

What Is An Ankle Sprain?

An ankle sprain refers to tearing of the ligaments of the ankle. The most common ankle sprain occurs on the lateral or outside part of the ankle. This is an extremely common injury which affects many people during a wide variety of activities. It can happen in the setting of an ankle fracture (i.e. when the bones of the ankle also break). Most commonly, however, it occurs in isolation.

What Are The Symptoms An Ankle Sprain?

Patients report pain after having twisted an ankle. This usually occurs due to an inversion injury, which means the foot rolls underneath the ankle or leg. It commonly occurs during sports. Patients will complain of pain on the outside of their ankle and various degrees of swelling and bleeding under the skin (i.e. bruising). Technically, this bruising is referred to as ecchymosis. Depending on the severity of the sprain, a person may or may not be able to put weight on the foot.

What Are The Risk Factors For An Ankle Sprain?

As noted above, these injuries occur when the ankle is twisted underneath the leg, called inversion. Risk factors are those activities, such as basketball and jumping sports, in which an athlete can come down on and turn the ankle or step on an opponent's foot.

Some people are predisposed to ankle sprains. In people with a hindfoot varus, which means that the general nature or posture of the heels is slightly turned toward the inside, these injuries are more common. This is because it is easier to turn on the ankle.

In those who have had a severe sprain in the past, it is also easier to turn the ankle and cause a new sprain. Therefore, one of the risk factors of spraining

the ankle is having instability. Those who have weak muscles, especially those called the peroneals which run along the outside of the ankle, may be more predisposed.

Anatomy

There are multiple ligaments in the ankle. Ligaments in general are those structures that connect bone-to-bone. Tendons, on the other hand, connect muscle-to-bone and allow those muscles to exert their force. In the case of an ankle sprain, there are several commonly sprained ligaments. The two most important are the following:

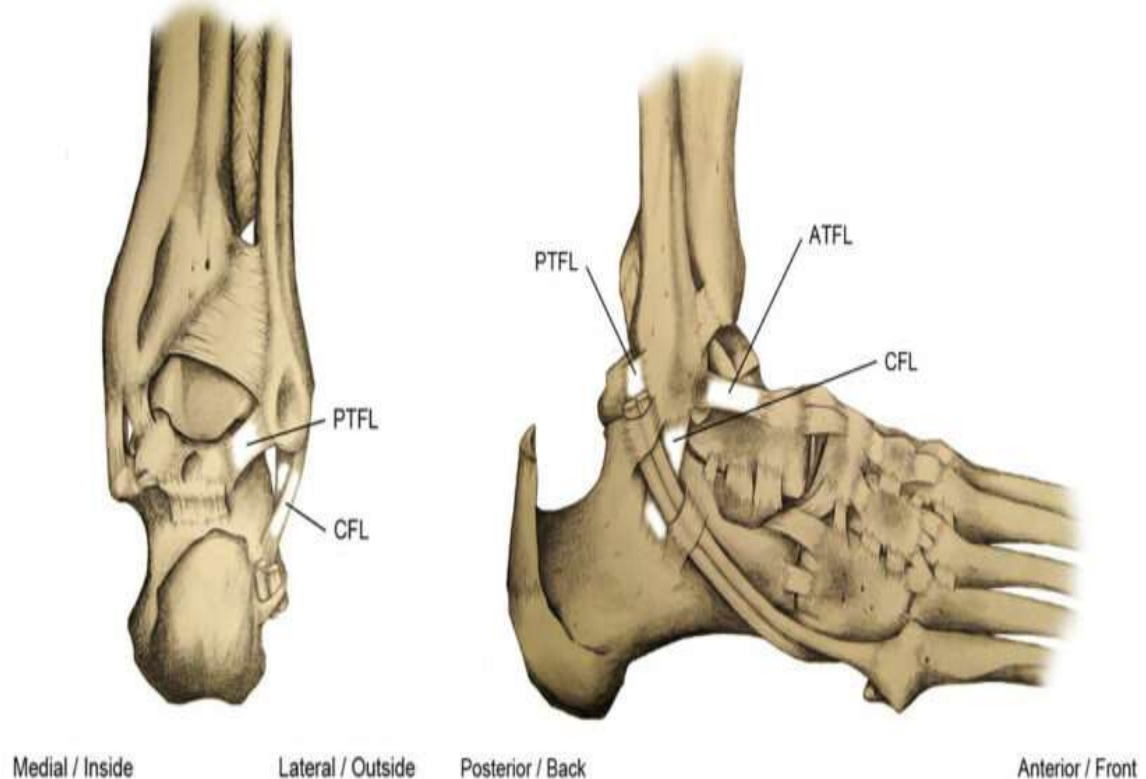
- 1.The ATFL or anterior talofibular ligament, which connects the talus to the fibula on the outside of the ankle.
- 2.The CFL or calcaneal fibular ligament, which connects the fibula to the calcaneus below.
- 3.Finally, there is a third ligament which is not as commonly torn. It runs more in the back of the ankle and is called the PTFL or posterior talofibular ligament. These must be differentiated from the so-called high ankle sprain ligaments, which are completely different and located higher up the leg.

