HINDMARSH
PHYSIOTHERAPY AND
SPORTS INJURY CLINIC

281 Port Rd Hindmarsh
Ph 8346 2000

# HOW TO MANAGE YOUR ANKLE SPRAIN

## HOW THEY HAPPEN

Lateral ankle sprains are not just the most common injuries suffered during athletic activities, they are also experienced during normal activities especially when wearing high heels. However they are considered one of the most common sporting injuries with approximately 40% of all traumatic ankle injuries occurring during sport.

Early diagnosis along with functional treatment and rehabilitation are keys to prevent re-injury and chronic ligament insufficiency but unfortunately many people do not get their ankle injuries appropriately treated.  Ankle sprains predominantly occur in sports that require cutting movements and changes of direction such as basketball, the varying codes of football, volleyball, and netball.

Despite the mechanism involve- through sport or recreation, most of these injuries result in ligament tears, particularly of the lateral ligaments. The medial deltoid ligaments and those supporting the syndesmosis are less commonly injured.

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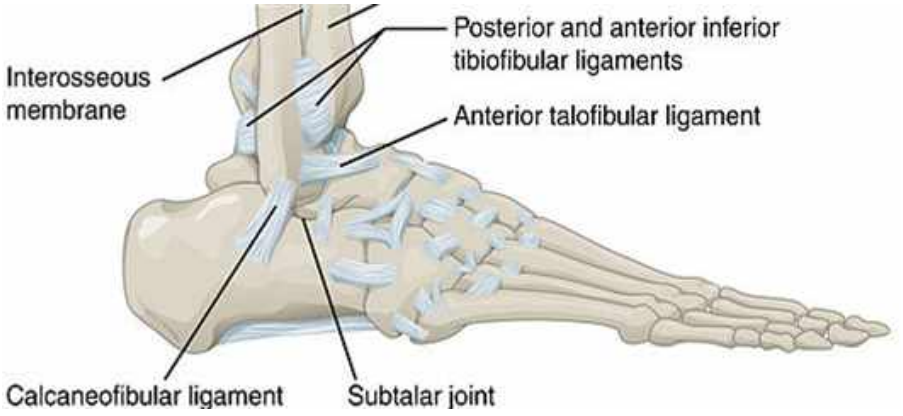
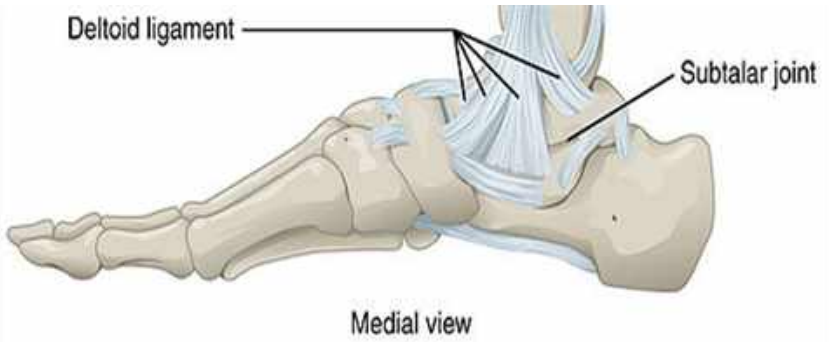
## BRIEF ANATOMY

The anatomy of the ankle is very complex. When everything works together, the ankle functions correctly. When one part becomes damaged, it can affect every other part of the ankle and foot, leading to problems.

The main ankle joint is a hinged synovial joint that is formed by the articulation of the talus, tibia, and fibula bones. It is actually made up of three joints: talocrural, syndesmosis and subtalar joints with various ligaments providing stability.

The talocrural joint is least stable in plantarflexion (toes pointed position) with three ligaments needing to provide stability. These are the ATFL, CFL and PTFL.The deltoid or medial ligament is on the inside of the ankle and the syndesmotic joint is stabilised by the AITFL and PITFL ligaments and the interosseous ligament preventing gapping of the tibia and fibula.



