

## You've Got Some Nerve

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Have you ever experienced a strange sensation in the ball of your foot like two or three toes have fallen asleep? Or perhaps it felt like the sock was bunched up under the ball of your foot, but the seam was straight and nothing looked out of order? Then again maybe you've noticed a sharp, shooting pain that lasts for a few seconds, but is very intense, sometimes strong enough to make you stop in your tracks? Or it could be such that your foot feels "jumpy" when you're trying to sleep?

Each of these can be signs of a condition known as **Morton's neuroma**. While the name may sound like it is a tumor, it is actually more similar to carpal tunnel syndrome. It involves a nerve that becomes entrapped between two metatarsal bones (the long bones behind your toes that form the ball of the foot) and the ligament that attaches to these bones. The most frequent combination of toes involved are the third and fourth followed by the second and third. Usually, this condition is caused by the mechanics of the foot, where there is usually a tendency for a person to overpronate (the foot tends to flatten excessively when walking). The condition is often made worse by wearing shoes that are too tight or ill-fitting; standing on cement for prolonged periods of time; certain types of exercise, especially if wearing the wrong shoes; and on occasion trauma or systemic conditions.

The symptoms of a neuroma can mimic other conditions, including arthritis, metatarsalgia (pain of the metatarsal bone), capsulitis (localized inflammation of a joint), or a fracture. There are times when a person may be diagnosed with neuropathy, when in fact it is a localized swelling or

entrapment of a single nerve (neuroma). It is possible, though, to have both a neuroma and peripheral neuropathy.

A **Morton's neuroma** can be treated several different ways from conservative to surgical. In the early stages, the neuroma often responds to a change in shoes or shoe inserts called orthotics (either prefabricated or custom-made depending on the foot structure). Physical therapy is frequently prescribed, as are antiinflammatories like Motrin or Naprosyn. A cortisone injection may be given for the condition if the previous treatments fail to provide relief or if the neuroma has been present for more than several months. Sclerosing injection have also been employed in the treatment of this condition, which is a way of deadening the nerve permanently. Surgery may be necessary for the neuromas that do not respond to conservative care or that measure excessively large (a diagnostic ultrasound can be used to measure the approximate diameter of the damaged nerve).

The surgical option of choice for many years has been to excise (remove) the damaged section of the nerve. This leaves the affected area of the foot with a numb sensation, which was most often preferable to the pain. Over the last several years' new technological advances have been made, which have lead to new surgical treatments. The two most common involve minimally invasive surgery to release the transverse metatarsal ligament (the tissue that attaches the metatarsal bones and constricts the nerve). These procedures are based on the carpal tunnel surgery release principles in that by releasing the ligament, pressure is reduced on the nerve, and normal sensation can return

This technique can be done either with an

endoscope, where two small incisions are made and the ligament can be visualized (known as E.D.I.N. or endoscopic decompression of the interdigital nerve); or it can be done with the KobyGard™ System (M.I.N.D. or minimally invasive nerve decompression) which enables the surgeon to isolate the ligament before releasing it. Most people are back in a gym shoe or walking shoe within one to two weeks. Both of these techniques are providing patients with good relief of symptoms, though it is still necessary in some cases to remove the involved section of nerve.

Chronic nerve pain in the foot can be annoying at best and near-crippling at worst. It is most important to first get an accurate diagnosis, begin the appropriate conservative treatment, and know that if the pain persists that surgical options are available that just may provide the relief you are seeking.

*Disclaimer: Material presented is intended for information purposes only and is not intended as a substitute for medical care. If you are having pain or symptoms, please see your podiatrist or primary health care provider.*