutral
DF/PF, 10-15 degrees
abduction (for all 3 procedures)

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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 ASO brace without compensation
- Minimize effusion
- Increase core, hip and knee strength

Criteria for progression to Phase 3

- Minimal pain with ambulation
- Minimal effusion
- Ambulate WBAT in ASO

Brace

- 10-12 weeks wean from boot into normal shoe with ASO brace on during all weight bearing activities per MD recommendation, including PT

Weight bearing

- WBAT weaning from boot and into ASO brace to gradually increase time and distance without compensation

PROM

- All planes to comfort

AROM

- Ankle Fusion: DF and PF AROM about 30% of normal; foot ABD and ADD about 90% of normal
- Tibiotalocalcaneal (TTC) Fusion: will have talonavicular ROM which will improve over time, so expect about 90% loss of DF and PF AROM
- Pantalar Fusion: will have minimal ROM anywhere, although some will increase through the NC and TMT joints

Manual Therapy

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

Strengthening

- 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 and on a stable surface

Aquatics

- Initiate aquatic therapy program when incisions are closed
- **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 ASO brace at 14-16 weeks under PT guidance
- ASO brace used for patient comfort only after weaning period is complete. Patient may choose to wear for "high risk" activity
- Ambulation without a walking aid, without compensation

Criteria for progression to Phase 4

- Ambulation without brace and no compensation

Brace

- Wean from ASO brace at 14-16 weeks
- ASO brace used for patient comfort or during "high risk" activity
- May require a rocker bottom shoe at this point (optional)

PROM/AROM

- LE flexibility restored

Manual Therapy

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Strengthening

- Continue with progressing LE and core strength to tolerance

Proprioception

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

Core Strengthening

- As tolerates
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Modalities

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

Cardiovascular

- Stationary bike

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Phase 4 – Return to Function

Goals for Phase 4

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

Criteria for return to work, function, sport

- Week 20-24: **Return to function testing** if required by MD
- Pain-free, full ROM, minimal joint effusion, 5/5 MMT strength, jump/hop testing at 75% compared to uninvolved, adequate ankle control with sport and/or work specific tasks

Brace

- Patient may continue to wear ASO for "high risk" activity

Strengthening

- Unilateral gym strengthening program
 - single leg calf raises
 - single leg squats
 - eccentric leg press
 - step-up progression
 - multi-directional lunges

Proprioception

- Advanced proprioception
 - un-stable surfaces with perturbations
 - dual tasking
 - sport specific balance tasks as able

Core Strengthening

- Advance core strengthening

Cardiovascular

- Upright bike
- Elliptical

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