

Sprained Ankle (Lateral Ligament Sprain)

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(Also known as Ankle Sprain, Rolled Ankle, Lateral Ligament Sprain of the Ankle, Twisted Ankle)

N.B. The term 'sprained ankle' will be used in this document to describe the injury known as a lateral ligament sprain of the ankle.

What is a sprained ankle?

A sprained ankle is a condition characterized by damage and tearing to the soft tissue and ligaments of the ankle. The most commonly affected ligament in this condition is the lateral ligament

A ligament is a strong band of connective tissue which attaches bone to bone. The lateral ligament of the ankle comprises of three bands of connective tissue and is responsible for joining the fibula to the talus and calcaneus. Collectively, the lateral ligament acts to prevent the foot and ankle from turning inward excessively ... inversion. When this movement is excessive and beyond what the ligament can withstand, tearing to the ligament occurs. This condition is known as a sprained ankle and may range from a small partial tear resulting in minimal pain, to a complete rupture resulting in significant pain and disability.

Causes of a sprained ankle

An ankle sprain commonly occurs during activities requiring rapid changes in direction, especially on uneven surfaces. They often occur in basketball, football, volleyball and netball. The usual mechanism of injury is an extreme combination of turning the foot inwards and pointing the foot and ankle downwards (plantarflexion – figure 4) during weight bearing.

Signs and symptoms of a sprained ankle

Patients with this condition will often notice an audible snap or tearing sound at the time of injury, with subsequent pain and swelling at the outside of the ankle. The patient may also be unable to weight bear at the time of injury due to pain and may develop bruising and stiffness over the coming days.

Diagnosis of a sprained ankle

A thorough subjective and objective examination from a physiotherapist is usually sufficient to diagnose a sprained ankle. Investigations such as an X-ray, MRI or CT scan are often required to confirm diagnosis and rule out other injuries (particularly fractures).

Treatment for a sprained ankle

The vast majority of patients with a sprained ankle heal well with appropriate physiotherapy. The success rate of treatment is largely dictated by patient compliance. One of the key components of treatment is that the patient allows their body to heal naturally by avoiding activities that further damage the affected tissue. Patients can determine if an activity damages or aggravates their condition based on their symptoms. Generally an activity aggravates the condition if:

1. Pain increases during that activity OR
2. Pain increases upon rest after that activity OR

3. Pain increases the morning after that activity.

It is therefore vital that patients rest from ANY activity that increases their pain during activity, after activity or the following morning.

Appropriate treatment in the first 48 – 72 hours following injury is vital to reduce bleeding, swelling and inflammation. This should involve following the [R.I.C.E regime](#) which comprises of rest from aggravating activities (crutches are often required), regular icing, the use of a compression bandage and elevation of the affected limb. Anti-inflammatory medication may also be useful in this initial phase of injury.

It is also important for patients to perform movement, strength and balance exercises early in the rehabilitation process to prevent stiffness, weakness and instability from developing and to ensure the ankle is functioning correctly. These exercises should be implemented as soon as pain allows. A gradual return to activity should occur once the patient is pain-free, provided symptoms do not increase.

Prognosis of a sprained ankle

In cases of a minor to moderate sprained ankle (grades I and II), return to sport or normal activity can usually occur in 2 – 6 weeks with appropriate management and treatment. Patients with a more severe injury (e.g. a complete rupture – grade III) will require a longer period of rehabilitation to gain optimum function.

