Ankle Sprains
Healthshare Information for Guided Patient Management
Introduction
Healthshare is committed to improving your health and wellbeing. This information leaflet is produced by health professionals who are expert in improving musculoskeletal conditions. The information is based on the latest available evidence from research in the field. If you are not sure of any of the given information, please contact our physiotherapy helpline for further information.

Ankle joint anatomy

What is a sprained ankle?
The term “sprain” generally indicates injury to the ligaments. A sprain is a common type of ankle injury that involves one or more of the ligaments.

Sometimes there may also be damage to tendons, bone and other tissues, depending on the severity of the injury.

Inversion injury or sprain: This is the most common form of ankle sprain. It happens when the heel or foot turns inwards, overstretching the ligaments on the outside of the ankle.

Eversion injury or sprain: Less commonly the foot turns outwards, overstretching the ligaments on the inside of the ankle.
What causes an ankle sprain?

- Ankle sprains are common in sports injuries, especially in sports involving running and jumping, landing from a jump, fast changes in direction or with lots of stop-starts such as in football, tennis or netball.
- It may also happen when walking on an uneven surface, stepping off the edge of the kerb, climbing stairs or losing your balance while wearing high heeled or platform shoes.
- The chances of spraining your ankle increases if you have weak lower leg muscles, lax ligaments in the ankle or an abnormal walking pattern.
- If you have had a previous ankle sprain, you are more likely to sprain the same ankle again, especially if you have not had adequate exercises to rehabilitate your initial injury.

Why do I need to do exercises?

Injury to the ligaments and/or cartilage of your joints also damages the joint position sensors.

Joint position sense is provided by small receptors in the ligaments and joint structures which tell your body the position of the joint.

If this is not retrained properly after your ankle sprain, the chance of you reinjuring your ankle a second time is far higher.

Therefore doing your exercises regularly and adequately is very important to rehabilitate the ankle joint after a sprain.

When do I see my GP or physiotherapist?

The severity of an ankle sprain can be divided into different grades and this determines the need for assessment and treatment.

A mild sprain results in mild joint stiffness with no laxity of the joint and no difficulty in moving the ankle.

A complete rupture results 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 physiotherapist for further assessment.

What are the treatments available?

Most problems resulting from an ankle sprain are due to bleeding and swelling in and around the joint.

Reducing the swelling and bleeding helps the ankle to heal faster; most sprains heal completely within a few weeks.

With a severe ankle sprain, the rehabilitation process becomes longer and more complex.

Chronic and recurrent ankle sprains usually require a strengthening exercise programme and joint position sense training to improve the balance of the injured leg.

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<tr>
<th>Initial Stage</th>
<th>The treatment is focused on decreasing the post-injury swelling, bleeding and pain.</th>
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<tbody>
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<td>Avoid</td>
<td>The following should be avoided in the first 24hrs as they may increase the blood flow to the area and therefore may increase the swelling and slow down the healing process:</td>
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<td>• Hot showers, heat rubs or hot packs applied to the injured area.</td>
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<td>• Drinking alcohol.</td>
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<td>• Taking Aspirin: This prolongs the clotting time of blood and may cause increased bleeding into the ankle.</td>
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**Protection**

It is essential to protect the healing ligaments. Ligaments must be kept in a stable position to help with the normal healing process.
- An ankle brace may be helpful if the sprain is severe.
- **Elbow crutches**: These are useful to reduce weight bearing on the injured ankle or promote partial weight bearing during the first 2 weeks, if your injury is severe or a fracture is suspected.
- Early walking is essential if possible, as weight bearing reduces the tightness of the tendons, which can lead to tendonitis.

**Rest**

You should rest the ankle joint for 24 hours after the injury.
- Avoid vigorous exercise to the affected leg.
- Static exercises can be done from the third day onwards to maintain muscle strength.
- Exercises should be pain free to prevent further damage.

