SPORTS MEDICINE ASSOCIATES
Any Athlete. Any Injury. Anytime.®

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POST-OP ANKLE ORIF

PHASE I: IMMEDIATE POST-OP (0-6 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Demonstrate safe ambulation with prescribed weight bearing precautions • Able to maintain weight bearing status per surgeon with transfers and stairs • Manage swelling • Perform ADLs in a modified independent manner or with minimal assistance • Increase range of motion of foot and ankle • Minimize the loss of strength in the core, hips, knees, and upper extremities • Patient Education: • Modifications for ADLs
Precautions	• No joint mobilizations near fracture site or that require stabilizing over the fracture site • NO instrument assisted soft tissue mobilization (IASTM) over fracture sites until at least 6 weeks post-op
Weight Bearing	• Weight bearing status per surgeon • Boot/cast per surgeon
Interventions	*Swelling Management* • Ice, compression, elevation • Retrograde massage (avoid pressure on healing fracture sites) *Gait Training* • Gait training on level surfaces and stairs with emphasis on weight bearing precautions *Range of motion/Mobility* •Initiate ankle passive range of motion (PROM), active assisted range of motion (AAROM) and active range of motion (AROM) o Ankle pumps o Ankle circles o Ankle inversion o Ankle eversion o Seated heel-slides for ankle DF ROM • If stiff from boot immobilization, initiate toe stretching (by patient or by therapist) • Foot joint mobilizations may be performed if indicated during this time per therapist discretion - AVOID pressure on healing fracture sites or hardware. • May begin gentle scar mobilization once incisions are healed

	Cardio • Upper body ergometer *Strengthening (in boot/splint)* • May perform upper body strengthening with weights if modified for weight bearing precautions • Lower extremity gym equipment (Ex: hip abductor and adductor machine, hip extension machine, roman chair) • Proximal/core strengthening (maintain precautions) o Quad sets o Straight leg raise o Abdominal bracing o Hip abduction o Clamshells o Prone hip extension o Prone hamstring curls • Ankle: o Seated heel raises o Seated toe raises o Seated arch doming o Exercises for foot intrinsic muscles to minimize atrophy while in boot *Proprioception* • Joint position re-training
Criteria to Progress	• Pain <3/10 • Minimal swelling • Increased ankle ROM • Cleared by surgeon to progress to weight bearing as tolerated (WBAT) or full weight bearing (FWB) • Independence with daily home exercise program

PHASE II: INTERMEDIATE POST-OP (7-12 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Manage swelling • Full range of motion of foot and ankle • Safely progress strengthening • A normalized gait pattern on all surfaces (wean from boot/brace when healing is adequate) • Minimize the loss of strength in the upper extremities, core, hips, and knees • Gradually return to regular activities if ROM, strength, and gait pattern are sufficient
Precautions	• No joint mobilizations near fracture site or that require stabilizing over the fracture site
Weight Bearing	• Progress to FWB per surgeon • Wean boot per surgeon
Additional Interventions	*Range of motion/Mobility* • Continue ankle AROM/PROM exercises and toe stretching as needed

*Continue with Phase I interventions as indicated	• Progress to standing ankle dorsiflexion stretch on step • Gentle stretching of proximal muscle groups as indicated: (Ex: standing quad stretch, standing hamstrings stretch, Thomas hip flexor stretch, piriformis stretch) • Standing gastrocnemius and standing soleus stretching once weaned from boot and talocrural joint mobility is normalized • May begin gentle ankle mobilizations at the discretion of the therapist once fracture is radiographically healed or clearance is given by surgeon. *Cardio* • Stationary bicycle (in boot if not yet weaned) • Treadmill walking once boot is weaned and gait normalized *Strengthening* • Continue Phase I exercises • Isometrics for ankle planes that are not near full active range of motion (AROM). • Ankle exercise with resistance bands once near full ankle AROM: o Ankle dorsiflexion with resistance o Ankle plantar flexion with resistance o Ankle eversion with resistance o Ankle inversion with resistance • Once boot is weaned begin standing calf raise progression: o Bilateral standing heel raises (25% body weight thru involved leg) o Bilateral standing heel raises (50% equal weight through both legs) o Bilateral standing heel raises (75% body weight thru the involved leg) • Knee Exercises for additional exercises and descriptions • Gym equipment (ex: seated hamstring curl machine and hamstring curl machine, leg press machine, hip abductor and adductor machine, hip extension machine, roman chair) • Lumbopelvic strengthening: (ex: bridges on physioball, bridge on physioball with roll-in, bridge on physioball alternating • Progress intensity (strength) and duration (endurance) of exercises *Balance/proprioception* • Double limb standing balance utilizing uneven surface (wobble board) • Single limb balance - progress to uneven surface as able
Criteria to Progress	• No swelling/pain after exercise • Normalized gait in supportive sneaker • AROM equal to contralateral side • Progressing strength of lower extremities • Return to all activities (except sports) • Joint position sense symmetrical (<5 degrees margin of error).

