

Ankle Syndesmosis Injury

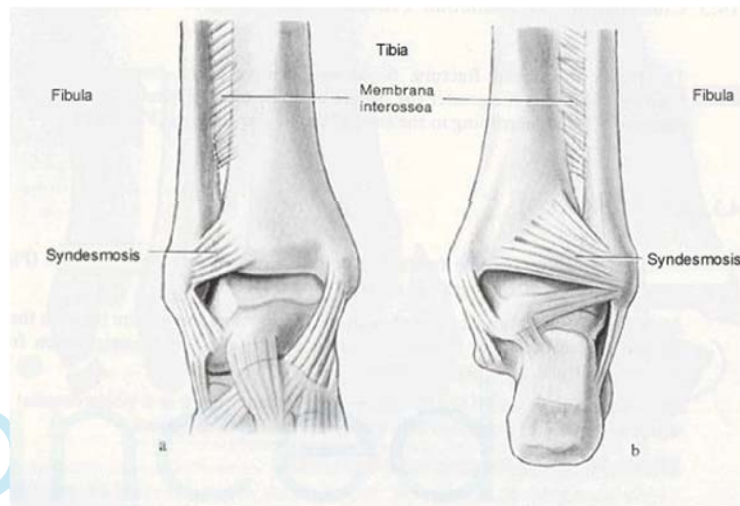
A **syndesmosis** is a joint where the rough edges of two bones are held together by thick connective ligaments. Only a few joints in the body are syndesmosis or syndesmotic joints.

The connection of the lower leg bones, the tibia and fibula, is a **syndesmosis**. The tibia is the main bone of the lower leg. The fibula is the small, thin bone that runs down the outer edge of the tibia. The **ankle syndesmosis** is held together by three main **ligaments**.

1. The ligament crossing just above the front of the ankle and connecting the tibia to the fibula is called the **anterior inferior tibiofibular ligament (AITFL)**.
2. The posterior fibular ligaments attach across the back of the tibia and fibula. These ligaments include the posterior **inferior tibiofibular ligament (PITFL)** and the transverse ligament.
3. The **interosseous ligament** lies between the tibia and fibula. (Interosseous means between bones.)

The function of this group of ligaments is to hold these bones together and so provide a stable junction between the lower leg and the ankle.

An **ankle syndesmosis injury** involves a sprain of one or more of the ligaments that support the ankle syndesmosis. A sprain stretches or tears the ligaments. The ligament is weakened by the injury. How much it is weakened depends on the degree of the sprain.



An **ankle syndesmosis injury** typically occurs when the foot is planted and the body and leg turned in, referred to as external rotation of the tibia and fibula on the foot. These injuries are also sometimes referred to as high ankle sprains.

Pain and Symptoms

Syndesmosis injuries are amongst the most severe sprains of the foot and ankle. Initially they are very painful and often make it impossible to take weight through the leg or continue normal activity. Mild to moderate sprains may initially mimic a common sprained ankle. Symptoms include **pain and swelling** on the outside, front and above the ankle. Attempts to turn or twist the injured foot may cause **sharp pain** in the ankle joint. Pain may radiate upward along the side of the lower leg.

Although **ankle syndesmosis** injuries comprise less than 10% percent of all ankle injuries, they are such important structures that they **require urgent assessment and treatment**. It is vital to remember that an ankle syndesmosis injury is more complex than a simple ankle sprain. The healing time is typically longer, and returning to normal activity is usually a more gradual process.

Diagnosis

The diagnosis of syndesmosis injuries is usually made by examining the ankle. If an injury is suspected, an X-Ray or MRI assessment is often required to determine the extent of the injury and to see if other injuries such as fracture have occurred.

Treatment

Treatment of a syndesmotic injury will vary according to the severity and site of the injury. Severe injuries will require surgery while minor and moderate injuries can be treated successfully with Physiotherapy, including rehabilitation exercises. In all cases a qualified Physiotherapist should guide the rehabilitation process and in many cases an Orthopaedic Surgeon needs to be consulted.

