

The ankle joint is a flexible hinged joint which consist of three bones (tibia, fibula and talus). Tendons permit up and down movement, and to a small extent, sideways movement. The bones are stabilised and held together by ligaments.

The hinged joint permits a wide range of motion, and is strong enough to bear the weight of the entire body. However, ankles are frequently injured, especially in sporting activity. A sprained ankle occurs when the ligaments in the ankle joint are torn or stretched. Depending upon the amount of damage to the ligament a sprain can be mild, moderate or severe.

## Diagnosis

A complete medical evaluation is required to correctly diagnose an ankle sprain. This will include a history of how the injury occurred, a physical examination and an x-ray of the ankle.

## History

Most ankle sprains occur when the foot is suddenly turned inward, tearing the outside ligaments (the *anterior talofibula*, and/or *calcaneofibula* ligaments). Sprains of the *deltoid* ligament on the inside of the ankle are less common because it is less likely that the foot will be forced outward, and because the *deltoid* ligament is stronger.

## Physical Examination

The location and amount of pain and swelling may aid in diagnosis, as will strength, stability and mobility of the ankle. Listed below are some guidelines. The degree of pain and swelling will vary person to person and may be misleading.

**Mild** - the ligaments are only slightly stretched or torn.

**Moderate** - the ligaments are partially torn. Pain, swelling and bruising are greater, and walking may be difficult.

**Severe** – the ligaments may be completely torn. The ankle immediately becomes very swollen, pain is severe, and bruising may appear on both sides of the ankle. It is usually too painful to walk.

## X-ray

X-rays are taken to rule out fractures, and to ensure the ankle mortise (the weight bearing surface of the joint) has not been damaged.

## Treatment

Treatment depends upon the severity of the injury, the amount of pain experienced, and the physical demands which will be placed upon the ankle. Generally, the ankle sprains recover well with RICEE treatment, and a full return to previous level of activity should occur.

## RICEE

RICEE treatment for ankle sprains is:

**Rest** – this is the most important aspect of treatment. You should reduce activity levels for several days, avoiding standing and walking.

**Ice** – application of an icepack within the first 24hrs is most effective if used for short periods, often. Ice should not be applied directly to the skin.

**Compression** – a firm bandage or elasticised stocking will help control swelling and pain.

**Elevation** – above the level of the heart. This is best achieved by placing your ankle on several pillows. Resting on a footstool is not enough.

**Exercise** – early range of motion exercises should be started as soon as possible, helping to maintain joint function and reduce swelling.

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## Plaster Cast

A plaster cast treatment may be considered for your ankle sprain if your pain is severe, or you are unable to rest for the recommended period.

Plaster casts immobilise the ankle joint, protecting it while the ligaments rest and heal. Weight can be taken through the cast, but as it is not possible to achieve early range of motion exercise, the ankle joint may become stiff.

## Taping

Some doctors may recommend taping or strapping your ankle to provide added stability, especially when you return to sporting activity. Check with your doctor or physiotherapist for more information about ankle taping.

## Pain Relief

As ankle sprains can be very painful it is important that you take pain relief regularly to help control your pain. You should be provided with a prescription for pain relief, however information about non-prescription medication is also available – please ask.

Another important method of controlling pain is to control swelling. For this reason rest and elevation are an essential aspect of treatment. You should seek medical advice if your ankle sprain continues to be very painful.

## Exercises

Following ankle sprains it is important to exercise the ankle. If you are being treated in a plaster cast these exercises should commence immediately the cast is removed. Otherwise begin ankle exercises as soon as pain permits. It is expected that exercises will cause discomfort, but if pain occurs you should reduce the level of exercise being undertaken.

## Ankle exercises should include:

Range of Motion exercises. The best way to do these is to write letters of the alphabet in the air, using your toes as a pencil.

**As rest is very important, range of motion ankle joint exercises should be done while resting with the foot elevated.**

If you wish to achieve a high level of activity, or return to sport, these exercises are best carried out under the supervision of a physiotherapist.

Ankle Curl exercises. Sit on the edge of a table or chair. Alternatively raise and lower your foot, gradually increasing the amount of movement you are able to achieve.

## Contact us

**Remember** if you do not have an appointment, always phone before coming to Orthopaedic clinic.

### Wellington Hospital Orthopaedic Clinic

**Phone:** (04) 385 5952 **Fax:** (04) 385 5953

**Hours:** 8am-9.30pm, Monday to Friday  
(including Public Holidays)

Sat & Sunday 9am – 5.30pm

**Outside of these hours** please contact the Wellington Hospital Emergency Department  
Phone (04) 385 5999 Ext 5432

### Kenepuru Hospital Outpatients

**Phone:** (04) 385 5999 Ext 7205

**Hours:** 8am - 4.30pm, Monday to Friday  
(excluding Public Holidays)

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If they are closed contact the Wellington Hospital Emergency Department on (04) 385 5999 Ext 5432

### **Can't keep your outpatient appointment?**

Please phone us on 0800 999 442 and let us know as soon as possible.