Lisfranc

DR. EASTWOOD

SURGICAL PROCEDURE

When first and second tarsometatarsal (TMT) ORIF is performed, a curvilinear incision is made over the first and second TMT, starting distally over the first metatarsal and extending proximally over the middle cuneiform. A second incision is made over the medial cuneiform and the medial foot to give access for a medial to lateral screw. The joints are opened in the interval between the EHL and the Extensor digitorum brevis and the ruptured ligaments are identified. The first ligament is between the base of the second metatarsal and the cuneiform, and the second at the first TMT joint. The base of the second metatarsal to the medial cuneiform is reduced and a guide pin is placed medial to lateral, across the medial cuneiform to the base of the second metatarsal. After confirming that the joint is reduced, a stainless steel screw is inserted across the medial cuneiform into the base of the second. While keeping the first TMT joint reduced, a small starting hole on the base of the first metatarsal is made. A guide pin is used and then a screw is placed across the first TMT to provide stability to the joint. The Lisfranc ligament is then repaired.

POSTOPERATIVE PHASE I:

1-6 Weeks

CLINICAL GOALS

- Restore full ROM 4 directions (DF, PF, IN, EV) compared to non-involved side
- Restore full toe MTP ROM
- Control swelling
- Restore Achilles/calf flexibility compared to non-involved side

TESTING

- Bilateral ankle ROM (DF, PF, INV, EV)
- Strength (DF, PF, INV, EV) at 6 weeks postoperative
- Heel cord flexibility
- Bilateral MTP ROM

EXERCISES – NON-WEIGHT BEARING FOR 6 WEEKS

- Week 1
  - Toe curls
  - Desensitization massage
  - Achilles tendon towel stretches
  - Ankle and subtalar ROM (DF, PF, INV, EV), toe MTP ROM
- Week 2
  - Begin ankle and subtalar joint strengthening with TheraBand® (DF, PF, INV, EV)
  - OK to run or swim in pool non-weight bearing
  - All upper body lifting as long as sitting down
  - Leg extensions, leg curls as appropriate
  - Seated calf raises

CLINICAL FOLLOW-UP

- The patient will see the physician and physical therapist at 1, 2 and 6 weeks postoperative

If you have any problems or questions, please call your doctor's office (8am-5pm).

Answering service for after hours.

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POSTOPERATIVE PHASE II:
6-12 Weeks

CLINICAL GOALS

- Restore strength 4 directions (DF, PF, IN, EV) compared to non-involved side
- Able to complete bilateral calf raise and then single (standing)
- Wean out of boot into orthotics
- Begin proprioception activities

TESTING

- Bilateral ROM (DF, PF, INV, EV)
- Bilateral strength 4 directions (DF, PF, INV, EV)
- Heel cord flexibility

EXERCISES

- Week 6
  - Wean off crutches
  - Stationary bike program with boot
  - Proprioception retraining (in boot)
  - Bilateral standing toe raises progressing to single toe raises with shoes/orthotics or carbon fiber plate
  - Wall Achilles tendon stretching
- Week 8
  - Progress towards single leg toe raises with shoes/orthotics or carbon fiber plate
  - Stationary bike program with shoes/orthotics or carbon fiber plate
  - Wean out of boot into shoes/orthotics or carbon fiber plate
  - Can begin StairMaster®/elliptical when can bike 30 minutes 4 days per week w/inserts and no pain (shoe/orthotic or carbon fiber plate)
  - Proprioception retraining in shoes/orthotic or carbon fiber plate
  - Aggressive Achilles Tendon Stretching (AATS) on step in shoes/orthotics or carbon fiber plate

CLINICAL FOLLOW-UP

- Follow-up visits after 6 weeks postoperative are determined by the patient's success in meeting the goals for full ROM and good ankle strength.

POSTOPERATIVE PHASE III:
(12-16 Weeks)

GOALS

- Restore full ROM, strength and flexibility
- Restore proprioception to that of non-involved side
- Implementation of a sport-specific functional progression

TESTING

- Bilateral ROM 4 directions (DF, PF, IN, EV)
- Bilateral strength (ability to do single leg toe raise)
- Proprioception (single leg toe raise) (advanced Prop.)

EXERCISES

- Continue ankle strengthening, flexibility and proprioception activities (advance proprioception retraining to uneven surfaces, eyes closed, etc.)
- Continue low-impact cardiovascular activities
- Sport-specific functional progression to return to full sports participation
- Return to run after able to tolerate 30 minutes elliptical 4 days in a row – follow run f/p

CLINICAL FOLLOW-UP

- Patient will return at 12 weeks postoperative to address any problems that the patient encounters with ADLs, exercise and sport. Patient/doctor will also discuss ROH (removal of hardware) at this time. Typical ROH occurs no earlier than 3 months postoperative.

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