Tight footwear can cause nerve compression in the forefoot.

If you have this or any other foot related issue, see us at Shepparton Foot Clinic for a caring professional podiatry opinion.

Shepparton Foot Clinic, where we help your 'Feet for Life'

Shepparton Foot Clinic has been providing top quality, friendly and reasonably priced podiatry to Shepparton and the Goulburn Valley since 1983.

Conveniently located in central Shepparton, we have parking on site and easy wheelchair access to our clinic.

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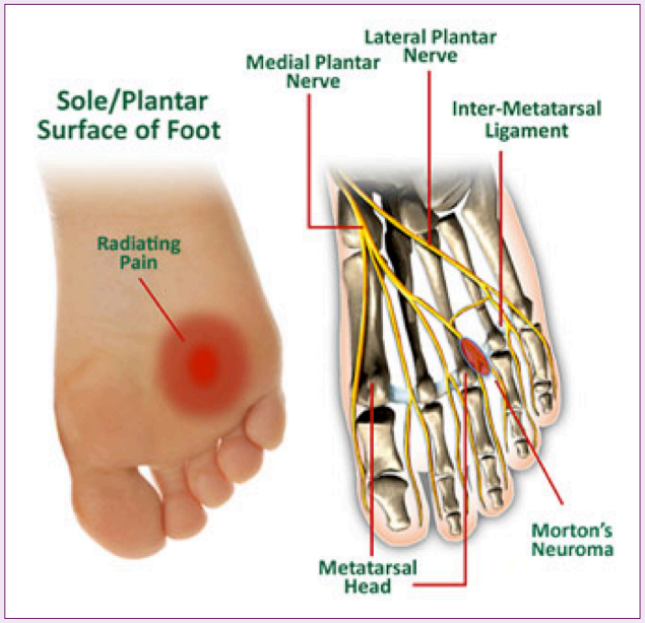
Morton's Neuroma

SHEPPARTON FOOT CLINIC

Morton's neuroma *(also known as Morton's metatarsalgia and interdigital neuroma)* is a benign thickening of a nerve in the forefoot most commonly between 2nd–3rd and 3rd–4th metatarsals which results in the entrapment of the affected nerve. The main symptoms are pain and/or numbness, sometimes relieved by removing footwear.



The entrapment of the plantar nerve is due either to compression between the metatarsal heads or as it passes under the transverse metatarsal ligament. The condition was named by Thomas Morton in the late nineteenth century and although it is labeled a "neuroma", it is not a true tumor, but rather a perineural fibroma (fibrous tissue formation around nerve tissue).

Symptoms and signs

Symptoms include: pain on weight bearing, frequently after only a short time. The nature of the pain varies widely among individuals and is usually effected by compressive shoe styles. Some people experience shooting pain affecting the contiguous halves of two toes. Others describe a feeling like having a pebble in their shoe or walking on razor blades. Burning, numbness, and paresthesia may also be experienced.

In most cases there are no obvious deformities or signs of inflammation, or limitation of movement. Direct pressure between the metatarsal heads will usually replicate the symptoms, as will compression of the forefoot between the finger and thumb.

Differential diagnosis:

There are several other causes of pain in the forefoot which may be mistaken for a neuroma. Such as:

- Capsulitis or Plantar Plate inflammation. This is inflammation of ligaments that attach the phalanx (bone of the toe) to the metatarsal bone. Swelling from this condition can put pressure on an otherwise healthy nerve and give neuroma-type symptoms.
- Intermetatarsal bursitis between the third and fourth metatarsal bones will also give neuroma-type symptoms due to pressure on the nerve.
- Freiberg's disease, which is i vascular injury of the 2nd metatarsal head, most commonly in young women, causes pain on weight bearing or compression.
- Stress fractures occur most commonly in the forefoot with pain being more toward the top of the foot.

Imaging

A neuroma is a soft tissue abnormality and therefore will not be seen on standard X-rays. Ultrasound (sonography) usually accurately demonstrates thickening of of greater than 3mm of the interdigital nerve and is diagnostic of a Morton's neuroma. A neuroma typically occurs at the level of the intermetatarsal ligament and frequently an intermetatarsal bursitis coexists with the neuroma.

Ultrasound also has the advantage of determining which may be the source of the pain by applying direct pressure with the probe. Further to this, ultrasound can be used to guide treatment such as cortisone injections into the webspace, as well as alcohol ablation of the nerve.

Treatment

A podiatrist is the best professional to correctly diagnose and treat Morton's Neuroma.

Orthotics and corticosteroid injections are widely used conservative treatments for Morton's neuroma. In addition to traditional orthotic arch supports, a small pad may be positioned under the space between the two affected metatarsals, immediately behind the bone ends. This pad helps to splay the metatarsal bones and create more space for the nerve so as to relieve pressure and irritation.

Corticosteroid injections can relieve inflammation in some patients and help to end the symptoms. For some patients, however, the inflammation and pain recur after some weeks or months, and corticosteroids can only be used a limited number of times because they cause progressive degeneration of ligamentous and tendinous tissues.

Sclerosing alcohol injections are an increasingly available treatment alternative if the above management approaches fail. Dilute alcohol (4%) is injected directly into the area of the neuroma, causing toxicity to the fibrous nerve tissue. Frequently, treatment must be performed 2–4 times, with 1–3 weeks between interventions. An 60-80% success rate has been achieved in clinical studies, equal to or exceeding the success rate for surgical neurectomy with fewer risks and less significant recovery.

Radio Frequency Ablation is also used in the treatment of Morton's Neuroma. The outcomes appear to be equally or more reliable than alcohol injections especially if the procedure is done under ultrasound guidance.

If such interventions fail, patients are commonly offered surgery known as neurectomy, which involves removing the affected piece of nerve tissue. Postoperative scar tissue formation (known as stump neuroma) can occur in approximately 20%-30% of cases, causing a return of neuroma symptoms.