NHS
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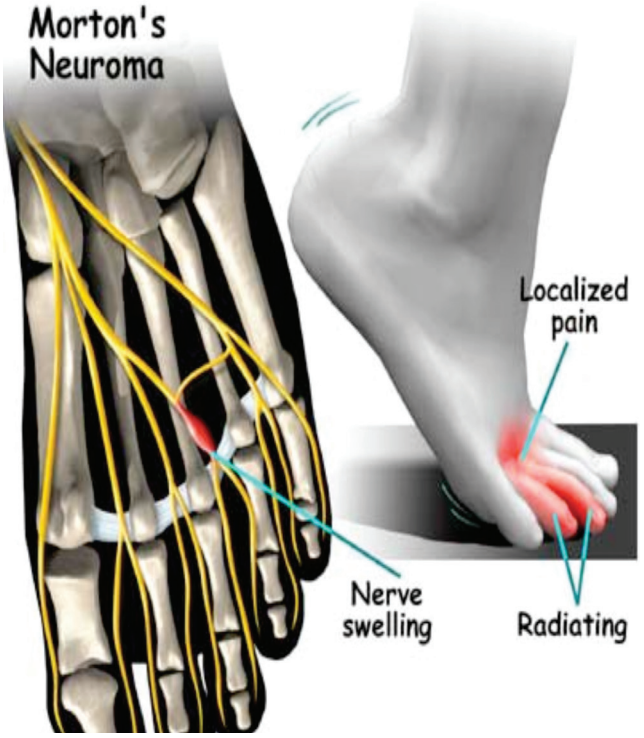
Morton's Neuroma

What is Morton's neuroma?

Morton's neuroma is named after Dr Morton who first described this condition in 1876. It is sometimes called Morton's metatarsalgia or interdigital neuroma.

It is a condition that affects one of the common plantar digital nerves that run between the metatarsal bones in the foot. It most commonly affects the nerve between the third and fourth metatarsal bones, causing pain and numbness in the third and fourth toes. It can also affect the nerve between the second and third metatarsal bones, causing symptoms in the second and third toes.

Morton's neuroma rarely affects the nerve between the first and second, or between the fourth and fifth, metatarsal bones. It tends to affect only one foot. It is rare to get two neuromas at the same time in the same foot.



What causes Morton's neuroma?

The exact cause of Morton's neuroma is not known. However, it is thought to develop as a result of chronic (long-standing) stress and irritation of a plantar digital nerve. There are a number of things that are thought to contribute to this. Some thickening (fibrosis) and swelling may then develop around a part of the nerve. This can look like a neuroma and can lead to compression of the nerve.

The anatomy of the bones of the foot is also thought to contribute to the development of Morton's neuroma. For example, the space between the metatarsals (the long bones of the foot) is narrower between the second and third, and between the third and fourth metatarsals. This means that the nerves that run between these metatarsals are more likely to be compressed and irritated. Wearing narrow shoes can make this compression worse.

Sometimes, other problems can contribute to the compression of the nerve. These include the growth of a fatty lump (called a lipoma) and also the formation of a bursa (a fluid-filled sac that can form around a joint). Also, inflammation in the joints in the foot next to one of the digital nerves can sometimes cause irritation of the nerve and lead to the symptoms of Morton's neuroma.

Who gets Morton's neuroma?

About three-quarters of people with Morton's neuroma are women. It commonly affects people between the ages of 40 and 50 but can affect someone of any age.

Poorly fitting or constricting shoes can contribute to Morton's neuroma. It is more likely in women who wear high-heeled shoes for a number of years or men who are required to wear constrictive shoe gear.

What are the symptoms of Morton's neuroma?

People with Morton's neuroma usually complain of pain that can start in the ball of the foot and shoot into the affected toes. However, some people just have toe pain. There may also be burning and tingling of the toes. The symptoms

are usually felt up the sides of the space between two toes. For example, if the nerve between the third and fourth metatarsal bones is affected, the symptoms will usually be felt up the right-hand side of the fourth toe and up the left-hand side of the third toe. Some people describe the pain that they feel as being like walking on a stone or a marble.

Symptoms can be worse if you wear high-heeled shoes. The pain is relieved by taking your shoe off, resting your foot and massaging the area. You may also experience some numbness between the affected toes. Your affected toes may also appear to be spread apart.

How is Morton's neuroma diagnosed?

Morton's neuroma is usually diagnosed by your Podiatrist/Physician listening to your symptoms and examining your foot. There is usually a click, (Mulder's Click) felt or even heard, which often also reproduces the symptoms, when the forefoot is compressed.

An ultrasound or MRI scan may be performed to confirm the diagnosis. A local anaesthetic injected into the area where you are experiencing pain can also facilitate the diagnosis.

What is the treatment for Morton's neuroma?

Non-surgical treatments:

- **Footwear adjustments** including avoidance of high-heeled and narrow shoes.
- **Steroid or local anaesthetic injections** (or a combination of both) into the affected area of the foot may be needed if the simple footwear changes do not fully relieve symptoms. These can be repeated as required until there is a successful outcome.

Surgery

If these non-surgical measures do not work, surgery is sometimes needed. Surgery normally involves a small incision (cut) being made on the top of the foot between the affected toes.

The surgeon will then either create more space around the affected nerve (known as nerve decompression) or will resect (cut out) the affected nerve. If the nerve is resected (cut out), there will be some permanent numbness of the skin between the affected toes.

What is the outlook (prognosis) for Morton's neuroma?

About a quarter of people do not require any surgery for Morton's neuroma and their symptoms can be controlled with footwear modification and steroid/local anaesthetic or alcohol injections.

Of those who choose to have surgery, about three-quarters have good results with relief of their symptoms.

Recurrent or persisting symptoms can occur after surgery. Sometimes, decompression of the nerve may have been incomplete or the nerve may just remain 'irritable'. In those who have had resection of the nerve (neurectomy), a recurrent or 'stump' neuroma may develop in any nerve tissue that was left behind. This can sometimes be more painful than the original condition.

Can Morton's neuroma be prevented?

Ensuring that shoes are well fitted, low-heeled and with a wide toe area may help to prevent Morton's neuroma.

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If you would like to talk to someone outside the service contact the **Patient Experience Team** on **0113 220 8585**, Monday to Friday 9.30am to 4.30pm or email **lch.pet@nhs.net**

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