



YOUR GUIDE TO

# ANKLE SPRAINS

MUSCULOSKELETAL

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## Introduction

**Please take note of the following before starting any of the exercises in this guide:**

- The information contained in this guide is intended to assist in managing your recovery.
- This guide is based on the latest medical research in the field and contains the best advice available to the best of our knowledge.
- This guide is complimentary to other medical services and is not intended as a substitute for a health care provider's consultation.
- Never disregard medical advice or delay in seeking advice because of something you have read in this guide.

● Many people have found quick and lasting relief from their Ankle Sprain by acting upon the information provided, but everyone decides for themselves what to do with this information. Should you doubt a particular exercise in your situation, please consult your health professional.

**When consulting your health professional, it is wise to take this guide with you to show them.**

## The Ankle Joint

The ankle is a joint that is formed by the **tibia** and **fibula** (shin bones) and the **talus** (bone of the foot).

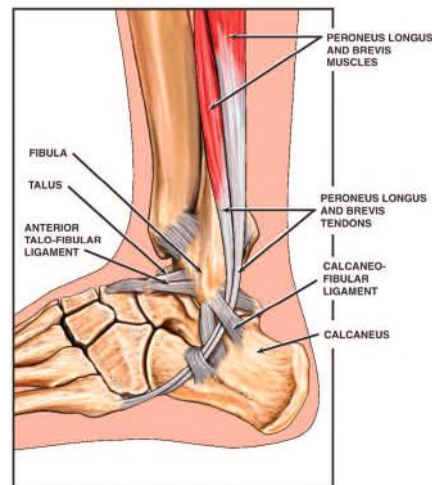
The stability of the joint comes from several factors:

1. The unique structural arrangement of the bones forming the joint
2. The ligaments surrounding the joint

Joint instability can therefore develop after one of these structures has been damaged either through a fracture of the bones or damage to the surrounding ligaments of the joint.

On the lateral (outside) aspect of the ankle is a complex of three ligaments. Damage to any of these ligaments will impact on the stability of the joint. How many are damaged and the extent of the damage, will determine the grade of the injury and the amount of instability at the joint. It will also determine the course of treatment necessary.

On the medial (inside) aspect of the joint is the deltoid ligament complex. Injury to this ligament complex is far more unlikely, and if damage does occur, it usually only results in a partial tear of the ligaments. Complete rupture of these ligaments generally only occurs in combination with ankle fractures.



## What is a Sprained Ankle?

**A sprain is a very common type of ankle injury** and occurs when one or more of the ligaments are stretched and/or torn. In addition to ligament damage, there may also be damage to tendons, bone and other joint tissues, depending on the extent of the injury.

The most common ankle sprain is when the heel or foot turn inwards in relation to the lower leg, overstretching the ligaments on the outside of the ankle. This is called an **inversion sprain**. Less commonly the foot turns outwards, overstretching the ligaments on the inside of the ankle. This is called an **eversion sprain**.

**Ankle sprains are common sports injuries**, especially in sports involving running and jumping, landing from a jump, fast changes in direction or lots of stop-starts such as football, tennis or netball. Ankles are however injured just as often walking on an irregular surface, stepping off the edge of the kerb, twisting the ankle while climbing stairs or losing your balance while wearing high heeled or platform shoes.

People have a greater chance of spraining their ankle if they have weak lower leg muscles, lax ligaments in the ankle or an abnormal walking pattern. Those who have had a previous ankle sprain are more likely to sprain the same ankle again, especially if they have not rehabilitated their first injury properly.

When there has been damage to a joint, there is also damage to the proprioceptors of the joint (receptors in the joint which determine the position of the joint in space). If proprioception is not retrained properly after your ankle sprain, the chance of you reinjuring your ankle a second time is far higher. **Proper rehabilitation is therefore very important after an ankle sprain.**

The degree of severity of an ankle sprain can be divided into three grades of injury, ranging from a **mild sprain** resulting in mild joint stiffness with no laxity and no difficulty in moving the ankle, to **complete rupture** which will result in severe slackness, loss of function and an inability to weight bear for a considerable period of time. If you are unable to weight bear, it is important that you consult your GP or allied health professional (physiotherapist, chiropractor or osteopath) to ensure that the appropriate treatment is subscribed, and that there is no fracture involvement.

