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REHABILITATION PROTOCOL

Lisfranc Injury

Postoperative Rehabilitation Protocol — Operative Lisfranc Fixation (ORIF / Ligamentous Repair)

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> This protocol is a general guideline and does not replace individualized medical advice. Timelines vary with the procedure performed, healing, and individual factors. Always follow the specific instructions from your surgeon and physical therapist, which take precedence over this document.

Overview

This protocol outlines general rehabilitation guidelines following operative management of Lisfranc (tarsometatarsal) injuries. Progression should remain **criteria-based rather than strictly time-based** and individualized according to:

- Injury severity and pattern
- Fixation method and stability
- Sport/activity demands
- Patient healing response and symptoms
- Surgeon preference and imaging findings when indicated

Important: This protocol serves as a guideline only. Clinical judgment should always guide rehabilitation progression.

Phase 0: Immediate Postoperative Protection

Weeks 0–2

GOALS

- Protect surgical fixation and maintain reduction
- Control pain and swelling
- Promote incision healing
- Maintain general conditioning

IMMOBILIZATION / WEIGHT BEARING

- **Strict non–weight bearing (NWB)**
- Splint, cast, or CAM boot per surgeon preference

THERAPY / ACTIVITY

- Aggressive elevation and edema control
- Gentle active toe ROM as tolerated
- Hip, core, and upper-extremity strengthening
- Straight-leg raises and contralateral limb conditioning

RESTRICTIONS

- No weight bearing
- No midfoot loading or rotational stress
- No forced forefoot or midfoot motion

Phase 1: Protection With Early Mobility

Weeks 2–6

GOALS

- Maintain ankle and subtalar mobility
- Prevent stiffness and proximal deconditioning
- Protect biologic healing of Lisfranc complex

IMMOBILIZATION / WEIGHT BEARING

- Continue **strict NWB through week 6**
- Cast or CAM boot per surgeon preference

THERAPY / ACTIVITY

- Ankle ROM: dorsiflexion, plantarflexion, inversion, eversion
- Toe and first MTP mobility exercises
- Gentle intrinsic activation without loading
- Stationary cycling with minimal resistance (if cleared)
- Pool-based ROM once incisions healed
- Ongoing hip/core strengthening

CRITERIA TO PROGRESS

- Incisions healed
- Controlled swelling and pain
- Radiographic and clinical surgeon clearance

Phase 2: Progressive Weight Bearing

Weeks 6–8

GOALS

- Gradual load introduction to midfoot
- Normalize protected gait mechanics
- Begin functional strengthening

WEIGHT BEARING PROGRESSION

- **Weeks 6–7:** Partial WB (~25–50%) in CAM boot with assistive device
- **Weeks 7–8:** Progress to WBAT in boot

PROGRESS ONLY IF

- Minimal midfoot pain
- Controlled swelling
- Non-antalgic gait pattern

THERAPY FOCUS

- Gait training in boot
- Weight-shifting drills
- Closed-chain strengthening in protected range
- Seated calf raises
- Early balance and proprioception work
- Cardiovascular conditioning as tolerated

CAUTION SIGNS

- Increased midfoot pain
- Swelling escalation
- Limping or altered gait
- If present → slow progression

Phase 3: Boot Weaning and Functional Strengthening

Weeks 8–10

GOALS

- Transition out of immobilization
- Normalize gait mechanics
- Improve foot strength and proprioception

FOOTWEAR TRANSITION

- Supportive athletic shoe
- Consider:
  - Carbon fiber insert
  - Stiff-soled shoe
  - Rocker-bottom footwear

THERAPY FOCUS

- Gait retraining
- Progressive calf strengthening (eccentric emphasis)
- Intrinsic foot strengthening
- Step-ups, controlled single-leg tasks
- Elliptical and treadmill walking progression

CRITERIA TO PROGRESS

- Minimal pain with walking
- Near-normal gait without boot
- No reactive swelling after activity

Phase 4: Return-to-Sport Progression

Weeks 10–16+

GOALS

- Restore strength, endurance, and mechanics
- Introduce power and agility safely

ACTIVITY PROGRESSION

1. Walking progression
2. Walk–jog intervals

- Prepare for sport-specific demands

3. Continuous running
4. Linear running before cutting/pivoting
5. Plyometrics (hopping, bounding, jump training)
6. Gradual sport-specific drills

RETURN-TO-SPORT CRITERIA (TYPICALLY ~3–4 MONTHS)

Clearance should be functional rather than calendar-based:

- No midfoot tenderness
- Minimal swelling
- Full ankle and first MTP functional motion
- Strength ≥90% of contralateral side
- Pain-free hopping, cutting, and sport-specific tasks
- Athlete confidence without compensatory mechanics

Phase 5: Hardware Removal

If Planned ~5–6 Months

POST-REMOVAL CONSIDERATIONS

- WBAT in supportive footwear (surgeon dependent)
- Temporary reduction in impact activity (≈2–4 weeks)
- Gradual return to sport once incision healed and symptoms resolved

Patient Counseling Points

WHAT TO KNOW

- Midfoot swelling can persist for several months and does not necessarily indicate complications.
- Lisfranc injuries vary widely in severity — recovery timelines differ substantially.
- Premature return to sport risks fixation failure, chronic pain, and midfoot arthritis.
- Return-to-sport decisions should always be criteria-driven, not time-driven.

Selected References

- American Academy of Orthopaedic Surgeons (AAOS). Lisfranc (Midfoot) Injury. OrthoInfo.
- Nunley JA, Vertullo CJ. Classification, investigation, and management of midfoot sprains: Lisfranc injuries in the athlete. Am J Sports Med. 2002;30(6):871–878.
- Deol RS, Roche A, Calder JDF. Return to training and playing after acute Lisfranc injuries in elite professional soccer and rugby players. Am J Sports Med. 2016;44(1):166–170.
- Watson TS, Shurnas PS, Denker J. Treatment of Lisfranc joint injury: current concepts. J Am Acad Orthop Surg. 2010;18(12):718–728.
- Panchbhavi VK, Vallurupalli S, Yang J. Suture button fixation for Lisfranc injuries. Foot Ankle Int. 2009;30(11):1041–1046.
- Jackson JB 3rd, Strasser NL, Gonzalez T, Park J. Management and return to play of the elite athlete for common sports-related injuries about the foot. J Am Acad Orthop Surg. 2024 Oct 17;33(16):e899-e908. doi:10.5435/JAAOS-D-23-00881. PMID: 39467272.