



# Advantages of ILA - Internal Ligament Augmentation in Ankle Instability Treatment

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## Introduction:

The most common injury seen by an orthopedic surgeon is an ankle sprain. This lesion most commonly affects the lateral ligaments (Anterior talofibular ligament and calcaneofibular ligament). It may also compromise medial ligaments (deltoid and/or spring) and syndesmotic injury. Up to 30% of acute ankle sprain may continue with problems, being ankle instability one of the most common ones.

Ankle instability is a common complaint that could be severe disabling. Besides recurrent ankle sprains, patients may even end up with arthritis. This could mean many days away from work, sports and even daily activities. For this reason it is more common to even decide to go for early surgery in selective cases, specially in elite athletes.



## Diagnosis:

Clinical diagnosis begins with the history of recurrent ankle instability. When this instability is going on for a long period of time patient may also have associated injuries like osteochondral defects, peroneal tendon ruptures, bone edema, fractures, arthritis, etc.



*Fig: Show classical swelling and hematoma in the lateral aspect of the ankle.*

Physical examination may show a positive anterior drawer test or a talar tilt asymmetric finding compared with the contralateral side. It must be considered that some patient may have significant laxity as a normal finding without any association with symptomatic instability. The other way around may also occur, which is someone with ankle instability but with no clear laxity on physical examination.

Regular X-rays are typically normal when there are no associated bony or joint pathology. Stress X-rays may demonstrate anterior talar translation (anterior drawer test) or varus instability (talar tilt). But since there is significant variability between normal and abnormal ankle stability there is no consensus definition for a radiologic limit between normal and abnormal.

It must be mentioned that any pain in the ankle may produce the subjective sensation of instability, and when the pain is improve with appropriate treatment, then instability goes away. But if pain and instability persist long enough it will always end in formal ankle instability.

Ligaments may be easily seen with ultrasound or even better with MRI, lateral, medial and syndesmotic. It can also help to rule out differential diagnosis.

It has recently been described what has been called by Jordi Vega "microinstability". This is defined as a subjective sensation of giving way and instability of the ankle but no mechanical

instability on physical examination. This finding seems to be related to an isolated injury of the anterior fascicle of the anterior talofibular ligament.

## Conservative treatment:

Conservative treatment is always worth trying. It should include restriction of risky activities like sports. Protection against new injuries using an ankle brace and always a thorough rehabilitation including strengthening exercises and proprioceptive treatment.

Any other possible etiology of pain should be ruled out and treated. One of the most common is an impingement soft tissue syndrome in which a cortisone shot could be used.

## Surgical treatment:

When conservative treatment does not have satisfactory result after 3 to 6 months, then surgical treatment may be recommended.

The most common technique used has been the Brostrom Gould in which the ligaments are imbricated and reinforced with the superior extensor retinaculum. This technique showed good results in 90% of the patient proving to be safe and reproducible. Since suture was not intrinsically stable from the beginning it typically needed a long recovery time with protection and restriction of weightbearing. Some authors published more recurrences that initially shown.

More recently, authors showed that just repairing the anterior talofibular ligament was enough, without the need to suture the calcaneofibular ligament. This finding opened up the possibility of performing different ways of arthroscopic repairs with similar results compared to open treatment but with less potential soft tissue damage.

At the same time, it was observed that there are some risk factors that compromise the prognosis like:

- 1- Recurrency;
- 2- Long term instability;
- 3- Heavy patients;
- 4- Hyperlaxity; and
- 5.- Poor soft tissue quality.

In these cases, something else needed to be done and the

option of an allograft is appealing, but since it is associated with more morbidity and a longer recovery time it is reserved for cases in which there is no tissue left to suture.

For all the other cases a new surgical option has been added to our surgical armamentarium. This has been the concept of an ILA - Internal Ligament Augmentation.

## ILA - Internal Ligament Augmentation:

In order to decrease recurrency and allow earlier recovery time with less restrictions, adding an augmentation fixed in the exact isokinetic anatomical position as the original anterior talofibular ligament has recently gained popularity.

Biomechanical and clinical studies have shown that is a safe and reproducibly technique that allows initial ligament suture to become three times stronger when adding this augmentation.

During surgical technique, lateral ligaments are directly sutures and an augmentation tape is fixed between the fibula and the neck of the talus in the anatomical and isokinetic position of the ATFL.

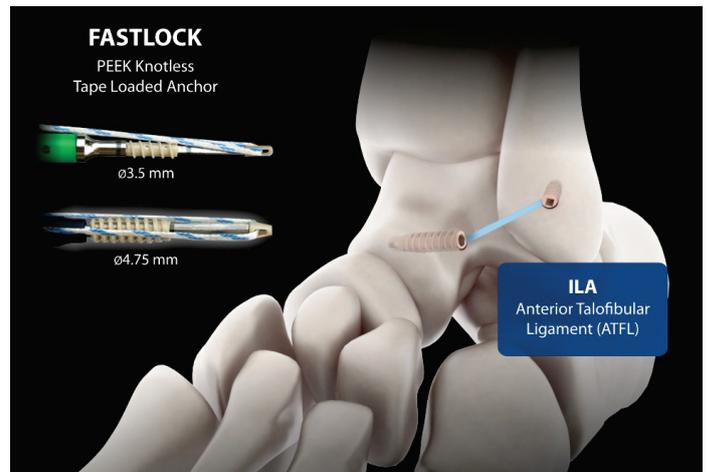


Fig: Augmentation of internal ligament repair with Fastlock knotless tape loaded anchor.

Recently textile medical technology had developed tapes strong enough to support forces on this type of repairs. This made surgeons confident to make postoperative recovery quicker without external brace (like a boot) so patients were able to start rehabilitation as soon as the wound was better. Everyone's experience showed that actually patients did not need any protection after surgery and rehabilitation can go as fast as the patient tolerates. This has reduced recovery and return to sports significantly making the indication of repair

plus augmentation a worldwide recommendation.



*Figs: Intraoperative pictures of lateral ligament reconstruction with ILA - Internal Ligament Augmentation. Images cordially provided by Thiago Baumfeld, MD.*

## Ø3.5 mm FASTLOCK INSTRUMENTS

Code	Description
320-110	Fastlock Drill Guide
320-135	Ø1.3 mm K Wire
320-110-27-C	Ø2.7 x 110 mm Cannulated Drill Bit
320-110-27	Ø2.7 x 110 mm Drill Bit
320-FL-35	Ø3.5 mm Fastlock Tap

## Ø4.75 mm FASTLOCK INSTRUMENTS

Code	Description
320-110	Fastlock Drill Guide
320-110-34	Ø3.4 x 110 mm Drill Bit
320-FL-475	Ø4.75 mm Fastlock Tap



Ø3,5 mm



Ø4,75 mm

## Fastlock - Knotless Tape Loaded Anchor:

### IMPLANTS

Code	Description
320-351580-PE1	Fastlock Knotless Tape Loaded PEEK Anchor Ø3.5 x 10.1/15.8 mm
320-475191-PE5	Fastlock Knotless Tape Loaded PEEK Anchor Ø4.75 x 15.0/19.1 mm

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