# What treatment can I receive?

## TREATMENT AND REHABILITATION

Many problems resulting from sprains are due to blood and swelling in and around the ankle. Minimising swelling helps the ankle heal faster, with most sprains healing completely within a few weeks. With increasing injury severity, the rehabilitation process becomes more complex and extensive. Chronic or recurrent lateral ankle sprains usually receive some type of strengthening programme and proprioception training due to poor balance on the injured leg.

## EARLY PHASE

The initial goal immediately after an ankle sprain is to decrease post-injury swelling, bleeding and pain. It is also essential to protect the healing ligament(s).

The following are to be avoided in the first 24hrs as they increase the blood flow to the area and will therefore increase the swelling and slow the healing process:

- **Hot showers**
- **Heat rubs**
- **Hot packs**
- **Drinking alcohol**
- **Aspirin** - it prolongs the clotting time of blood and may cause increased bleeding into the ankle.
- **Ibuprofen** may be taken to help with pain, but will not speed up the healing process

## PROTECTION

Ligaments must be maintained in a stable position so healing can occur. Use of an ankle brace may be necessary, and if the sprain is severe, get off your feet, taking the weight off the injured ankle, or partial weight bear with crutches. Early walking is essential if possible, as weight bearing inhibits tightness of tendons, which can lead to tendonitis.

## REST

Allow your injured ankle to rest for approximately 24 hours after the injury. Caution should be taken against vigorous exercise, however exercises for the uninjured leg can be performed. Isometric (static) exercises can be performed from an early stage to increase strength and decrease weakening of muscles. Exercises must be done in a pain free range of motion to prevent further damage to the ligament.

## ICE

Ice the ankle every two hours for 15- 20 minutes to decrease pain and swelling for the first 48-72 hours. Do not place ice directly on to the skin and do not use for over 30 minutes at a time.

## COMPRESSION

Use ankle brace, strapping or a bandage to provide both support and pressure to the area to help decrease the swelling.

## ELEVATION

Elevate as much as possible with ice and compression. Elevate the foot higher than the waist to reduce swelling and pain.

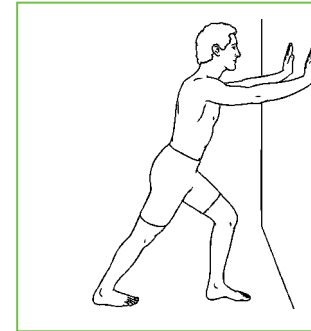
# Exercises phase 1

This phase starts when the **swelling stops increasing** and the **pain lessens**, so that the ligament(s) have reached a point in the healing process at which they are not in danger when given minimal activity. The start of this phase will depend on the severity of your sprain, and will therefore vary

from one person to the next. Pain is your guide as to when you can start, and how much activity is enough. The goal of this phase is to increase the range of motion and strength, which will aid in circulation and help eliminate inflammation.

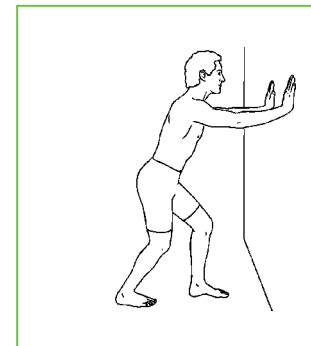
## STRETCHING EXERCISES

- **Hold each stretch for 30 seconds and repeat 3 times each side**
- **Do not bounce the stretch**
- **Only work in a pain free range of motion and you should only feel a stretch, not pain**



### CALF STRETCH

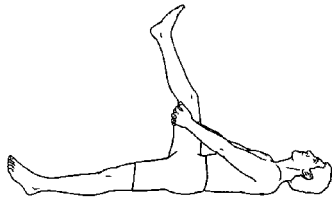
Stand about a meter away from a wall. Place both hands against the wall with one foot further back than the other. Now lean in towards the wall, bending the front knee and keeping the back knee straight and the heel on the floor.



### SOLEUS STRETCH

In the above position, now keep the back leg slightly bent, with the heel on the floor and toes pointing in a straight line to the wall. Lean into the wall until a stretch is felt in the lower calf.