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The ankle joint is also supported by nearby tendons. The large Achilles tendon is the most important tendon for walking, running, and jumping. It attaches the calf muscles to the calcaneus (heelbone) and allows us to raise up on our toes. The posterior tibial tendon, the anterior tibial tendon and two peroneal tendons are also important in the stability and function of the ankle.


## WHAT IS AN ANKLE SPRAIN

Ligaments are predominantly torn following a traumatic injury such as rolling your ankle.

This can happen in sport, at home, walking down the street or whilst working. A torn ligament can range from a small tear to a full rupture or even an avulsion fracture ( pulling a small piece of bone away) with associated pain, swelling and instability.

**Grade I injury** represents a microscopic injury without stretching of the ligament on a macroscopic level.·
**Grade II injury has** macroscopic stretching, but the ligament remains intact.·
**Grade III injury** is a complete rupture of the ligament.

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## WHAT CAN HAPPEN

1.Lateral (outside) ligament injuries are commonly described as inversion injuries with the ATFL generally torn first followed by the CFL and PTFL dependant on force. This is the common foot rolling in type injury.

2.The Medial (inside) deltoid ligaments are injured in positions of the ankle rolling out and

3.The syndesmotic ligaments (ligament holding the 2 big bones of your lower leg together) are vulnerable when your foot is jammed backwards and rotated, forcibly separating the tibia and fibula.

Most people experience a “pop” or snapping sound and will find weightbearing tasks aggravating. There is pain with ankle movements and often a sensation of instability. Ankle injuries are commonly accompanied by swelling and bruising which can potentially extend into the foot or lower calf.

## DIAGNOSIS AND EXAMINATION

In most cases a likely diagnosis can be made based on a thorough physiotherapy consultation and examination.

Determining the onset of symptoms and finding out the mechanism of injury will give important clues to the potentially injured structures, whilst an examination can indicate which ligaments are torn and the severity of damage.

Examination will include a variety of movements, tests and functional assessments dependant on the patient’s symptoms & history

## WHAT WE NEED TO LOOK AT :

- The limitation and pain response to particular movements
- Palpation, swelling and bruising
- Examination of gait , ability to weight bear and functional movements
- Ligament laxity and stability tests
- Muscle strength

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Following a complete examination, physio's can diagnose and refer for imaging as appropriate. If a fracture is suspected, an Xray will be needed or syndesmosis injuries may need further imaging to determine their severity.

Most ankle sprains are managed conservatively and surgery is rarely required. More severe sprains may need a moonboot for a period of time but generally early mobilisation and weight bearing is encouraged.

It is vital however, that initial physiotherapy management is commenced early (within 48-72 hours), not only so that a clear diagnosis is made and patients can be more comfortable as pain and swelling is managed, but also, so that appropriate movement exercises and gait education can commence.

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## TREATMENT

Initial treatment for most ankle injuries involves reducing pain and swelling.
This will include “hands on” manual therapy techniques used by the physio to assist with swelling and pain. Crutches, boots, strapping or ankle braces maybe also indicated. These can assist in reducing the load through the injured ankle whilst allowing early functional mobilisation.

As the initial symptoms start to improve it is important to regain joint movement and progress towards active rehabilitation. The physio will prescribe a progressive exercise program to assist in addressing issues found on assessment. This will often include gait/walking retraining and muscle activation which is started once tolerated.

Physiotherapy will aim to restore all ankle movement and will assist with improving functional tasks such as walking, going up/down hills/stairs, running, and jumping. It is also important to increase strength and endurance in the muscles that support the ankle combined with balance and proprioception exercises related to return to sport and life requirements. Studies have confirmed that exercise therapy and neuromuscular retraining results in reduced incidence of chronic ankle instability.

