

Morton's neuroma excision surgery

Information for patients

What are the benefits of Morton's neuroma excision surgery?

The potential **benefits** from surgery are:

- Reduction in pain

An improvement in pain may also have a positive impact on your mobility and function.

What are the risks?

There are no guarantees regarding surgery. The success rate of surgery is about 60-70%. Not all patients are satisfied with the outcome and a small number of patients are worse off (e.g. increased pain, altered sensation in toes/foot, negative impact on activities). There are specific risks with this type of operation and the outcomes are not always as expected. These risks have been detailed within this document and it is important that you read over these carefully before requesting an operation.

There is a lengthy recovery following this type of operation. It will be three months before you return to usual activities. You will need to wear a special shoe for two weeks, you will be off work for two to four weeks, and you will be unable to drive for about four weeks. Feedback from patients tells us it can be as much as one year after surgery before things settle down fully.

Lastly, it is important for you to know that neuroma symptoms may return despite surgery.

Are there alternatives to the surgery?

If you decide not to have an operation, you can manage your symptoms by altering your activity levels, using painkillers, and changing footwear to extra width, training shoes or walking shoes with a sturdy sole, possibly with a cushion-pad or in-shoe foot support. You should **avoid high heels and shoes with a narrow toe**.

Can I do nothing?

Surgery is **not** essential. Doing **nothing** is an option. Surgery can be done at anytime and we can continue to monitor your symptoms.

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Introduction to this guide

As a patient you have the right to make choices about your own health and care. This booklet provides information on what to expect when you have Morton's neuroma excision surgery. The information will help you to decide whether the planned treatment is the best option for you at this time. You will get the best outcomes by taking an active role in your care, by talking with your healthcare professional and planning ahead. Every individual is unique and this booklet provides general information. It is a guide, so that you can have an informed discussion with your surgical team. You, your family and friends should read this booklet carefully before surgery and refer to it during your healing process. You should consider the options available to you, including non-surgical management. Ask your surgical team to explain anything you do not understand. This will help if you are feeling a little worried.

What is Morton's neuroma?

The exact cause of Morton's neuroma is not known. It is thought to develop as a result of long-standing (chronic) stress and irritation of the nerve to your toes. This may be due to the nerve being squashed (compressed), rubbed, or stretched. Some thickening (fibrosis) and swelling may then develop around a part of the nerve. We know that wearing narrow shoes, thin soled or flimsy shoes make the pain worse.

Other factors such as tight muscles at the back of your leg (Triceps surae) can reduce the ability of the foot to bend upwards at the ankle. This leads to increased pressure on the front (ball) of your foot and can give rise to neuroma symptoms. This is best treated with physiotherapy to stretch the muscles, but sometimes surgery is necessary. Sometimes the neuroma occurs with other problems in the foot such as a bunion of the big toe joint, arthritis of the big toe joint or deformity of the small toes. These problems may need to be addressed before the neuroma symptoms improve. Sometimes Morton's neuroma symptoms occur with other medical conditions such as rheumatoid arthritis, diabetes or conditions affecting the nerves (neuropathy).

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 (middle toes). Some people describe the pain that they feel as being like walking on a stone or a marble. Symptoms can be made worse if you wear high-heeled shoes. You may also experience some numbness between the affected toes.

Diagram showing swelling on nerve to the 3rd and 4th toes



How is Morton's neuroma diagnosed?

Morton's neuroma is usually diagnosed by your healthcare professional listening to your symptoms and examining your foot. Sometimes an **ultrasound scan** is ordered to confirm the diagnosis but this is not always necessary. Such tests are not always accurate and diagnosis is best **made on clinical grounds**. Occasionally other tests, such as blood tests or an X-ray or MRI may be needed to rule out other conditions.

What is the treatment for Morton's neuroma?

1. Non-surgical treatments

Choosing the right footwear is the key to making the Morton's neuroma pain better. If you have a Morton's neuroma you should avoid high-heeled and narrow or pointed-toe shoes. Also avoid shoes with thin soles. Wear comfortable, wide-fitting shoes which don't squash your feet. Training shoes are helpful and a pair of **sturdy walking shoes** are ideal. **Changing your shoes may be all you have to do to deal with the pain of Morton's neuroma.**

Pads inside the shoes are often helpful. Shoe inserts (also called orthoses) for this condition can be bought in pharmacies over-the-counter. To protect the nerve, obtain a metatarsal (a soft pad which sits below the ball of your foot). It may be better to have an insole fitted by a trained foot specialist (podiatrist or orthotist).

Steroid injections are effective in improving the pain of Morton's neuroma. However the expected benefit is only temporary and does not usually bring about a cure. Steroid injections can cause adverse side effects if given too often. Usually you are limited to one or two injections.

