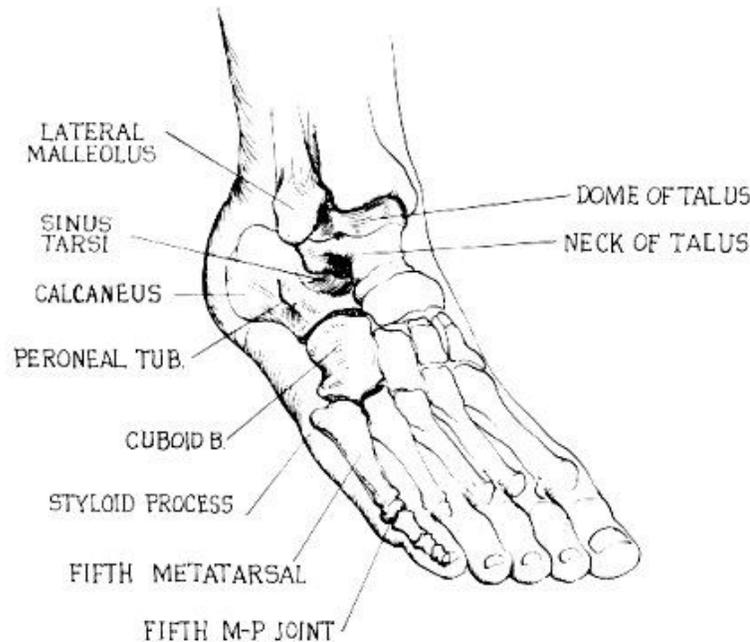


Sinus Tarsi Syndrome

The sinus tarsi is a cone shaped area that lies between the talus to the top, and calcaneus to the bottom. When the nerves within the sinus tarsi become compressed a painful condition called sinus tarsi syndrome results.



Numerous small nerve endings are found deep within the sinus tarsi. Strain applied to the nerve endings of the sinus tarsi will stimulate a proprioceptive response and will initiate splinting of adjacent muscles and tendons in an attempt to limit excessive motion of the subtalar joint.

Causes

Sinus tarsi syndrome usually occurs following an ankle sprain or due to the repetitive strain associated with walking or running on an excessively pronated (flat) foot. Sprains or repetitive strain cause thickening of the joint capsule by scar tissue deposition. This thickening of the joint capsule makes it susceptible to pinching between the bones in the ankle. Once it gets pinched it becomes inflamed and is more likely to get pinched again.

Shop No. P16, NorthPoint, 100 Miller St. North Sydney. NSW – 2060

T – (02) 99222212 F – (02) 99225577 W: www.physio4all.com.au

E: info@physio4all.com.au

Steve Felsher – Principal Physiotherapist Corey Iskenderian – Physiotherapist

ABN: 77 548 297 578

PHYSIO4ALL

revitalise – bounce – be healthy

Biomechanics

- History of trauma to the subtalar joint, such as an ankle sprain. If an ankle inversion sprain is not treated or rehabilitated properly the ankle becomes unstable, resulting in more ankle sprains and occasionally a feeling of unsteadiness when walking on uneven surfaces. Furthermore, the natural healing process of an ankle sprain may result in thickening of the joint capsule which then predisposes to developing a sinus tarsi syndrome.
- Compression of the tissues within the sinus tarsi occurs as the foot pronates (rolls inwards). Pronation significantly increases pressure within the sinus tarsi.
- Often patients who experience sinus tarsi syndrome also suffer from pathological flatfeet.
- Sinus tarsi syndrome may also be due to chronic inflammatory conditions of the subtalar joint. Chronic inflammatory tissue can result from arthritis or cyst formation within the sinus tarsi or adjacent subtalar joint.
- The onset of sinus tarsi syndrome usually occurs in the second or third decade of life.

Symptoms

- Pain along the top and/or outside of the foot and ankle.
- Sharp pinching sensation.
- Pain reproduced when foot is dorsiflexed (toes pulled closer to shin), such as when walking up stairs.
- Pain that increases with time on the feet.
- Pain that is relieved by rest.
- Patients with sinus tarsi syndrome commonly complain of hindfoot instability while walking on uneven ground
- Tarsal pain that increases when the foot is forced inwards.

Diagnosis

- Direct palpation of the sinus tarsi.
- Range of motion of the subtalar joint.
- An injection of local anesthesia into the sinus tarsi is a common tool used to block the nerve sensation of the sinus tarsi. If pain relief is achieved following injection, the diagnosis of sinus tarsi syndrome is made.
- X-rays do not provide information specific to sinus tarsi syndrome, but are necessary to rule out fractures of the talus or calcaneus. Also, x-rays can be used to evaluate the integrity of the subtalar joint and rule out arthritis. MRI's can be useful in cases of sinus tarsi syndrome and can identify inflamed tissue within the canalis tarsi.

Shop No. P16, NorthPoint, 100 Miller St. North Sydney. NSW – 2060

T – (02) 99222212 F – (02) 99225577 W: www.physio4all.com.au

E: info@physio4all.com.au

Steve Felsher – Principal Physiotherapist Corey Iskenderian – Physiotherapist

ABN: 77 548 297 578

PHYSIO4ALL

revitalise – bounce – be healthy

Physiotherapy Treatment

- Cryotherapy/ice
- Modalities such as electrical stimulation, ice, acupuncture or ultrasound to help reduce pain and swelling.
- Deep tissue friction massage to reduce the formation of scar tissue.
- Joint mobilisation
- Exercise to improve flexibility, strength and balance
- Possible orthotics prescription to control poor foot mechanics.
- Advice on correct footwear
- Ankle bracing/taping
- Activity modification advice

Corticosteroid and anesthetic injection into the sinus tarsi may be appropriate to improve the condition. If cortisone and physiotherapy prove ineffective, ablation (destruction) of the nerve can be accomplished by chemical or thermal means. Surgical debridement of the sinus tarsi can also be used to denervate the sinus tarsi. Arthroscopic methods are available and have proven to be successful. Open evacuation of the contents of the sinus tarsi may also be performed. In severe cases of sinus tarsitis where pain does not respond to surgical evacuation of the sinus, a fusion of the subtalar joint may be indicated.

Differential Diagnosis

- Ankle sprain
- Calcaneal fracture
- Impingement within the ankle
- Intermediate dorsal cutaneous nerve entrapment
- Talar fracture

Shop No. P16, NorthPoint, 100 Miller St. North Sydney. NSW – 2060

T – (02) 99222212 F – (02) 99225577 W: www.physio4all.com.au

E: info@physio4all.com.au

Steve Felsher – Principal Physiotherapist Corey Iskenderian – Physiotherapist

ABN: 77 548 297 578