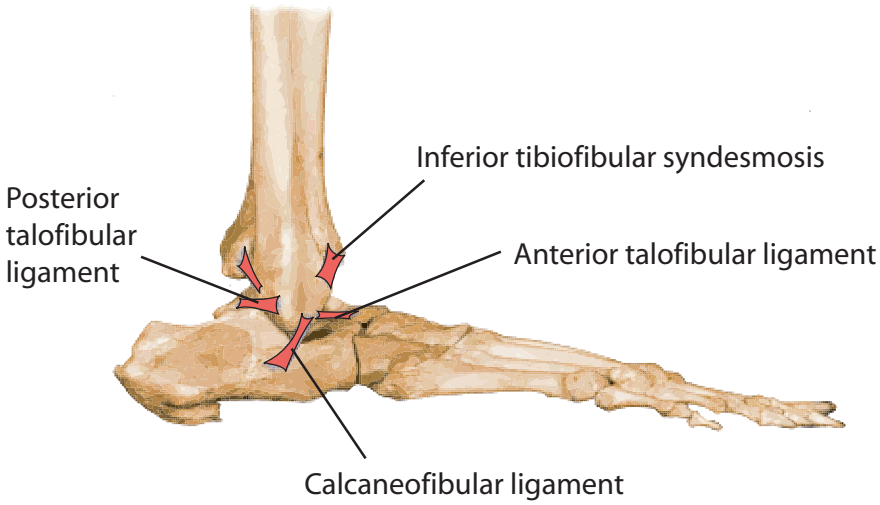
Dear Patient

Ankle Sprains

Ankle Sprains are very common and usually sustained whilst playing sport or walking on an uneven surface. The incidence of ankle sprains is highest in sports that require sudden stopping, starting, twisting and turning movements such as in netball, basketball, football and soccer. In most cases, the ankle is sprained when the foot rolls inwards under the leg. Injury may also result from stepping on another player's foot.

WHAT HAPPENS WHEN AN ANKLE IS SPRAINED ?

The ankle joint is made up of 4 bones - the fibula, tibia, calcaneus and the talus. A joint capsule surrounds these bones and maintains lubrication of the ankle joint. Ligaments are bands of strong connective tissue that act to stabilise a joint and help control movement in certain directions.



Above: Side (lateral) view of the ankle showing the lateral ligaments

When the ankle "rolls" the ligaments are put on a sudden, forceful stretch. If the force is great enough and the muscles around the ankle do not act quickly, fibres of the ligament(s) tear causing bleeding into the surrounding tissues. This damage prompts an immediate inflammatory reaction and the ankle then swells and becomes painful. All structures comprising the ankle joint, including bone, muscle and the joint capsule may be affected.

The most commonly sprained ligaments are those found on the outside of the ankle - the anterior talofibular ligament (ATFL), the calcaneofibular ligament (CFL), and the posterior talofibular ligament (PTFL). Sometimes the large ligament on the inside of the ankle, known as the deltoid ligament, may also be injured due to a compression rather than a stretching injury.

The muscles around the ankle may also be affected, causing pain on the outside of the leg towards the knee. In severe ankle sprains a small piece of bone may be pulled off the end of the fibula (an avulsion fracture) or a fracture of the talus may occur.

SIGNS AND SYMPTOMS

- Inability to weight bear with limping
- Pain and Swelling
- Visible bruising
- Restricted, painful movement

TYPES OF ANKLE SPRAINS

Ankle sprains may be classified using the following information:

Grade I (mild) - slight stretching of a ligament, a few fibres torn, approximately 2-3 weeks before return to activity.

Grade II (moderate) - partial tear, less than half the fibres torn, capsule may be torn, approximately 3-6 wks return to activity.

Grade III (severe) - two or more ligaments involved, significant deformation evident, complete rupture of fibres, capsule may be torn, the joint is unstable, possible associated fracture, may take up to 8-12 months to heal properly and may require surgery.

TREATMENT

Initially, treatment is aimed at reducing pain and swelling and at preventing further damage. This improves the speed and quality of long term recovery and reduces complications. Physiotherapy can help to reduce inflammation and stabilise the joint in the very early stages and, later, in the rehabilitation phase of treatment.

Following injury, use the RICE principles - Rest, Ice, Compression and Elevation.

REST- Avoid aggravating activities. Crutches may be required if pain is severe.

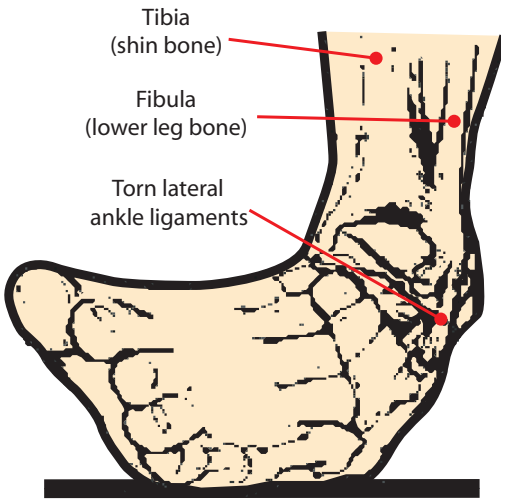
ICE- Apply immediately for 15-20 minutes. Then reapply every 2-3 hours for the next 2 days.

COMPRESSION- Firmly bandage the ankle, foot and lower leg (but not so tightly as to restrict circulation!) Compression should be applied constantly for around 1-3 days.

ELEVATION- Rest the ankle above the level of the heart whenever possible.

MOVEMENTS- Gentle and pain free, should begin as soon as possible to help move unwanted fluid out of the ankle, avoid stiffness and ensure good alignment of healing ligament fibres.

ANTI-INFLAMMATORY medication may be taken as prescribed by your doctor. Avoid ALCOHOL as this increases swelling and prolongs recovery time. Once the initial inflammatory reaction is controlled, exercises are essential to restore normal ankle function and to reduce the likelihood of re-injury.



Above: Most ankle sprains occur when the foot turns in or inverts, stretching the ligaments on the outside of the ankle.

Ultrasound applied by a physiotherapist in the acute stage following an ankle sprain can help reduce swelling and speed up recovery.

Strapping tape, applied by a qualified therapist, can assist with pain and swelling and significantly improve recovery.

Your Physiotherapist will recommend a variety of exercises including those designed to re-educate balance or "proprioception".

"If initial treatment is commenced quickly and effectively, recovery time may be significantly reduced."

Disclaimer : The material contained in these pages is intended as a guide only and does not constitute advice or treatment. For further information, please see your qualified health professional.

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