Lisfranc Internal Brace™
Ligament Augmentation
Surgical Technique
Lisfranc InternalBrace™ Ligament Augmentation

Introduction

The Lisfranc InternalBrace ligament augmentation implant system is a novel technique used to repair Lisfranc ligament injuries. This technique uses a small 1.6 mm guidewire through the Lisfranc articular surface. An oblong button is placed on the 2nd metatarsal with collagen-coated 2 mm FiberTape® suture passing through the intraosseous Lisfranc complex secured with a 4.75 mm Knotless SwiveLock® anchor to the medial cuneiform.

**Advantages:**
- No second surgery for hardware removal or broken screws
- Micromotion similar to Lisfranc ligament to accelerate biological healing\(^1,2\)
- Less joint disruption than that caused by a screw
- Knotless technique

References

Use a 2 mm incision technique. Make a dorsal approach overlying the intercuneiform joint and the 1st and 2nd tarsal-metatarsal joints. Care is taken to protect the neurovascular bundle dorsally by staying under the flexor hallucis brevis. Make the second (medial) approach along the medial cuneiform inferior to the tibialis anterior tendon insertion.

Stabilize the Lisfranc complex with the reduction clamp and compress the 2nd metatarsal base and the medial cuneiform.

Insert the 1.6 mm guidewire starting at the dorsal lateral edge of the 2nd metatarsal head aiming plantar towards the medial cuneiform and through the interosseous ligament. The guidewire should exit inferior to the tibialis anterior tendon. Check guidewire trajectory under fluoroscopy. **Note: Clamp omitted for clarity.**

Drill through the medial cuneiform with the 3.5 mm drill and drill guide over the 1.6 mm guidewire. The drill guide will stop the drill at 15 mm depth.
Load the collagen-coated 2 mm FiberTape® suture with the oblong button through the nitinol loop on the 1.6 mm guidewire.

Oscillate the 1.6 mm guidewire from lateral to medial until the guidewire moves freely by hand.

Pull tension on the collagen-coated 2 mm FiberTape suture with the oblong button. Ensure the button is flush and in the correct orientation on the 2nd metatarsal.

Insert the 4.75 mm PEEK SwiveLock® anchor between the suture tails while pulling tension on the FiberTape suture.
Release the clamp and evaluate the reduction under fluoroscopy. Cut the FiberTape® suture tails.

Optional
Bridge plating:
- Place a bridging plate dorsally if 2nd and/or 3rd TMT joint instability is present.
- Secure the plate with screws after the Lisfranc articulation is fixed with the InternalBrace ligament augmentation repair.

Optional
- Intercuneiform instability: Drill the central portion of the intermediate cuneiform with the drill guide and the 3.4 mm drill bit from AR-8979DS.
- Load FiberTape suture tails through 3.5 mm × 13.5 mm SwiveLock® anchor (AR-8979P).
- Insert the 3.5 mm SwiveLock anchor.
Postoperative Protocol

- A posterior splint is applied
- A total of 6 weeks of non-weightbearing is recommended
- At 2 weeks a removable splint is applied and ankle and subtalar range of motion exercises are performed daily
- Once healing is complete, full weightbearing may be started at week 6 with a CAM boot
- Sport-or activity-specific training can begin at week 12

Ordering Information

**Lisfranc Internal Brace Ligament Augmentation Implant System**

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEEK SwiveLock® Suture Anchor, 4.75 mm</td>
<td>AR-1698-CP</td>
</tr>
<tr>
<td>FiberTape Suture, collagen-coated, with button</td>
<td></td>
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<tr>
<td>Drill Bit, cannulated, 3.5 mm</td>
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<tr>
<td>Drill Guide</td>
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<tr>
<td>Suture Passing Wire, 1.6 mm, qty. 2</td>
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**3.5 mm × 13.5 mm DX SwiveLock Anchor Disposables Kit**

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Item Number</th>
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</thead>
<tbody>
<tr>
<td>Drill Guide w/ Depth Stop</td>
<td>AR-8979DS</td>
</tr>
<tr>
<td>Drill Bit, solid, 3.0 mm</td>
<td></td>
</tr>
<tr>
<td>Drill Bit, solid, 3.4 mm</td>
<td></td>
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<tr>
<td>Tap for DX SwiveLock Anchor</td>
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**Additional Part Numbers for Supplemental Fixation Technique**

<table>
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<tr>
<th>Product Description</th>
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<tbody>
<tr>
<td>DX SwiveLock Anchor, PEEK, w/ closed eyelet, 3.5 mm × 13.5 mm</td>
<td>AR-8979P</td>
</tr>
</tbody>
</table>
This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.

View U.S. patent information at www.arthrex.com/corporate/virtual-patent-marking

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