

The Syndesmotic “High” Ankle Sprain

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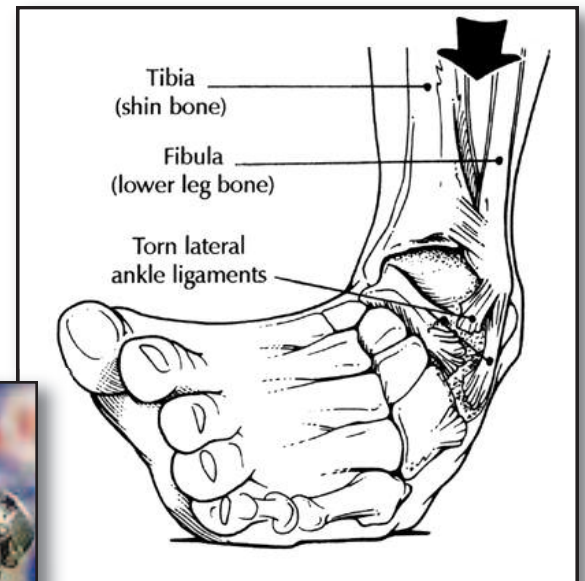
High ankle sprains are common in athletes that play contact sports. Research suggests that high ankle sprains account for 11 to 17 percent of all ankle sprains in athletes. Collision sports such as football, wrestling, ice hockey, rugby, and lacrosse are where these sprains are most prevalent.

The high ankle sprain involves the stretching or tearing of the four syndesmotic ligaments. These ligaments hold the two bones of the lower leg (tibia and fibula) together just above the ankle joint, creating a stable ankle mortise. Injuries to this complex generally require a high velocity load such as those experienced in collision sports.

The three most common mechanisms of injury involve forceful external rotation at the ankle. An athlete may just pivot too rapidly off a foot planted in the ground.

A blow may be administered to the lower leg while the foot is planted, or a kneeling athlete receives a direct blow to the outside of his or her heel.

High ankle sprains are very similar to conventional lateral ankle sprains in regards to pain and swelling. However, point tenderness may be observed up the front of the lower leg as well as on the inside of the ankle since the deltoid ligament can be involved. Patients often



are unable to walk without crutches, and fractures of the fibula and tibia must be ruled out.

Rehabilitation of the high ankle sprain is similar to that of patients with lateral ankle sprains with certain adaptations. Each rehabilitation program is tailored to an individual's presentation and goals.

The acute phase involves decreasing pain, inflammation, weakness, atrophy, and loss of motion.

A period of restricted weight bearing may be followed by a patient needing a walking boot or lace-up ankle brace for support. Pain and anti-inflammatory medications could be prescribed along with compression, elevation, ice, and electric stimulation. A patient is progressed to the sub-acute phase when he or she can go up and down stairs with minimal discomfort.

The sub-acute phase aims to normalize range of motion, strength, joint mobility, and neuromuscular control. Patients will perform functional strengthening exercises with the use of their own body weight as well as balance exercises on unstable surfaces, progressing from double-leg to single-leg stance. The patient may progress to the advanced training/sports

specific phase when he or she can jog with no discomfort.

The goal of the advanced training/ sports specific phase is to prepare the athlete for return his or her sport. Advanced, explosive plyometric exercises and lateral agility drills are performed to prepare the athlete for his or her sports functional movement patterns. Props such as cones, hurdles, and ladders are used to simulate game conditions. Patients return to sport when they exhibit good movement quality at game speed without pain.

Generally, patients require 6 to 8 weeks for a full recovery from a syndesmotic sprain, but this varies from one person to the next.



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