CONDITION

Morton neuroma

Morton neuroma is a painful thickening around a nerve in the ball of the foot, usually between the third and fourth toes.

WHAT IT IS
Thickened, irritated nerve tissue in the forefoot

BODY SYSTEM
Nerves and feet

MAIN SYMPTOMS
Burning forefoot pain, tingling, numb toes, pebble sensation

WHAT CAUSES IT
Repeated pressure and irritation around a toe nerve

HOW IT IS DIAGNOSED
Foot examination; ultrasound or MRI when needed

MAIN TREATMENT
Footwear changes, pressure relief, injections, or surgery

CAN IT BE CURED?
Sometimes - symptoms resolve after pressure is relieved

IS IT AN EMERGENCY?
No - usually managed through routine care

LONG-TERM OUTLOOK
Symptoms often improve, but recurrence is possible

Overview

Morton neuroma is a painful foot condition caused by thickening and irritation of tissue around a nerve. It develops in the ball of the foot, where nerves travel toward the toes.

It most often affects the space between the third and fourth toes. Less often, it develops between the second and third toes. Although it is called a "neuroma," it is not usually a nerve tumor and is not cancer.

Pressure on the nerve can cause burning pain, tingling, or numbness. Some people describe feeling as though they are standing on a pebble, a fold in their sock, or a small lump. There may be no lump that you can see or feel from the outside.

Symptoms may interfere with walking, exercise, work, or wearing certain shoes. Treatment

aims to reduce pressure on the nerve and settle the irritation. Many people can manage the condition without surgery, although symptoms sometimes persist or return.

Symptoms

Morton neuroma usually causes pain in the ball of the foot rather than the heel or arch. The pain may spread into the nearby toes.

Common symptoms include:

Symptoms often become worse while walking, running, or wearing narrow shoes or high heels. Removing the shoe, resting, or rubbing the foot may provide temporary relief.

The pain may start as an occasional problem and become more frequent over time. Some people have symptom-free periods between flare-ups. Morton neuroma does not usually cause visible swelling, skin redness, or a large external lump.

Similar symptoms can come from other foot problems. These include stress fractures, arthritis, inflamed joints, injury to the tissues supporting a toe, or pressure on a nerve elsewhere. Numbness affecting a larger part of the foot may have another cause.

- Burning, shooting, or aching pain in the forefoot
- Tingling or numbness in two nearby toes
- A feeling of standing on a pebble or bunched-up sock
- Pain that worsens in tight shoes or during forefoot-loading activities

Causes and risk factors

A nerve traveling toward the toes passes beneath a strong band of tissue in the forefoot. Repeated squeezing or irritation can cause tissue around that nerve to become thickened and painful. This is sometimes called perineural fibrosis, meaning scar-like tissue around a nerve.

There is not always one clear cause. Several types of pressure may contribute.

Shoes with a narrow toe box squeeze the toes together. High heels shift more body weight onto the ball of the foot. Both can increase pressure around the nerve.

Running and other activities that repeatedly load the forefoot may aggravate symptoms. Sports that use tight footwear, such as skiing or climbing, may also increase pressure in this area.

Foot shape and other foot conditions can affect how weight moves across the forefoot.

Examples include bunions, hammer toes, flat feet, high arches, and reduced movement in nearby joints. Having one of these features does not mean that you will develop Morton neuroma.

Morton neuroma is not generally considered an inherited condition. It is also not caused by an infection and cannot spread to another person.

Diagnosis

A healthcare professional will usually begin by asking where the pain occurs, what it feels like, and which shoes or activities bring it on. They will examine the foot and may press between the long bones leading to the toes. Squeezing the forefoot may reproduce the pain or cause a click.

The history and foot examination are often enough to make a likely diagnosis. No single test is perfect, and nerve thickening can sometimes appear on a scan in people who have no symptoms. Scan findings therefore need to match the location and pattern of your pain.

An X-ray cannot show the neuroma itself, but it may help identify arthritis, a stress injury, or another bone problem.

Ultrasound can show thickened tissue around the nerve and may be used to guide an injection. MRI can provide detailed images of the soft tissues and bones. It is generally considered when the diagnosis remains uncertain, symptoms are unusual, or another condition needs to be excluded.

Treatment and management

Treatment usually begins by reducing pressure on the painful area. Shoes with a wide, deep toe box allow the toes to spread more naturally. A lower heel reduces the amount of weight placed on the forefoot. Shoes should also have enough cushioning and a stable sole.

A metatarsal pad or foot insert may help redistribute pressure. It normally supports the foot just behind the painful area rather than pressing directly on it. A podiatrist or another foot specialist can help with its position and fit.

Temporarily reducing activities that trigger pain may allow the irritation to settle. This does not always mean stopping all exercise. Lower-impact activities may be more comfortable while symptoms are active.

Over-the-counter pain medicines may provide short-term relief, but they do not remove pressure from the nerve. These medicines are not suitable for everyone. A pharmacist or

healthcare professional can help you check whether they are safe with your health conditions and other medicines.

