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## **Neuroma**

### **What is a Neuroma?**

A neuroma is a thickening of nerve tissue that may develop in various parts of the body. The most common neuroma in the foot is an intermetatarsal neuroma, which occurs at the base of the third and fourth toes (usually women) or the base of the second and third toes (usually men). Neuromas may also occur in other locations in the foot. The thickening, or enlargement, of the nerve that defines a neuroma is the result of compression and irritation of the nerve. This compression creates swelling of the nerve, eventually leading to permanent nerve damage.

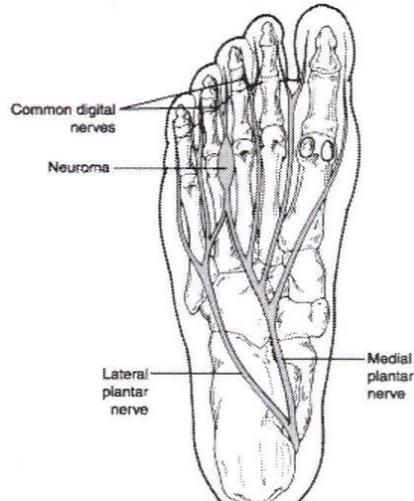
### **Symptoms of a Morton's Neuroma**

If you have a neuroma, you will probably have one or more of these symptoms where the nerve damage is occurring:

- ❖ Tingling, burning, or numbness
- ❖ Pain
- ❖ A feeling that something is inside the ball of the foot, or that there's a rise in the shoe or a sock is bunched up

### **What causes a Neuroma?**

Anything that causes compression or irritation of the nerve can lead to the development of a neuroma. One of the most common offenders is wearing shoes that have a tapered toe box, or high heeled shoes that cause the toes to be forced into the toe box. People with certain foot deformities i.e. bunions, hammertoes.



Flatfeet, or more flexible feet – are at higher risk for developing a neuroma. Other potential causes are activities that involve repetitive irritation to the ball of the foot, such as running or racquet sports. An injury or other type of trauma to the area may also lead to a neuroma.

## Diagnosis

To arrive at a diagnosis, the doctor will obtain a thorough history of your symptoms and examine your foot. During the physical examination, the doctor attempts to reproduce your symptoms by manipulating your foot. Other tests may be performed. Early diagnosis of a neuroma greatly lessens the need for more invasive treatments and may avoid surgery. Often a diagnostic/therapeutic injection is given to secure the diagnosis and guide the doctor in a successful treatment path for you.

## Treatment

In developing a treatment plan, your doctor will first determine how long you've had the neuroma and evaluate its stage of development. Treatment approaches vary according to the severity of the problem. For mild to moderate cases of neuroma, treatment options include:

- ✓ *Orthotic devices.* Custom orthotic devices provided by your podiatric surgeon provide the support needed to reduce pressure and compression on the nerve.
- ✓ *Activity modifications.* Activities that put repetitive pressure on the neuroma should be avoided until the condition improves.
- ✓ *Changes in shoe wear.* It's important to wear shoes with a wide toe box and avoid narrow-toed shoes or shoes with high heels.
- ✓ *Steroid injections.* Often used as a diagnosis tool, but if relief of symptoms is long lasting, then steroid injections can become the treatment.
- ✓ *Sclerosing injections.* This series of 5-7 injections is used to shrink and deaden the painful neuroma.

## When is surgery needed?

Surgery may be considered in patients who have not received adequate relief from other treatments. Generally, there are two surgical approaches to treating a neuroma the affected nerve is either removed or released. Your podiatric surgeon will determine which approach is best for your condition. Regardless of whether you've undergone surgical or nonsurgical treatment, your doctor will recommend long-term measures to help keep your symptoms from returning. These include appropriate footwear and modification of activities that cause repetitive pressure on the foot.

