



# LISFRANC INJURY

SEARCH

## WHAT IS A LISFRANC INJURY?

A Lisfranc injury involves the joints and/or the ligaments of the midfoot (middle of the foot). The Lisfranc is a ligament of the foot that runs between two bones called the medial cuneiform and the second metatarsal. The name comes from French surgeon Jacques Lisfranc de St. Martin (1790-1847), who was the first physician to describe injuries to this ligament.

There are a variety of causes for a Lisfranc injury such as a car accident, sports injury, or a simple slip and fall. Sometimes the injury can be mistaken for a foot sprain when X-rays do not show any broken bones. Delaying treatment can sometimes lead to more significant problems. Proper diagnosis from a **foot and ankle orthopaedic surgeon** is key.

## Symptoms

The common symptoms of a Lisfranc injury are swelling and pain on the top of the foot near the instep. Bruising is common, and a bruise on the bottom of the foot can be a clue that this injury has occurred. With a severe injury, the foot may be distorted and putting any weight on it may be very painful. With a mild injury, the foot may appear normal and you may be able walk on it with only mild pain.

## Causes

Low-energy injuries can happen when the back of the foot twists or presses down with the ball of the foot planted on the ground. This can happen during athletic activities such as football but also can occur from a

misstep or even missing a stair and stumbling over the top of the foot. High-energy injuries occur from direct trauma such as a car accident or a fall from a height.

Specialized ligaments in the midfoot hold the bones in this area together like puzzle pieces to maintain the arch of the foot. When the ligaments, joints, or bones in this area are injured, they may shift out of place, making the arch unstable.

## Diagnosis

A Lisfranc injury diagnosis is made based on what happened at the time of injury, your symptoms, and an examination of the foot and ankle that compares the injured foot to your uninjured foot. Your **foot and ankle orthopaedic surgeon** will examine the middle part of your foot to identify the location of your pain and perform tests to check the stability of this area. X-rays may show broken or shifted bones in the middle of the foot. Sometimes X-rays will be taken while you are standing in order to better identify the shifting of bones in the foot. An MRI scan may be helpful to see if the ligaments in the foot are damaged. A CT scan can help determine the extent of the bone injury and is useful when planning surgery if needed.

## Treatments

### Non-surgical Treatment

If the ligaments and the bones in the middle of the foot are not severely injured, and bones are not shifted out of their normal positions, non-surgical treatment can be successful. A cast or CAM boot may be needed for at least 6 weeks in order for the ligament and/or bone to heal. Your foot and ankle orthopaedic surgeon will follow up regularly with X-rays to make sure the bones maintain good position during the recovery.

### Surgical Treatment

If the bones or ligaments are injured in a way that causes them to shift out of their normal positions, **Lisfranc surgery** may be necessary to restore the anatomy of the foot. Surgery may involve the placement of plates and screws that may need to be removed later, once the bones and ligaments have healed.

## Recovery

Recovery from Lisfranc surgery depends on the severity of the injury. Most patients will be in a **non-weightbearing cast** for 6 weeks, followed by 6 weeks in a walking boot. Physical therapy may be needed to strengthen the foot and ankle and help regain walking ability. Return to maximal function, running, and sports can take up to one year.

## Risks and Complications

Lisfranc injuries may cause **arthritis** and chronic pain in the middle of the foot. This may require additional treatment. With surgery, injury to the nerves and tendons may occur. Because of the swelling that often occurs with this injury, complications such as wound opening, infection, and/or further swelling of the foot may occur after surgery.

The outcome for Lisfranc injuries depends on their severity. Some patients will not be able to return to their pre-injury level of functioning or athletic activities even with well-performed treatment. The cartilage joint surfaces commonly are injured and some patients may develop midfoot arthritis (arthritis of the middle of the foot). It is also common for pain to continue in the joints after this injury. For some patients, surgery such a **fusion of the joints** may be necessary to relieve arthritis pain.

## How can I tell if I have a sprain or a Lisfranc injury?

Unrecognized and untreated Lisfranc injuries can have serious complications, including joint degeneration and a buildup of pressure within muscles that can damage nerves and blood vessels. If the standard treatment for a **sprain** (rest, ice, and elevation) doesn't reduce the pain and swelling within a day or two, or there is extensive bruising on the bottom of the foot, see your foot and ankle orthopaedic surgeon immediately.

## How soon can I get back to normal activity after a Lisfranc injury or surgery?

It is important to follow your doctor's orders and refrain from activities until you are given the go-ahead. If you return to activities too soon after a Lisfranc injury or surgery, you may suffer another injury that results in damage to blood vessels, arthritis, or an even longer healing time.

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