

High Ankle Sprain

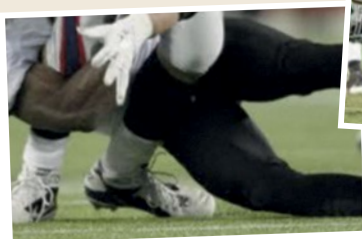
What is it?

A high ankle sprain is also sometimes called an ankle syndesmosis injury and an inferior tibiofibular joint injury. The shin contains two bones, the tibia (the large shin bone on the inside) and the fibula (a smaller bone on the outside of the lower leg). Damage to the ligaments that hold these two bones together is a syndesmosis injury. **It is extremely important to differentiate these injuries from a normal ankle sprain, as the management is completely different.** For instance, while it is important to weight bear early with a typical ankle sprain, early weight bearing with a high ankle sprain can delay healing.



What are the symptoms?

Symptoms at the time of the injury are usually extreme pain. Pain is usually just above and at the front of the ankle. Pain is worse with weight bearing.



Note the different examples in the photographs above where the ankle is being forced in an outwards direction by a combination of poor ankle positioning and external forces being applied.

How did I get it?

A high ankle sprain usually occurs with external (outward) rotation of the ankle. If you watch the accompanying video you will see a typical mechanism for ankle sprain. As the ankle is rotated outwards the ligaments that hold the tibia and fibula together are stretched and torn. This means that they are not as effective at holding those bones together. As you put weight through the ankle the bones are forced apart, usually the ligaments would hold the bones together but if the ligaments are damaged the bones come apart which makes it difficult for the ligaments to heal and causes ongoing pain and disability.



Go online for more information

or visit <http://www.youtube.com/watch?v=1DWpOgEVYq4>

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What should I do?

If there is a concern regarding a high ankle sprain you should be checked out by an appropriately trained medical professional. While most simple ankle sprains have good outcomes even without medical attention, **high ankle sprains need a definite treatment plan or long term pain and disability will certainly result.** Initial management that should be implemented immediately is R.I.C.E. treatment (Rest, Ice, Compression, Elevation).

R.I.C.E. works to decrease the amount of inflammation and swelling. Some inflammation and swelling is important but the body overdoes it initially. There is often so much bleeding that it prevents or at least delays the body's ability to start repairing the injured area. These

measures to decrease blood flow initially actually act to increase blood flow in the medium and long term to facilitate healing.

Rest involves ceasing activity and limiting the amount of weight you put through your leg. While walking on the ankle if possible is best with a normal ankle sprain, avoiding weight bearing is the safest option if there is a suspicion of a high ankle sprain.

Ice is very useful initially and helps decrease the amount of swelling. Usually 10 mins on, 10 mins off, 10 mins on every 2 hours is effective and decreases the likelihood of nerve damage from ice burn.

Compression and elevation both assist to decrease the amount of swelling.



Diagram 1 Walking Boot being used to assist in the recovery after an ankle injury



Diagram 2 Compare the difference in the separation distance of both the tibia and fibula in this xray.

What does rehab involve?

Depending on the ligaments involved and the physical requirements of the patient, a period of rehab or early surgery may be necessary. If there is definite widening of the high ankle and all of the ligaments are torn then surgery is usually required. If only the ligament at the front of the ankle is injured and there is not significant widening then non-operative management involving a walking boot (note diagram 1), followed by graded return to activity is usually sufficient.

How is a diagnosis made?

A clinical suspicion is formed by history of the injury and nature of the pain in combination with an examination. X-Rays will be requested to identify any broken bones or stress fractures. An MRI maybe requested to confirm the diagnosis.

Do you have a question?

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