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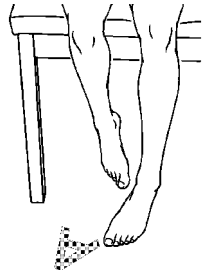


#### TIBIALIS ANTERIOR STRETCH

Lay on your back with one knee bent and the other straight. Raise the straight leg up holding behind your knee. Now point your toes forwards and inwards, and you should feel a stretch along the front of your leg. Only rotate to a pain free position.

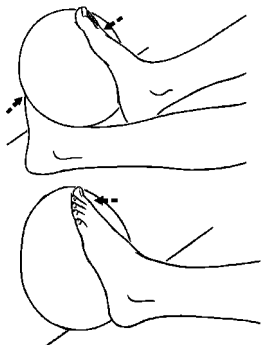
### MOBILITY & STRENGTHENING EXERCISES

- Repeat two sets of 10-12 repetitions of each exercise.
- If it is an isometric exercise (i.e. no movement involved) hold the position for 10 seconds and repeat 10 times
- Make sure that you work in a pain free range of movement and gradually increase your range as you go



#### ANKLE ALPHABET:

Sitting/lying with your leg outstretched in front. Now raise the leg, keeping knee straight and leg still. Paint the alphabet in the air, with ankle using capital letters, slowly to get full range of movement in ankle. Repeat with other leg. The movement should not be from your hip, only your ankle and range should be pain free

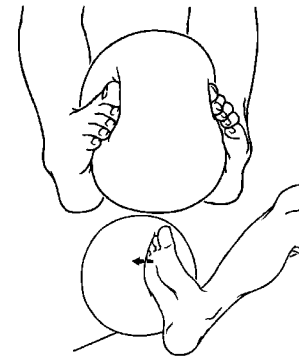


#### ISOMETRIC DORSIFLEXION

Sit with your legs straight out in front of you. Place a rolled pillow between the feet, with the injured foot on the bottom and squeeze feet together, pulling toes of the injured foot up towards you. There should be no movement of the injured foot

#### ISOMETRIC PLANTAR FLEXION

Place a rolled pillow against the wall, and press the sole of your foot into the pillow i.e. your toes pointing away from you. There should be no movement

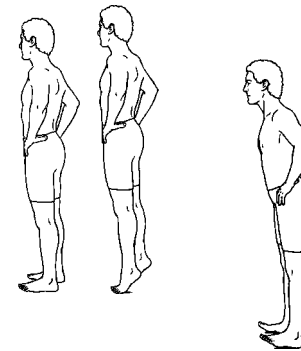


#### ISOMETRIC INVERSION

With rolled pillow between feet, press inner border of feet into pillow

#### ISOMETRIC EVERSION

Place a rolled pillow against the wall and press the outer border of foot into pillow.

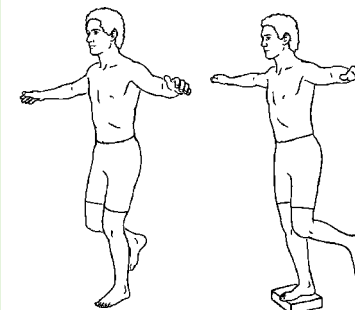


#### CALF RAISES

Supporting yourself against a wall, raise up onto your toes in the following manner: First onto your big toe, then onto the middle of your foot and then onto your little toe. This sequence equals one repetition.

#### STANDING TOE RAISE

Standing with your weight now on your heels, raise your toes off the ground in the same sequence as the calf raises, i.e. middle of your heel, outside and inside.



#### STORK STANDING

Balance on one leg for 30 seconds and repeat with the other leg. Repeat the above with your eyes closed. Make sure that you stand next to a solid surface so you can hold on if necessary

Progress the above to standing on an unsteady surface, e.g. a cushion or a narrow piece of wood.

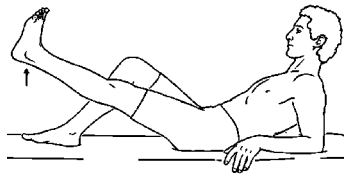
## Exercises phase 2

This phase of exercise can be started when you are able to complete phase 1 exercises pain free and with control. You should no longer have swelling or pain and if this is not the case it is important that you consult your allied health professional to ensure that there are no other problems and that you are completing the exercise programme correctly. Do not be afraid

to go back to phase 1 if you feel that you are unable to safely continue with the phase 2 exercise or you can overlap the phases if you are not completely confident to do all the exercises in phase 2 yet. Be aware of pain as your marker of doing too much or maybe even doing the exercise incorrectly. Continue with the stretches as in phase 1.