**Your return to pre-injury sport and pre-injury life while minimising the risk of recurrences and chronic issues is our ultimate goal of ankle rehabilitation.**

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## SO WHAT TO DO:

Get an Accurate Diagnosis!
We will ask- How did you do it, where does it hurt, what can you do now and have you injured it before

Find out the most important steps for you to get pain free and back to activity. What is your activity level and what do you need to return to. What sort of extra support would be best during the different stages of recovery.

## WHAT YOU CAN START TO DO

Control of swelling and pain
Ice- there is considerable discussion about the role of Ice in the management of acute sporting injuries. For control of pain it is very useful and for swelling there is some debate.

The most current advice is **PEACE**-
**Protect-** avoid activities that increase pain during the first few days
**Elevate** the injured limb above heart level
**Avoid** anti inflammatories
**Compression** with elastic bandage or tape to reduce swelling. Our physios can show you the appropriate taping with a compression bandage and horse show padding to minimise swelling.
**Education-** seek advice from your health professional on diagnosis and appropriate management

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## STAGE 1 EXERCISES

Here are some simple yet essential exercises that can give you relief and speed up your recovery .Let pain be your guide and seek advice from your Physiotherapist
Early movements-

Some examples of exercises that may be appropriate for you to start

1Towel crunches-Spread the towel on the floor, gather it with your toes. Repeat 10 x

2. Ankle pumps Point your toes then pull foot backwards repeat 10x

3. Towel stretches- loop towel around your foot and pull back to stretch calf- keep knee straight. Hold 15 secs and repeat 3 x

4. Ankle circles – rotate foot to right then left, Repeat 10 each way

5. Alphabet- Write the letters of the alphabet with your foot

6. Marble pick up. Grasp with toes and move and drop

## WHATS NEXT

Next is Early strengthening

**Isometrics**
These are static contractions in all directions holding for 10 secsonds and repeating 10 x

**Theraband**
Once you physio is confident of your injury- Theraband is added to all directions non weight bearing

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**Progressive exercises weight bearing**
Heel Raises
Lunges
Heel toe walking
Toe raises
Single leg balance
Wobble boards

**Preparation for return to higher level functioning**
Double leg hops- forward, backwards, sideways
Single leg hops- forward, backwards, sideways
Agility training
Sports specific Exercises

## RETURN TO SPORT AND LIFE

Learn to Understand how to manage your activities without suffering the consequences of further injury – Rigid protective taping techniques and or bracing may be indicated to help in your return to full activities.

We hope this has been informative and please see our Physios to know exactly what to do to get symptom free and get back to sport, activity and the things that you love

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## GET SOME PHYSIO HELP

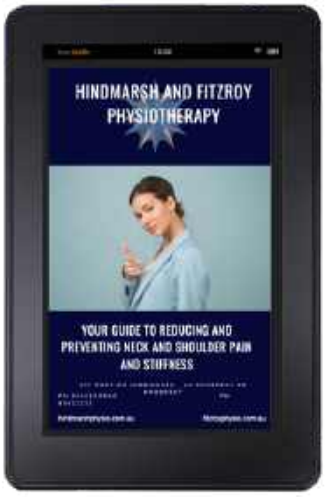
Our Caring and experienced Physiotherapists have the skills to correctly assess your musculoskeletal problems and provide safe and effective treatment. Its is very tempting to think that its nothing and it will go away on its own, but early treatment can be the key to a quicker resolution if youre  suffering with persistent  pain or disability

If you are in the Adelaide area, you can book an assessment with one of our experienced physiotherapists in Hindmarsh by calling our Physiotherapy clinic on 83462000 and let us help you to move better and feel better.

*As Physios, we provide extensive education as part of our management and prevention programs, but realize not everyone can find the time or have the confidence to make an appointment. You are welcome to download these informative E-books that you may find useful  to get you on your way.*


**ACL INJURIES**


**COMMON SPORTS INJURIES**




**MANAGING NECK PAIN**

**To access our free patient  E-book Resource just click the images above**

You can call us on 83462000 at Hindmarsh or CONTACT US ONLINE HERE if you would like an appointment

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