

Treating inflammation with PRICE - immediately after injury and for 3-5 days afterwards

Tissue injury usually involves damage to small blood vessels that results in bleeding at the site of injury. This bleeding leads to the five main signs of inflammation: heat, redness, swelling, pain and loss of function. The inflammatory reaction is necessary as it is part of the natural healing process. However the body tends to overreact to sudden traumatic injury and as a result more inflammatory fluid accumulates than is necessary for healing. This fluid contains a protein that turns into replacement 'scar' tissue. Too much scar tissue may prevent the structure returning to normal function with reduced flexibility and increased risk of re-injury. The advice below should be followed for 3-5 days depending on severity. It can be remembered by the acronym **PRICE**.

- **PROTECT** - Protect the injured tissue from undue stress that may disrupt the healing process and/or cause further injury. Make sure the mode of protection can accommodate swelling.
- **REST** - This reduces the energy requirements of the area, avoids any unnecessary increase in blood flow, ensures protection of the area and optimises healing. For example using slings, crutches or static rest (ie. sitting or lying down).
- **ICE** - The ice helps constrict the blood vessels thereby limiting bleeding and reducing the accumulation of unnecessary scar tissue. Crushed ice wrapped in a damp towel (to prevent ice burn) is best (ice cubes can be wrapped in the cloth and smashed against a wall to crush the cubes). Ice should be applied immediately after injury for 20 minutes every 3-4 hours or no more than 5-10 minutes at a time on bony areas.
- **COMPRESSION** - Simple off-the-shelf compression bandages such as Tubigrip™ and adjustable neoprene supports are adequate. It is important to ensure the bandages are not too tight to cause pins and needles or any loss of feeling around the joint.
- **ELEVATION** - Lowers the blood pressure and helps limit bleeding and encourage drainage of fluid through the lymphatic system.

When following **PRICE** it is also important to avoid **HARM**, hence the saying: 'Give **PRICE** and avoid **HARM**'.

AVOID

H - Heat (eg. hot bath, sauna)

A - Alcohol

R - Running

M - Massage



these are counter-productive to **PRICE** treatment

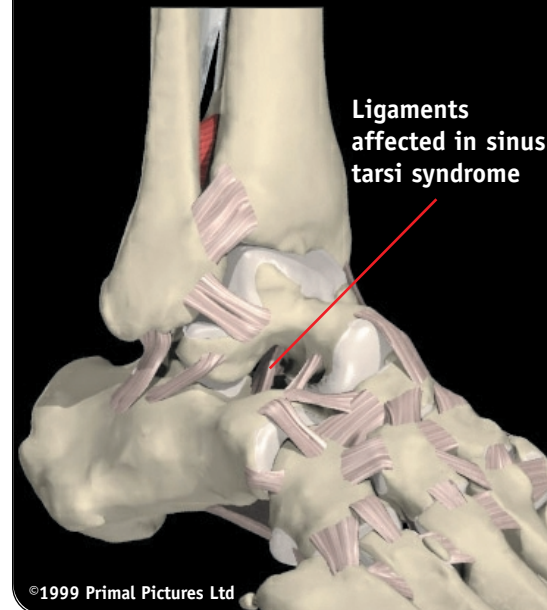
SINUS TARSI SYNDROME

Promoting Health Through Exercise

sportEX
medicine

Exercises for sinus tarsi syndrome rehabilitation

Diagram showing the sinus tunnel in the ankle joint



YOUR INJURY

Sinus tarsi syndrome is a common problem, particularly in runners, which results either from trauma or from repeated movements that are biomechanically incorrect. The condition affects the ankle joint which is very important because it is essential in taking the weight of the body and dispersing it through the foot. It is also responsible for producing and controlling many of the movements that can occur in the foot. The joint is supported by thick ligaments between the bones that sit in the sinus tunnel running through the joint (see diagram). Sinus tarsi syndrome is chronic inflammation of these ligaments.

WARM UP & WARM DOWN

When injured it is particularly important that you warm up with a fast walk (at a pain free pace) for 3-4 minutes before you start your exercise. This increases your circulation and helps prepare your muscles for the activity to come. When you have finished your exercises, it is also important to allow your heart rate to slow down gradually by ending the session with a gentle walk for 3-4 minutes.