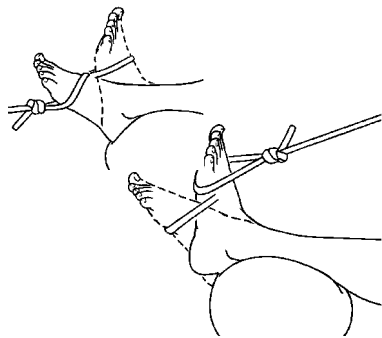
### MOBILITY & STRENGTHENING EXERCISES

- Repeat two sets of 10-12 repetitions of each exercise.
- Make sure that you work in a pain free range of movement and gradually increase your range as you go



#### STRAIGHT LEG RAISES

Sitting on the floor with one knee bent and the other straight, lean back on arms. Now raise the straight leg off the floor, keeping knee straight. Perform one set with toes pointing up and the second with toes pointing out, keeping your knee pointing towards the ceiling

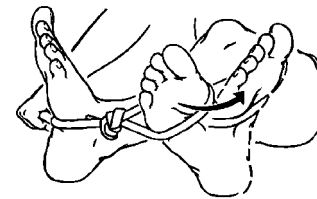


#### RESISTED DORSIFLEXION

With the tubing anchored to a fixed object (table leg), and attached around your foot, pull the foot towards you. Return slowly to your starting position.

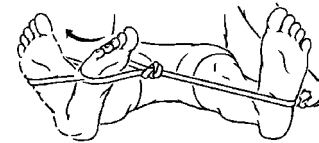
#### RESISTED PLANTAR FLEXION

Whilst holding one end of the tubing and the other tied around your ankle, press the foot downwards towards the floor. Return slowly to starting position.



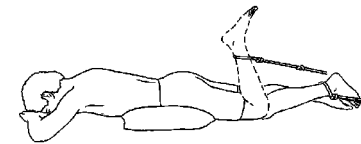
#### RESISTED INVERSION

Tie ends of the band together, and anchor the band around a table. Sitting side on to the table, loop the band around the foot of your injured ankle which should be closest to the table. Move toes up and in toward opposite knee. Be sure to only use your ankle.



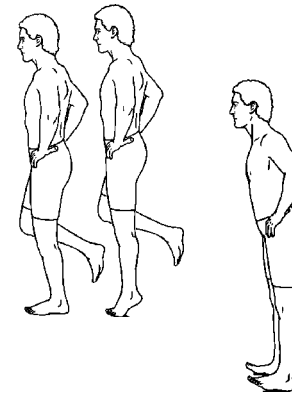
#### RESISTED EVERSION

Now turn around so your injured ankle is furthest from the table, with the band attached around the foot. Now move the toes of the foot up and out toward outer shin, pulling the band away from the table



#### HAMSTRING CURLS WITH BAND

Lying on your stomach, with one end of the band attached to a table and the other attached around your ankle. Starting with your knee straight, bend your knee towards your bottom keeping your pelvis in neutral and knee on the floor.

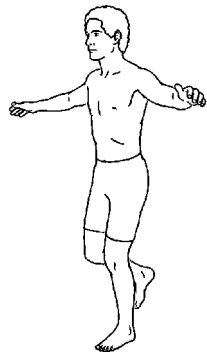


#### SINGLE LEG CALF RAISES

Supporting yourself against a wall, stand on one leg and raise up onto your toes in the following manner: first onto your big toe, then onto the middle toes and then onto your little toe. This sequence equals one repetition. Complete 10 and then change feet

#### STANDING TOE RAISE

Standing with your weight now on your heels, raise your toes off the ground in the same sequence as the calf raises, i.e. middle of your heel, outside and inside.