If symptoms continue, a clinician may discuss an injection around the affected nerve. Corticosteroid injections aim to reduce inflammation and pain. Relief may be temporary, and repeated injections can have local side effects, including changes to the fat padding or skin. Other types of injection are offered in some settings, but evidence for their long-term benefit is less certain.

Surgery may be considered when ongoing pain limits daily life and simpler treatments have not helped. One approach releases the tight tissues around the nerve. Another removes the affected part of the nerve, which is called a neurectomy.

Removing the nerve usually leaves permanent numbness between the affected toes. Surgery can reduce pain, but it does not guarantee that symptoms will disappear. Recovery involves wound healing, temporary activity limits, and a gradual return to regular footwear. Swelling may take longer to settle than the skin incision takes to heal.

Complications

Persistent pain may change the way you walk. This can place extra strain on other parts of the foot or leg and may reduce your ability to exercise or complete daily activities.

Pain can return after treatment if pressure on the forefoot continues. It may also return after surgery. One possible reason is a painful thickening at the cut end of the nerve, sometimes called a stump neuroma.

Other possible surgical complications include infection, scar sensitivity, ongoing pain, and permanent numbness in the nearby toes. These risks should be discussed as part of deciding whether surgery is suitable.

Morton neuroma does not become cancer and does not usually threaten the health of the foot. However, symptoms that do not fit the usual pattern may need assessment for another cause.

Prevention

Morton neuroma cannot always be prevented. Foot shape, nerve position, and the way pressure moves through the forefoot are not fully under your control.

You may be able to reduce pressure around the nerve by choosing shoes with enough room for your toes and avoiding long periods in shoes that squeeze the forefoot. Gradually increasing

running or other weight-bearing activity may help your feet adapt to changing loads.

If you have already had Morton neuroma, continuing to use comfortable footwear or pressure-relieving inserts may reduce flare-ups. These steps lower mechanical pressure but cannot guarantee that symptoms will not return.

Living with it and what to expect

Morton neuroma may cause occasional flare-ups or more persistent discomfort. Symptoms can change with footwear, activity level, and the amount of time spent standing or walking.

Many people improve after changing shoes, reducing pressure, and adjusting activities. Improvement may take time because irritated nerve tissue can remain sensitive even after the original pressure has been reduced.

If symptoms do not settle, injections or surgery may be considered. The choice is usually based on how much the pain affects your life, whether the diagnosis is clear, and how you feel about the possible benefits and limitations of each treatment.

After successful treatment, most usual activities may be possible. Some people continue to avoid narrow shoes or activities that repeatedly trigger forefoot pain. Others have lingering numbness or occasional discomfort.

Keep track of which shoes and activities bring on symptoms. Seek routine follow-up if pain is becoming more frequent, limiting how far you can walk, or returning after treatment. A review can check whether the diagnosis still fits and whether another management option would be helpful.

When to get medical help

Arrange a routine appointment if forefoot pain lasts for more than a short period, keeps returning, or is interfering with walking, work, sleep, or exercise. You should also seek assessment if numbness is persistent, spreading, or affecting more than two nearby toes.

Get prompt medical advice if you cannot put weight on the foot, especially after an injury. A fracture or another injury may need to be ruled out.

A red, hot, rapidly swelling foot is not typical of Morton neuroma. Seek urgent assessment if this occurs, particularly if you also have a fever, a wound, or feel unwell.

Seek emergency care if the foot or toes suddenly become pale, blue, or cold, or if you develop severe pain with loss of feeling or movement. These signs may indicate a problem with blood

flow or a serious injury rather than Morton neuroma.

If you have diabetes, reduced circulation, or reduced feeling in your feet, seek help earlier for new pain, swelling, blisters, or skin damage.

Common questions

Is Morton neuroma a tumor?

Despite its name, Morton neuroma is not usually a true nerve tumor. It is a painful thickening of tissue around an irritated nerve. It is not cancer and does not turn into cancer.

Can Morton neuroma go away on its own?

Mild symptoms may settle when pressure on the nerve is reduced. Wider shoes, lower heels, and changes to aggravating activities may help. Symptoms that keep returning or limit walking should be assessed because another foot condition can feel similar.

What shoes are best for Morton neuroma?

Shoes that have a wide and deep toe box, a low heel, cushioning, and a stable sole are often more comfortable. Your toes should be able to spread without being squeezed. The best fit may differ between activities and foot shapes.

Can I still walk or run with Morton neuroma?

You may be able to continue if the activity does not cause significant or lasting pain. Shorter distances, softer surfaces, different footwear, or temporary lower-impact exercise may help. Continuing through increasing pain can keep the nerve irritated.

Does Morton neuroma always need surgery?

No. Treatment usually begins with footwear changes, pressure-relieving pads or inserts, and activity adjustments. Injections may be considered if these do not provide enough relief. Surgery is generally reserved for persistent symptoms that meaningfully affect daily life.

Will surgery cure Morton neuroma?

Surgery can provide lasting pain relief, but it cannot guarantee a cure. Removing the affected nerve causes permanent numbness between the nearby toes. Pain can occasionally continue or return because of scar tissue or irritation at the remaining nerve end.

Sources

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