

Morton's Neuroma

A Compressed Nerve Between the Toes

What is it?

A Morton's Neuroma is a common foot problem consisting of a benign tumor-like enlargement of a nerve behind and between two of the lesser toes. It is usually located between the third and fourth toes, occasionally between the second and third. This condition is not a true tumor but rather a thickening of the nerve "skin" due to repetitive irritation.

Symptoms of a Morton's Neuroma include sharp pain, burning sensation and even a lack of feeling in the area. It is usually worsened by walking and pressure on the forefoot. This is a soft tissue deformity and will not show up on x-ray. Diagnosis is made by eliciting pain while pinching soft tissue between the toes. You may also notice that you can see an increased gap or space between your toes. Moving your toes in certain directions may also cause a clicking sensation as the enlarged nerve slides under a nearby ligament.

How did I get it?

A neuroma is formed by irritation and rubbing of the nerve, similar to the way a callus is formed on your skin from excessive rubbing or pressure. The nerve "skin" gradually thickens to protect itself, forming a benign tumor. When the arch of your foot collapses, it causes excess force to shift away from the big toe and onto the smaller bones of your forefoot. These smaller bones are not designed to handle the loads, so the excess force tends to break down the tissues under them, including the nerves running between them to the toes. As the nerve thickens to protect itself, it occupies more space and is more easily rubbed. Eventually, the nerve gets so big that it is sensitive to every step and it can even spread the toes (called "the daylight sign" since you can see light between your toes, as pictured above).

Shoewear that is too tight in the toe area, high heels that place additional pressure on your forefoot, and an increase in activity are also thought to



exacerbate the pain of a Morton's Neuroma.

How is it treated?

As with most foot problems there are two main concepts in the treatment of a Morton's Neuroma: 1) reduce the symptoms, and 2) address the underlying cause.

Injections: Cortisone can be injected into the area to control inflammation and pain. This may be helpful in reducing the pain temporarily but does not address the cause of your symptoms. Overuse of injected steroids can result in side effects such as weight gain and increased blood pressure and can interfere with proper healing, which is why patients only receive a limited number of injections.

Surgery: In cases that do not respond to conservative measures, your doctor may recommend surgery. The surgery is thought to be very successful in reducing the pain of a Morton's Neuroma but is a last resort as it comes with risks. The surgery involves the removal of both the tumor and some of your nerve. This often causes permanent numbness in the affected toes. The nerve will grow back slowly over time though its new shape and size may make it more susceptible to the same irritation that caused the original problem. If the underlying cause of the original problem is not

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treated, the nerve will become a "stump neuroma" which is often more painful than the first one.

Foot Orthotics: The right custom made orthotics will address your pain by correcting the cause of your foot dysfunction. *Sole Supports™* are uniquely designed to support and restore full arch function in your feet. This also restores proper weight distribution over the big toe and removes the abnormal pressures causing your nerve to thicken. The nerve can then heal and shrink back to normal size. It is important to note that, as with most conditions, attacking the problem early enough is critical to avoid the need for surgery. Should surgery eventually be necessary, though, use of *Sole Supports™* immediately after surgery can help insure that the tumor does not come back.

What can I expect from treatment?

With a proper diagnosis, and a well-rounded treatment plan based on effective orthotics, the prognosis is excellent. Over 90% of cases will respond favorably to proper orthotic management if addressed early enough.

This handout provides a general overview on this topic and may not apply to everyone. To find out if this hand-out applies to you and to get more information on this subject, talk to your health care provider.



With flattened arches, the large ball of the foot behind the big toe takes a holiday -it can't take its normal share of the load. The lesser balls are forced to take up the slack and grind unnaturally into the ground. The ligaments between the bones (shown above in lavender) then transmit the extra pressure to the underlying nerve. The nerve enlarges and becomes even more sensitive to pressure. Restoring the arch restores normal function, relieving the abnormal pressure.



This video demonstrates how the repetitive splay of the forefoot during walking pulls a ligament taut, pressuring the underlying nerve. The nerve gradually expands to occupy more space between the toes.