PodiatryNZ

Ankle Sprains

Fact Sheet

An ankle sprain describes damage to the ligaments that stabilise your ankle joint. They are a relatively common and accidental injury, often occurring when you roll out on your foot and over-stretch or tear the ligaments. The pain is immediate, and you may quickly have difficulty bearing weight on the injured foot.

Relevant anatomy

Types of sprains

There are two primary types of ankle sprains: **inversion** and **eversion** sprains. **Inversion** sprains occur when you roll out on the ankle, twisting the foot inwards. These occur much more frequently (>80%) than **eversion** sprains (<20%), where you roll in on the ankle and twist the foot outwards.

Injured ligaments

There are **four** primary ankle stabilising ligaments. The most commonly sprained ligaments, located on the outside of the ankle, are the:

- Calcaneofibular ligament (CFL)
- Anterior talofibular ligament (ATFL)
- Posterior talofibular ligament (PTFL)

The ATFL is the most commonly injured ligament, followed by the CFL if the sprain is severe.

On the inside of the ankle, we have the strong **deltoid** ligament, which is comprised of the:

- Tibiotalar ligament (TTL)
- Tibiocalcaneal ligament (TCL)
- Tibionavicular ligament (TNL)

One of the reasons that it is uncommon to sprain the ligaments on the inside of the ankle, aside from the strength of the deltoid ligament, is that the fibula (the thinner bone that runs alongside the shin bone - tibia) tends to prevent the excessive eversion of the ankle. It also means that when eversion sprains do occur, the head of the fibula may fracture from the impact.

What are the symptoms?

You'll almost certainly know when you've sprained your ankle as the damaged ligaments quickly result in **significant pain** that may impair your **ability to walk or bear weight** on the injured foot. You may also experience:

- Swelling
- Bruising
- Restricted movement in the ankle
- Tenderness when touching the ankle or moving the foot from side to side
- Instability when walking on the ankle, like it is giving way

If the ankle sprain is severe, or it was associated with a fall, there is a chance you may also have fractured or injured a bone in your foot. In this instance, **x-rays** will be useful to assess the extent of the bony damage, and **ultrasounds** can evaluate the integrity of the ankle ligaments.

What causes an ankle sprain?

Ankle sprains are an accidental injury caused by a force that causes the ankle to roll inwards or outwards. This may be from:

- Walking on an unstable or unbalanced surface
- Playing sports that have quick changes in direction
- Awkwardly planting your foot on the ground following a jump
- Getting hit on the inside of the ankle with a soccer ball (causing you to roll out and twist the ankle inwards, sprain ing the ligaments on the outside of the ankle)

If a previous injury has caused some weakening in your ankle ligaments, then you are more likely to have another ankle injury. It's important to see your Podiatrist if this is the case.

Caring for your ankle sprain at home

As soon as the sprain occurs, it's essential to avoid walking and bearing weight on the ankle. This is because ligament injuries can get worse - a strain can progress to a tear, and a small tear can progress to a larger tear, or may even rupture.

Next, you can:

Protection
Protect the foot from further injury, avoid doing activities that cause you pain.
Rest - rest the foot to allow it to heal. Once some time and passed and the healing process has begun, you may start to mobilise the ankle (gently and slowly move it), but stop immediately if this is causing you pain.

Ice
Cover the ankle with an ice pack - or use a cold bath. This works to reduce swelling, thereby reducing pain. Only use cold exposure for 10-15 minutes at a time to protect the skin. If you experience any rashes or the skin becomes raised, stop immediately. Redness will likely be present when icing but should settle within 5 minutes of removing the ice.

Brace or Strap
Brace or strap the foot to limit movement. Bracing/ strapping combined with an exercise programme prescribed by your Podiatrist has shown to deliver best outcomes in clinical studies. This programme must be prescribed by your Podiatrist and we do not recommend commencing any physical therapy unless under their supervision.

You must be careful when taking anti-inflammatory drugs as while they can be used to reduce pain and swelling, they may delay the healing process.

When to see a Podiatrist

When ankle sprains aren't effectively managed, they can lead to long-term ankle weakness and chronic instability. Minor ankle sprains can be managed at home. If your sprain is causing you pain while walking, it is likely more severe and we recommend that you see your Podiatrist as soon as you're able. Ideally, this will be within the first 24 - 48 hours.

How your Podiatrist can help

Your Podiatrist will start by **assessing the extent of your injury** to know how to best direct treatment. If it is suspected that you have subsequently injured your fibula or another bone during the sprain, you may be referred for an x-ray and ultrasound to assess both the bony damage and the integrity of your ligaments. Your Podiatrist may then:

- **Strap, splint** or provide **compression** for your ankle
- Discuss **footwear options** that will optimise and not impair your recovery
- Provide timely and appropriate **stretching and strengthening** for your ankle (note: if you start this too early, you may risk further damage to the ligaments. It is important to carefully follow the guidance of your Podiatrist as this is assessed on a case-by-case basis depending on the severity of the your injury
- Help **identify the cause of your sprain** and discuss how you can help prevent it in the future
- Work to **reduce the risk of** complications like chronic ankle instability

Surgery should only be considered when the ankle sprain does not respond to the above treatments, and exercise-based treatments (strengthening programme) have been tried.

Need a trusted Podiatrist in your area? Click **here**.

Disclaimer: This document is an informative guide only and is not a tool for diagnosis or management. We strongly recommend that you see your Podiatrist for their professional opinion, accurate diagnosis and appropriate treatment.