How Is An Ankle Sprain Diagnosed?

Ankle sprains can be diagnosed fairly easily given that they are common injuries. The location of pain on the outside of the ankle with tenderness and swelling in a patient who has an ankle with inversion is very suggestive. In these patients, normal X-rays also suggest that the bone has not been broken and instead the ankle ligaments have been torn or sprained.

It is very important, however, not to simply regard any injury as an ankle sprain because other injuries can occur as well. For example, the peroneal tendons mentioned above can be torn. There can also be fractures in other bones around the ankle including the fifth metatarsal and the anterior process

of the calcaneus. In very severe cases, an MRI may be warranted to rule out other problems in the ankle such as damage to the cartilage. An MRI typically is not necessary to diagnose a sprain.



What Are Treatment Options

Surgery is not required in the vast majority of ankle sprains. Even in severe sprains, these ligaments will heal without surgery. The grade of the sprain will dictate treatment. Sprains are traditionally classified into several grades. Perhaps more important, however, is the patient's ability to bear weight. Those that can bear weight even after the injury are likely to return very quickly to play. Those who cannot walk may need to be immobilized.

In general, treatment in the first 48 to 72 hours consists of resting the ankle, icing 20 minutes every two to three hours, compressing with an ACE wrap, and elevating, which means positioning the leg and ankle so that the toes are above the level of patient's nose. Those patients who cannot bear weight are better treated in a removable walking boot until they can comfortably bear weight.

Physical therapy is a mainstay. Patients should learn to strengthen the muscles around the ankle, particularly the peroneals. An ankle brace can be used in an athlete until a therapist believes that the ankle is strong enough to return to play without it. Surgery is rarely indicated but may be needed in a patient who has cartilage damage or other related injuries. Ligaments are only repaired or strengthened in cases of chronic instability in which the ligaments have healed but not in a strong fashion.

How Long Is Recovery?

Recovery depends on the severity of the injury. As noted above, for those minor injuries, people can return to their activities in sports within several days. For very severe sprains, it may take longer and up to several weeks. It should be noted that high ankle sprains take considerably longer to heal.

Outcomes for ankle sprains are generally quite good. Most patients heal from an ankle sprain and are able to get back to their normal lives, sports and activities. Some people, however, who do not properly rehab their ankle and have a rather severe sprain may go on to have ankle instability.

Chronic instability occurs in patients repeatedly spraining the ankle. Such repeated episodes can be dangerous because they can lead to damage within the ankle. These patients should be identified and considered for repair.

Potential Complications

Surgery is rarely needed. As noted above, however, an improperly rehabbed ankle may end up having chronic instability. It is important to address this with either therapy or surgery before further damage occurs to the ankle.

Frequently Asked Questions

What is a high ankle sprain and is that different from a regular ankle sprain?

A high ankle sprain refers to tearing of the ligaments that connect the tibia to the fibula (this connection is also called the syndesmosis). These are different and much less common than the standard lateral ankle sprains, meaning those that occur on the side of the ankle.

Do ankle sprains ever need to be repaired acutely?

Ankle sprains rarely, if ever, needed to be treated with surgery. The vast majority simply need to be treated with rest, ice, compression and elevation followed by physical therapy and temporary bracing.

I have sprained my ankle many times. Should I be concerned?

Yes. The more you sprain an ankle, the greater the chance that problems will develop. For example, turning the ankle can lead to damage to the cartilage inside the ankle joint. You should see your doctor if this is occurring.