Lisfranc Injury

What is a Lisfranc injury?
A Lisfranc injury involves the joints and/or the ligaments of the middle of the foot. This injury can result from a major accident or a simple slip and fall. Sometimes this injury can be mistaken for a sprain, and not obtaining treatment can sometimes lead to more significant problems. The degree of injury can range from mild to severe.

What are the symptoms of a Lisfranc injury?
The common symptoms of a Lisfranc injury are swelling and pain on the top of the foot. Bruising is common, and bruising on the bottom of the foot is 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 to put weight on it with only mild pain.

What causes a Lisfranc injury?
This injury may be low-energy and result from a slip and fall. Twisting frequently occurs during athletic injuries but can also 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.

Anatomy
The midfoot area is comprised of the joints and ligaments in the middle of the foot. Specialized ligaments hold the bones in this area together like puzzle pieces to maintain the arch of the foot. When the ligaments and/or bones in this area are injured, they may shift out of place.

How is a Lisfranc injury diagnosed?
The diagnosis of a Lisfranc injury is made using several things: your symptoms, a foot exam, X-rays and other tests. Your orthopaedic foot and ankle specialist will examine the middle part of your foot to identify the location of pain and perform tests to check the stability of this area. X-rays may show broken and/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.

What are treatment options?
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 with casting. A cast may be needed for six weeks. Your orthopaedic foot and ankle specialist will follow up regularly with X-rays to make sure the bones maintain their good position during the recovery. If the bones or ligaments are injured in a way that causes them to shift out of their normal positions, surgery may be necessary to restore the anatomy of the foot. Surgery may involve the placement of plates and screws that may be removed later, once the bones and ligaments have healed.

How long is recovery after surgery?
Recovery from Lisfranc surgery depends in part on the severity of the injury. For most cases of surgery, patients will be in a cast and not be able to put weight on the foot for six weeks, followed by six 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 about one year.

Potential Complications
Lisfranc injuries may result in 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 athletics even with well-performed treatment. The cartilage joint surfaces are commonly injured and some patients may develop 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.

Frequently Asked Questions
How can I tell if it's 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 doctor immediately and ask for a referral to an orthopaedic foot and ankle specialist.

How soon can I get back to normal activity?
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, development of arthritis and/or an even longer healing time.

Additional Resources
Lisfranc Surgery
The American Orthopaedic Foot & Ankle Society (AOFAS) offers information on this site as an educational service. The content of FootCareMD, including text, images and graphics, is for informational purposes only. The content is not intended to substitute for professional medical advice, diagnoses or treatments. If you need medical advice, use the “Find an Orthopaedic Foot & Ankle Surgeon” tool at the top of this page or contact your primary doctor.