Ankle ORIF

Physical Therapy Protocol · Open Reduction Internal Fixation of Ankle Fracture

Modeled on the Mass General Brigham rehabilitation protocol for ankle fracture with ORIF. Weight bearing status is dictated by the surgeon based on fracture pattern and fixation (including syndesmotic injury); phase progression is criterion-based.

AT A GLANCE

TIMELINE	20+ weeks; return to all non-sport activities by ~week 12, jogging from ~week 17, unrestricted sport at 5+ months
WEIGHT BEARING	NWB or TTWB in boot/cast per surgeon (commonly ~6 weeks; longer with syndesmotic fixation); progress to FWB and boot weaning weeks 7-12 per surgeon
KEY MILESTONES	Early ankle ROM out of the boot from Phase 1; normalized gait in supportive footwear by ~week 12; heel-rise >90% of uninvolved limb before impact
RETURN TO ACTIVITY	Interval walk/jog from ~week 17; return to sport at 5+ months with LSI >=90% and completed run progression

KEY PRECAUTIONS

- Weight bearing status strictly per surgeon; do not advance WB or wean the boot without radiographic and surgeon clearance.
- No joint mobilizations near the fracture site or that require stabilizing over the fracture site until radiographic healing; no instrument-assisted soft tissue mobilization over fracture/incision sites until 6+ weeks.
- Contact the surgeon for fever, unresolved numbness/tingling, excessive drainage, or uncontrolled pain.

PHASED REHABILITATION

PHASE 1 — IMMEDIATE POST-OP / PROTECTED	Weeks 0-6
GOALS	• Protect fixation with prescribed WB precautions • Edema and pain control • Initiate ankle ROM out of boot (per surgeon) • Maintain proximal strength
INTERVENTIONS	• NWB/TTWB gait training with crutches on level surfaces and stairs, boot or cast as prescribed • Elevation, compression, and edema management • Ankle ROM out of boot when cleared: pumps, circles, inversion/eversion, seated heel slides for DF • Quad sets, SLR, hip abduction/clamshells, abdominal bracing • Seated heel/toe raises, arch doming, foot intrinsic work • Upper body ergometry for conditioning
CRITERIA TO ADVANCE	• Pain <3/10 and minimal swelling • Improving ankle ROM • Surgeon clearance to progress weight bearing • Independent with home program and precautions

PHASE 2 — WEIGHT BEARING PROGRESSION & GAIT RETRAINING	Weeks 7-12
GOALS	• Progress to full weight bearing and wean boot per surgeon • Normalize gait in supportive footwear • Initiate strengthening and balance work
INTERVENTIONS	• Graded WB progression; gradual boot weaning; treadmill walking once gait normalizes out of boot • Standing DF stretch on step and proximal stretching once boot is weaned • 4-way resistance band ankle strengthening • Bilateral calf raises with progressive weight shift to involved side • Leg press, hamstring curls, hip machine work • Wobble board and single-limb balance progression
CRITERIA TO ADVANCE	• No pain or swelling after exercise • Normalized gait in supportive footwear • Symmetric active ankle ROM • Symmetric joint position sense

PHASE 3 — STRENGTH, BALANCE & MOVEMENT CONTROL	Weeks 13-16
GOALS	• Single-leg strength and control in all planes • Advanced balance on unstable surfaces
INTERVENTIONS	• Unilateral heel raises; wall sits with calf raise • Lunges, bilateral to single-leg squats, step-ups and step-downs • Balance on uneven surfaces (balance disc, BOSU, foam) • Joint mobilizations as indicated once fracture is healed radiographically
CRITERIA TO ADVANCE	• Good single- and double-leg balance and control in all planes • Pain-free single-leg strength work

PHASE 4 — IMPACT PROGRESSION & RETURN TO SPORT	Weeks 17-20+
GOALS	• Reintroduce impact • Complete return-to-run program • Unrestricted return to sport at 5+ months
INTERVENTIONS	• Rebounding heel raises bilateral to unilateral; bilateral and unilateral hopping in place • Interval walk/jog program with systematic progression • Agility: forward/backward runs, figure-8s, ladder drills • Plyometrics: box jumps, lateral jumps, multi-planar drills • Low-impact fitness (bike, elliptical, pool) for conditioning
CRITERIA TO ADVANCE	• Standing heel-rise test >90% of uninvolved limb • 30 minutes of fast walking without swelling • Functional testing and hop tests >=90% LSI • Return-to-run program completed without symptoms • Physician clearance

GUIDING PRINCIPLES

This protocol follows criterion-based progression over rigid time-based advancement; phased rehabilitation balancing tissue healing with controlled stress application; objective milestones (ROM, strength LSI, functional testing) to guide phase transitions; individualization based on surgical findings, tissue quality, and patient factors; and ongoing surgeon–therapist communication throughout recovery.

REFERENCES

1. Mass General Brigham Sports Medicine. Rehabilitation Protocol for Ankle Fracture with ORIF. https://www.massgeneral.org/assets/mgh/pdf/orthopaedics/sports-medicine/physical-therapy/rehabilitation-protocol-for-ankle-fracture-with-orif.pdf

2. Massachusetts General Hospital Foot & Ankle Service. Physical Therapy Guidelines for Ankle Fracture with Surgery (ORIF). https://www.massgeneral.org/assets/MGH/pdf/orthopaedics/foot-ankle/PT-guidelines-ankle-fracture-with-ORIF-final.pdf

For clinical use by licensed physical therapists treating patients of Robert Pettit, MD. This document is a rehabilitation guideline, not a substitute for clinical judgment. Progression must be individualized based on intraoperative findings, tissue quality, and patient response. Scan the QR code for the current version of this protocol.