**Ice**

Use ice packs around the ankle every two hours for 15-20 minutes to decrease pain and swelling during the first 48-72 hours. Do not place the ice directly on to the skin (use a damp tea towel) and do not use it for longer than 30 minutes at a time.

**Compression**

Ankle support bandages provide pressure to the area and help to decrease the swelling.

**Elevation**

Elevate your foot higher than your chest while lying down and do this 2-3 times every day for 20 minutes to reduce the swelling.
Exercises for ankle sprains

**Acute stage (First 2 weeks)**

**Static dorsiflexion**
Sit with your legs straight out in front of you. Place a rolled pillow over the injured foot and keep your unaffected foot over the pillow to fix the pillow. Slowly pull your injured foot up towards you. There should be no movement of the injured foot. Hold for 10 seconds. Repeat 10 times x 3 sets.

**Calf stretch (Gastrocnemius)**
Keep your hands on the wall and gently lean against the wall. Keep the back leg straight, with the heel on the floor and the foot pointing in a straight line to the wall. Slowly lean into the wall until a stretch is felt in the middle to upper calf. Hold this position for 20 seconds. Repeat 5 times every 2 hours during the day.

**Static plantar flexion**
Place a rolled pillow against the wall and under your injured foot. Slowly press your foot into the pillow without moving the ankle. Hold for 10 seconds. Repeat 10 times x 3 sets.

**Early stage (2-4 weeks)**

**Calf raises**
Supporting yourself against a wall, slowly raise up onto your toes. First onto your big toe, then onto the middle of your foot and then onto your little toe. Repeat 10 times in each position. Do this 3 times a day.

**Standing toe raises**
Standing with your weight now on your heels. Slowly raise your toes off the ground and hold this position for 10 seconds and repeat 10 times. Try to increase the hold to 30 seconds. Repeat 3 times a day.

**Static inversion**
Sit with your legs straight out in front of you. Keep a rolled pillow between your feet. Slowly press the inside of your feet into the pillow. Hold for 10 seconds. Repeat 10 times x 3 sets.

**Static eversion**
Place a rolled pillow against the wall and keep your affected foot against the pillow. Slowly press the outside of your foot into the pillow. Hold for 10 seconds. Repeat 10 times x 3 sets.
Exercises for ankle sprains/Continued

**Later stage (4 weeks onwards)**

**Calf stretch 2 (Soleus)**
Keep your hands on the wall and gently lean against the wall.
Keep the back leg slightly bent, with the heel on the floor and foot pointing in a straight line to the wall.
Lean into the wall until a stretch is felt in the lower calf.

**Single leg standing**
Balance on one leg for 30 seconds and repeat with the other leg.
Repeat 5 times on each leg.
Once you are confident, repeat the above with your eyes closed.
Make sure you have something solid to hold onto if necessary.
You can progress this exercise by standing on an unsteady surface for example a balance board, soft cushion or a narrow platform.

**Single leg standing pick up**
You will need a weight for this exercise eg., a can of beans.
Stand on one leg, with your weight on your heel. Slowly bend your knee in line with your second toe to pick up a weight from the floor.
Try to ensure that your back does not bend forward.
Up and down is one repetition. If you can’t go down to the floor, use a chair initially to support your weight.

**Resisted dorsiflexion**
With the band anchored to a fixed object (table leg) and attached around your foot, pull the foot towards you.
Return slowly to your starting position. Repeat 10 times x 3 sets once a day.

**Resisted plantar flexion**
Whilst holding one end of the band and the other tied around your ankle, press the foot downwards towards the floor. Return slowly to starting position.
Repeat 10 times x 3 sets once a day.

**Resisted inversion**
Tail 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 your foot inward to opposite knee.
Repeat 10 times x 3 sets once a day.

**Resisted eversion**
Tail ends of the band together and anchor the band around a table.
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 your outer shin, pulling the band away from the table.
Repeat 10 times x 3 sets 2 times a day.