



WHAT IS A "HIGH ANKLE SPRAIN" AND HOW IS IT DIFFERENT FROM A "REGULAR" ANKLE SPRAIN?

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Sprains of the ankle are the most common injury in orthopedics. We see ankle sprains in sports and normal day to day activities. But what is the difference between a common ankle sprain and a high ankle sprain? And which one seems to take longer to heal?

The answer is better understood if we look at what bones and ligaments make up the ankle. There are three bones in the ankle: the tibia (your shin bone), the fibula (the bone on the outside of your ankle), and the talus (which sits in the middle of the tibia and fibula). These bones are joined together by ligaments to form the ankle joint. The ligaments are what are injured when we twist or sprain our ankle.

Common Ankle Sprains

A common ankle sprain involves injury to a ligament on the outside of the ankle called the "ATFL", which stands for the anterior talo-fibular ligament. This ligament attaches the tip of the fibula to the talus. It is the most frequently injured ligament when an athlete "rolls" the ankle. It prevents the ankle from rolling onto the outside of the foot. Athletes will frequently get pain, swelling and bruising on the side of the foot and ankle and often are tender just below the fibula. Athletes can often return to sports quickly with this type of injury and the use of ankle taping by a trainer or a motion limiting brace. However, we have learned that the RICE method (rest, ice, compression, and elevation) are often not enough to treat this injury. Sometimes immobilization and physical therapy are needed.

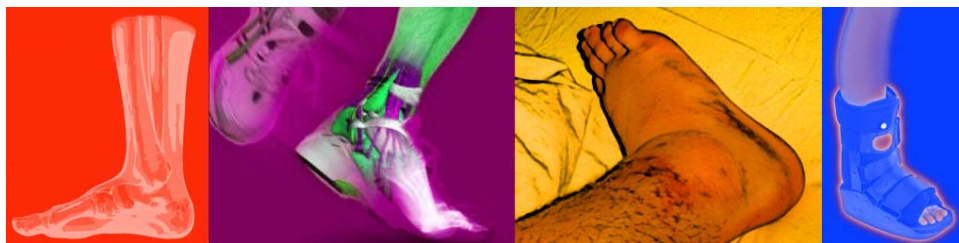




High Ankle Sprains

The high ankle sprain that we often hear about on *Sportscenter* is a different and more debilitating breed of sprain. A different set of ligaments is injured, called the "syndesmosis" (pronounced SIN-dis-MO-ses). The syndesmosis are ligaments located above the ankle joint and holds the tibia to the fibula. Athletes will often stress this ligament with running, pivoting, and jumping. Where most ligaments in the ankle prevent rolling of the ankle, the syndesmosis prevents the tibia and fibula from spreading apart. The syndesmosis is often sprained when the ankle is rotated outwards. When the syndesmosis is sprained, every step can be painful. Athletes will typically say the pain radiates up the leg from the ankle, and is worse with cutting motions that mimic the original twisting injury. Interestingly, the high ankle sprain often looks like nothing happened when viewed by the coaches, parents and teammates. There is often little bruising and mild swelling. Unfortunately, no type of bracing has been shown to treat or prevent these high ankle sprains.

The high ankle sprain often needs immobilization in a cast or walker boot. It will improve. However, since the syndesmosis is subjected to such high forces with each step, the amount of rest needed tends to be longer than for the common ankle sprain. Often, this can take double the amount of time compared to a common sprain. In addition, if the ligament is torn, often a screw is needed to be placed between the across the fibula and tibia to hold the joint together while the ligament is allowed to scar and heal. Athletes will typically return to play within 6 weeks, but about half will experience symptoms for up to 6 months.





WHAT IS A STRAIN AND HOW LONG DOES IT TAKE TO HEAL? Douglas A. Foulk, MD



The majority of muscle injuries that occur in sports are muscle strains. These occur at the junction between the muscle and tendon and are different than a sprain, which affects the ligaments. The most common muscle strain injury involves the hamstrings. It remains unclear if factors such as strength and flexibility predict injury and recovery. Certainly a previous strain injury places an athlete at risk for additional injury.

There is no real consensus on when it is safe for an athlete to return to activity following a muscle strain. A recent strain may predispose surrounding muscle and tendon to an increased risk of injury and therefore rest and suspended activity is essential to begin the healing process. Once the muscle is near pain-free, the focus shifts to regaining full range of motion and strength without increasing pain. Surgery is rarely indicated for muscle/tendon injury, however exciting new innovative approaches, such as growth factor application, may hold promise.

Clearly, prevention of this injury is the best approach for athletes to take. Some data suggest that a proper warm up before activity is the best tactic for reducing muscle strain injuries. In the event that a strain does happen, ice, to reduce inflammation of the area can help reduce recovery time.