Physiotherapy for a sprained ankle

Physiotherapy treatment is essential for all patients with a sprained ankle as inadequate rehabilitation can result in a poor outcome with a high likelihood of re-injury. Physiotherapy can hasten the healing process, ensure an optimal outcome and reduce the likelihood of recurrence. Treatment may comprise:

- soft tissue massage
- electrotherapy (e.g. ultrasound)
- anti-inflammatory advice
- joint mobilization
- ankle taping
- ankle bracing
- ice or heat treatment
- exercises to improve flexibility, strength and balance
- education
- activity modification advice
- the use of crutches
- the use of heel wedges
- biomechanical correction
- a gradual return to activity program

Other intervention for a sprained ankle

Despite appropriate physiotherapy management, a small percentage of patients with this condition do not improve adequately. When this occurs the treating physiotherapist or doctor can advise on the best course of management. This may involve further investigation such as an X-ray, CT scan or MRI, pharmaceutical intervention, corticosteroid injection or a review by a specialist who can advise on any procedures that may be appropriate to improve the condition. Surgical reconstruction of the lateral ligament of the ankle is occasionally required when all conservative measures fail.

Exercises for a sprained ankle

The following exercises are commonly prescribed to patients with an ankle sprain. You should discuss the suitability of these exercises with your physiotherapist prior to beginning them. Generally, they should be performed 3 times daily and only provided they do not cause or increase symptoms.

Foot and Ankle Up and Down

Move your foot and ankle up and down as far as possible and comfortable without pain (figure 6). Repeat 10 - 20 times.

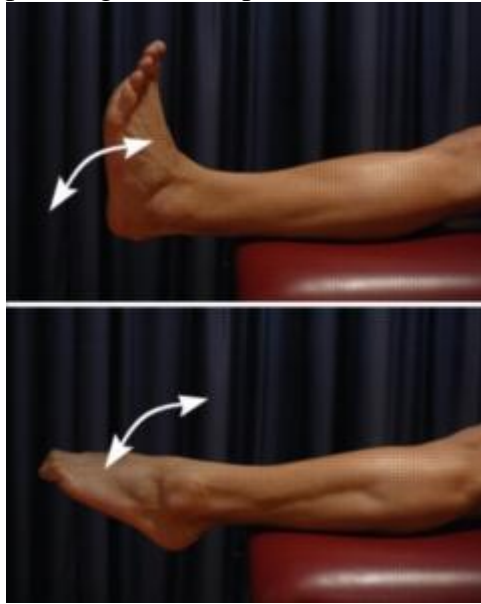


Figure 6 – Foot and Ankle Up and Down (left leg)

Foot and Ankle In and Out

Move your foot and ankle in and out as far as possible and comfortable without pain (figure 7). Repeat 10 -20 times.

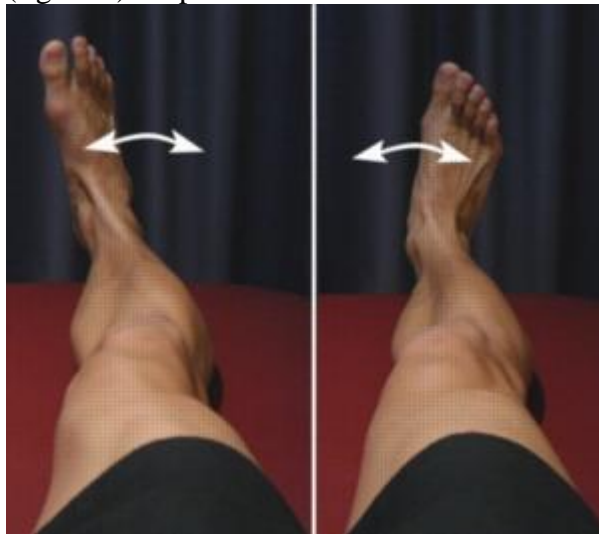


Figure 7 – Foot and Ankle In and Out (right leg)

Lunge Stretch

With your hands against the wall, place your leg to be stretched in front of you as demonstrated (figure 8). Keep your heel down. Gently move your knee forward over your toes as far as possible and comfortable without pain. Hold for 5 seconds and repeat 10 times at a mild to moderate stretch pain-free.



Figure 8 – Lunge Stretch (right leg)

If you are suffering from ankle pain and need expert advice and treatment, call me on +442866328200 or email info@lindaburke.co.uk