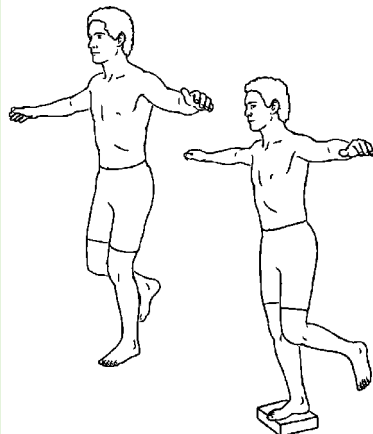
### STORK STAND PICK-UP

Standing on one leg, with your weight on your heel, bend down to pick up a weight from the floor with the opposite hand ensuring that your weight stays on your heel, and that your knee goes down in line with your second toe. Also ensure that your knee and not your back does the bending work. Up and down is one repetition. If you are unable to pick a weight up off the floor, start with it on a chair and progress as you get stronger



### STATIC LUNGE

Place one foot in front of the other. Bend both knees together until you have a 90° bend in both. Ensure that your front knee does not go over your front foot when bending to 90°. Return to the starting position. Complete all repetitions on one leg before changing



### STORK STANDING

Balance on one leg for 30 seconds and repeat with the other leg. Repeat the above with your eyes closed. Make sure that you stand next to a solid surface so you can hold on if necessary

Progress the above to standing on an unsteady surface, e.g. a cushion or a narrow piece of wood.

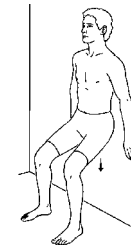
## Exercises phase 3

This phase should start when you are able to complete the exercise in phase 2 without pain, and with control. This phase is mostly focused on

proprioceptive exercises. **These are essential for your return to full function and to prevent a recurrence of ankle injuries.**

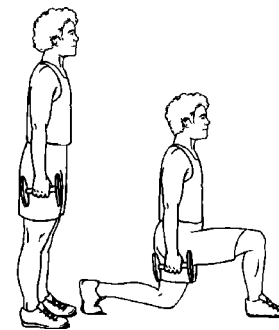
### STRENGTHENING & PROPRIOCEPTION EXERCISES

- Perform two sets of 10-12 repetitions of each exercise
- If you are unable to complete two sets of 10-12 initially, build up to this
- Ensure that you work pain free and with control



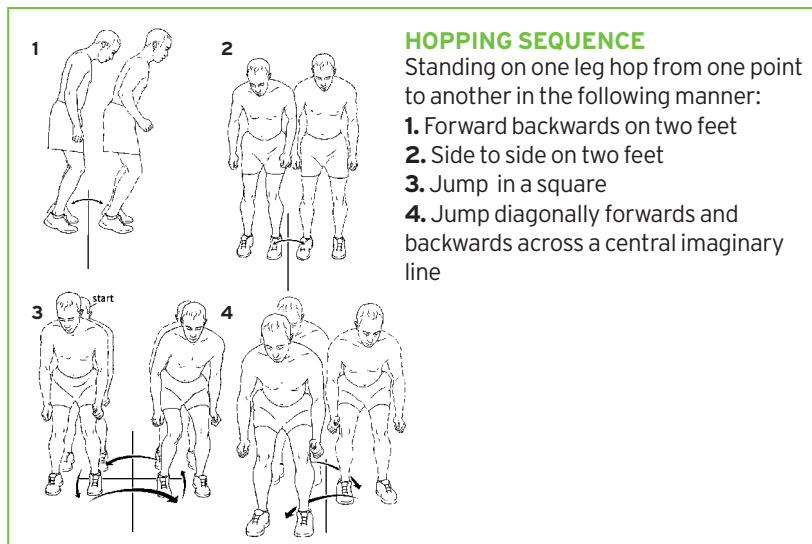
### WALL SLIDES

Stand leaning up against a wall, your feet a little away from the wall and pointing slightly outwards. Push your back against the wall. Slowly lower your body into a seated position and hold this position for 5-10 seconds. Complete 10 repetitions.



### LUNGES

Lunge with one foot forward keeping the knees 90° (or at least attempt to reach 90°). Ensure that your front knee does not go over your front foot when bending to 90°. Return to the starting position. Perform 10 reps with the one foot forward before changing to the other foot forward. Try to be as stable as possible during the exercise. Now try and perform in various directions i.e. diagonally to either side.



## Contact us

This guide is designed to assist you in the self-management of your injury/condition.

We are here to assist your recovery in the shortest but safest possible time. If you have any uncertainties or queries regarding the information, please do not hesitate to contact us on:

Phone 017890400999 / 07870166861  
[www.mdphysiotherapy.co.uk](http://www.mdphysiotherapy.co.uk)