USEFUL RESOURCES

- SportEX Medicine magazine
www.sportex.net
- The Organisation of Chartered Physiotherapists in Private Practice -
www.physiofirst.org.uk
- General Osteopathic Council
www.osteopathy.org.uk
- The Sports Massage Association
www.thesma.org
- The Osteopathic Sports Care Association
www.osca.org.uk

Exercises for sinus tarsi syndrome

Your rehabilitation programme

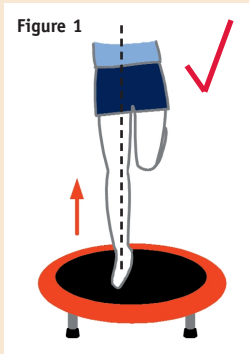
This exercise programme has specific exercises to strengthen muscles around the ankle as well as improve dynamic control and joint position sense (proprioception) of your ankle. In order to achieve proper rehabilitation of your injury it is important to ensure the exercises are performed with good technique. Poor practice leads to poor performance and potential strain on your injury. The process of managing your problem may include a combination of physiotherapy and orthotics backed up by a number of other interventions. In difficult cases a steroid injection may be required in conjunction with rehabilitation exercises. Only in very rare circumstances surgery may be required. The following leaflet includes some exercises to help in your rehabilitation.

Proprioception exercises (progression)

Proprioception is the body's sense of position awareness and contributes to good balance. Improving proprioception of the ankle involves finding the point at which balance is lost, working at that level until some improvement is noted and then moving on.

1 Balancing on a stable surface (ie. floor)

Standing on one leg with good hip/knee/foot alignment (ie. a line through the thigh should be in line with the midline of the foot). Maintain balance for 30 seconds regularly while doing an everyday activity or a sporting action eg. washing up or a kicking action



2 Balancing on an unstable surface (ie. trampet or mattress)

Progress the exercise above so you are standing on an unstable surface such as a wobble board, bed or trampet as shown in Figure 1

3 Balancing on an unstable surface with eyes closed

Progress the exercise above by closing your eyes and maintaining your balance. This is more difficult, particularly while standing on an unstable surface

4 Balancing on an unstable surface with a small jump

To progress the exercise a stage further try landing from a jump, or hop onto one leg, then maintaining your balance for 10 seconds before repeating the jump. It is ideal to start this on a safe but soft surface (ie. a trampet as seen in picture) if the ankle still does not cope well with impact. A good take off is essential (Fig.1). Examples of a good landing (Fig.1) and a poor landing (Fig.2) are shown.

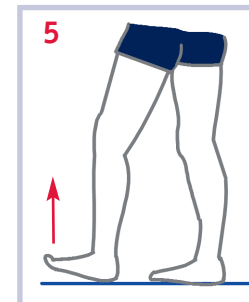
Eccentric exercises (progression)

Eccentric training involves using the muscles to control the movement of the body against an external force, usually gravity. This is difficult for the body to do as the muscle has to lengthen as it generates force (usually they shorten as they generate force).

This lengthening action is essential as it is the body's shock absorption mechanism. It is also this kind of action that is critical in improving alignment of the body during activity which helps in the protection of joints such as the ankle joint.

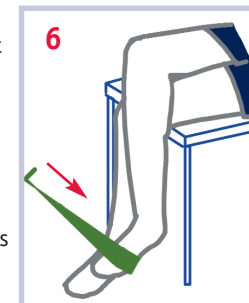
5 Toe raising and lowering

Raise and lower the toe slowly making sure you keep your hip, knee and foot in line with each other (Fig.5). **Repeat three sets of 30**



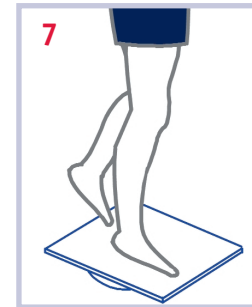
6 Alphabet

Draw the alphabet with a Theraband wrapped around your foot. You should be pulling outwards against the Theraband at all times. The letters should be drawn as large as possible (Fig.6). **Do the exercise at a number of speeds and progress by adding repetitions until three sets of A-Z are easy**



7 Wobble board

Use special equipment like a wobble board - rock slowly back and forth (Fig.7). **Three sets of 30**



8 The super exercise

This exercise combines a difficult proprioceptive challenge and eccentric work while offering the opportunity to incorporate sports specific elements. For example carrying out a mock badminton smash where you jump and land with a Theraband attached to your ankle. The Theraband can be attached in either direction and adds a force against which you have to work while doing your sporting action and keeping balanced when landing.



PRACTITIONER CONTACT DETAILS