PHASE III: LATE POST-OP (13-16 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Good balance and control on the involved leg in all planes • Safely progress strengthening

	• Promote proper movement patterns • Avoid post exercise pain/swelling
Weight Bearing/ Precautions	None if healing is complete
Additional Interventions *Continue with Phase I-II interventions as indicated	*Range of motion/Mobility* • Joint mobilizations as indicated *Cardio* • Stationary bicycle, treadmill walking *Strengthening* • Seated calf machine or wall sit with bilateral calf raises • Unilateral heel raises (once heel raise progression in Phase II completed) • **The following exercises are to focus on proper pelvis and lower extremity control with emphasis on good proximal stability: o Hip hike o Forward lunges o Bilateral squats progressing to single leg progression (below) o Single leg progression: partial weight bearing single leg press, slide board lunges: retro and lateral, step ups and step ups with march, lateral step-ups, step downs, single leg squats, single leg wall slides *Balance/proprioception* • Single limb balance on uneven surfaces (ex: balance disc, Bosu, ½ foam roll)
Criteria to Progress	• Good balance and control of the involved leg in all planes with single and double leg exercises

PHASE IV: TRANSITIONAL (17-20 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Progress to plyometrics and sports specific movement patterns • Progress to low impact fitness activities
Additional Interventions *Continue with Phase II-III interventions as indicated	*Range of motion/Mobility* • Joint mobilizations as indicated *Cardio* • Elliptical, stair climber, treadmill walking *Plyometrics* • Initiate Beginner Level plyometrics: o Once able to perform 3 sets of 15 of bilateral standing heel-raises with equal weight bearing progress to rebounding heel raises bilateral stance. o Once able to perform 3 sets of 15 unilateral heel raises progress to rebounding unilateral heel raises. o Once able to demonstrate good performance/tolerance with rebounding heel raises then initiate hopping in place bilateral stance. Progress as able to unilateral hopping in place.

Criteria to Progress	• No swelling/pain after exercise • Standing Heel Rise test > 90% of uninvolved • No swelling/pain with 30 minutes of fast-paced walking • Good tolerance and performance of Beginner Level plyometrics • Psych Readiness to Return to Sport (PRRS)

PHASE V: EARLY to UNRESTRICTED RETURN TO SPORT (5+ MONTHS AFTER SURGERY)

Rehabilitation Goals	• Gradual return to higher impact activities (jogging, running, jumping) • Gradual return to activities with multi-planar on uneven surfaces (hiking) • Safely initiate sport specific training program • Symmetrical performance with sport specific drills • Good lower extremity mechanics with plyometrics, agility, and running gait • Safely progress to full sport
Additional Interventions *Continue with Phase III-IV interventions as indicated	*Running* • Interval walk/jog program - Return to Running Program (Phase 1) • Return to Running Program (Phase 2) *Plyometrics and Agility* • Criteria to progress to the Agility and Plyometrics Program: o Good tolerance/performance of Beginner Level Plyometrics in Phase VI above o Completion of Phase 1 Return to Running Program (walk/jog intervals) with good tolerance.
Criteria to Progress	• Clearance from MD and ALL milestone criteria below have been met. o Completion of the Return to Running Program without pain/swelling. o Functional Assessment o Lower Extremity Functional Tests should be ≥90% compared to contralateral side for unilateral tests.