2. Surgical treatments

Surgery may be needed if the above measures have been tried and failed. The decision to go ahead with surgery is usually based on the following symptoms:

- Failure of non surgical treatments
- The pain is worsening
- There is significant disruption to your lifestyle or activities

Referral for neuroma excision surgery is needed only for pain and is **not** performed for cosmetic purposes i.e. to be able to get fashion shoes on.

Surgery is not carried out to address numbness in the foot. Surgery will not make numbness better but it will make it worse.

The procedure

The procedure involves a small cut (incision) made on the top of your foot between the affected toes. The nerve is then removed. Usually, the specimen is then sent to the pathology lab to confirm the diagnosis. Then, the skin incision is closed with sutures. The toe is covered with a dressing and a bandage and you may be given a sandal to wear to accommodate the bulky dressing.

Some people are diagnosed with two neuromas in the same foot. We would **prefer not to remove two neuromas** as this leaves permanent numbness in the middle toes which is not ideal. Sometimes this numbness is more widespread and doesn't just affect the toes- it can extend into the ball of your foot. This can be associated with some lasting hypersensitivity and discomfort in the area.

Anaesthetic

The operation is usually a day-case procedure. It is usually carried out under a general anaesthetic (you are asleep). You will receive an appointment to attend the pre-operative assessment a week or two before your operation date. Occasionally, patients prefer to have the surgery performed under a local anaesthetic. This will be discussed with you at the pre-operative assessment clinic (PAC). You will receive more details about your anaesthetic in an information booklet "*You and your anaesthetic*" when you attend the PAC clinic. Further details can be obtained at rcoa.ac.uk/patient-information

Recovery after surgery – the postoperative period

Recovery from surgery can be lengthy and it may be as much as a year, or more, before your post-operation symptoms have settled down completely. Pain and swelling is to be expected for many weeks and months after your operation.

During your recovery period, you will need to limit your normal daily, family, work and driving commitments. You will be able to look after yourself (for example going to the toilet and simple cooking). In agreeing to progress with surgery, you are expected to comply with post-operation instructions. Please follow the advice below for several weeks after your surgery:

- No household chores (cleaning, standing to cook, ironing, etc.)
- No shopping
- No dog walking
- No looking after young children or elderly relatives
- No driving (until 4 weeks after your surgery)
- You should take time off work for at least 4 weeks even if you have a sitting job as you must be able to raise your foot. You should also consider how you will travel to work and whether you will be standing or walking at work. If possible try to work shorter or fewer days or work from home.

You must have a competent adult at home for the first night after your surgery in case you experience any difficulties during the first night. If this is not the case you will need to stay in the hospital overnight. Your foot will be bandaged. You must use the special shoe and the crutches- these will be given to you by the hospital. At home, it is important to raise your foot when sitting and rest over the first few weeks to help the swelling and the pain to settle. You must keep your bandage dry. The bandage should not be changed until your first clinic appointment, about two weeks after your operation. You will be given instructions on the day of your operation in case you have problems.

If needed, you will be given a sick note for your employer.

You will be provided with some pain killers to take home (more information will be given regarding **post-operative instructions** on the day of your operation).

First 2-4 days

This is the worst time for pain but you will be given painkillers to help. You must rest completely for 2-4 days.

You will be able to stand and take weight carefully (using crutches) after the operation, but you must rest, with your feet up (above hip level), as much as possible. You will be able weight bear in the special shoe (see below) but you should restrict your walking to going to the bathroom. A physiotherapist will show you how to use your crutches. You can move about a little more after 3 days.

4 – 14 days after surgery

After about 4 days, your pain should start to improve. You may start to do a little more within pain limits. Pain means you are doing too much.

The dressing must be kept dry. You should avoid using the shower. However, waterproof protectors are useful and are obtainable online. Examples of the type of product available can be seen at limboproducts.co.uk. These are not supplied by us so you will have to purchase them yourself, but they will allow you to shower after your operation. The cost is about £15 plus postage.

At two weeks after surgery

You will have an appointment with the practice nurse at your local GP surgery to check on the progress of your recovery. The bandage will be removed, the wound will be cleaned and any sutures removed (if applicable). A light dressing will be applied to cover your wound. You should no longer need a bandage at this stage. You can now get your foot wet, providing the wound has healed satisfactorily. You should no longer need to use the crutches and you can dispense with the special shoe and try to get back in to a **training shoe** as soon as you feel able to. You can gradually increase your level of activity gently. You will still need to rest between your activities.

Between 2-6 weeks after surgery

- The wound should be healing
- Your foot will still be quite swollen, especially at the end of the day and this is quite normal at this stage
- Your foot will still be quite painful, particularly around the joint and movement will be uncomfortable. Again this is quite normal
- Some redness is to be expected at this stage. Sometimes the colouration comes and goes (for example, it may appear more red after a shower)
- You will need a review appointment at 12 weeks which is normally at the Royal Infirmary of Edinburgh (RIE).
- **Work** - You may return to work **after** 2-4 weeks but may need longer if you have an active job. For certain jobs, this could be an unrealistic expectation
- **Driving** - allow 4 weeks before returning to driving and check with your insurance company
- **Sports** - Whilst normal activity will be resumed, sport should be avoided until 12 weeks after surgery.

Please note

At six weeks following your surgery:

- You will still have some pain in your foot
- You will still have some swelling in your foot
- You will still have some redness
- You will be aware of numbness and strange sensations in your toes and sometimes the ball of your foot
- You will still be putting your weight onto the outside of your foot.

These features are all entirely normal, at this stage, and are to be expected.

Between 6-12 weeks after surgery

You will attend an outpatient clinic at 12 weeks after your surgery. Your foot should continue to improve and begin to feel normal again. There will be less swelling. You will have numbness in your toes. Sport can be considered after 3 months depending on your recovery.

Six to twelve months after surgery

The swelling should now be slight and you should be getting the full benefit of surgery. Your toes will still be numb

Twelve months after surgery

It can take as long as twelve months for post-operative pain and swelling to settle completely. The foot has stopped improving, healing is complete. You will be getting used to the numbness in your toes.

Please note: if a complication arises, such as infection, your recovery may be delayed.

It is expected that, in consenting to proceed with this operation, you agree to comply with the above post-operative instructions.

It is important to be aware that it can take **many months** for you to recover fully from your operation. Post-operative pain and swelling can persist for 6 months or longer after surgery. This may have no adverse consequences for day-to-day activities, but can affect your ability to wear tight shoes, **heels** or fashionable women's shoes.

If you have any concerns following your operation, and you would like to speak to a member of our team, please contact **01506 522 105** (during business hours). In an emergency, contact your GP, NHS 24 (dial 111) or attend your nearest Accident and Emergency.

Example of special shoe to be worn for two weeks after surgery



Risks of Morton's neuroma excision surgery

Complications happen with any operation and Morton's neuroma excision surgery is no exception.

The following list of risks is intended to give you as much information as possible. This will help you to make an informed decision as to whether you wish to go ahead with surgery or not. Please take a few minutes to read over the following list of potential complications. You may also find it helpful to discuss these with friends and family. If there are any items that you are not clear about, or that you don't understand, please discuss these with staff when you attend for your **Pre-Assessment Clinic**.

Some risks are more likely to occur than others. We have tried to give you an indication as to the likelihood of each complication listed, namely: those that are likely to happen, those that happen from time to time, happen only very occasionally and those that are unlikely and very unlikely to happen. The risk of complications following your surgery is increased with pre-existing medical conditions such as: diabetes, peripheral vascular disease, if you are immuno-compromised, if you take immune-suppression medication (e.g. steroids or rheumatoid medication) and if you are a smoker.

Likely to happen

Post-operative pain, swelling, bleeding and bruising

These are to be expected. Pain is the worst over the first 24-48 hours. We will give you painkillers to help with your pain but you must rest and keep your leg elevated and do minimal walking, especially for the first few days. Bleeding can happen, usually in the first day or two and bruising is common. We will give you more information regarding these aspects on the day of your surgery.

Post-operative pain and swelling can persist for some months after your operation. It may be as much as one year, or more, before you fully recover from your operation.

Numbness

This procedure involves removing nerves from your foot. This will leave you with some numbness in your toes which will be permanent. Sometimes the numbness extends into the ball of the foot. This may start as odd sensations in the ball of your foot such as tingling, electric shocks, pins and needles or other strange sensations. These odd sensations should gradually improve however nerves repair very slowly and it may take some time for the sensations to settle. You may be left with some permanent numbness in the ball of your foot.

Can happen from time to time

Infection

Infection is a risk with any surgical procedure and this does happen from time to time with Morton's neuroma excision surgery. The risk of wound infection is about 7%. However, although the risk may be relatively low, when it does occur infection can be extremely serious and the risk of infection should not be taken lightly.

If your wound becomes infected we may prescribe you antibiotics but unfortunately, from time to time, infection can be more invasive and, on occasions, it spreads to the deeper tissues and even bones or joints can become infected (osteomyelitis/septic arthritis). This is much more difficult to treat and may need "stronger" antibiotics for a longer period and sometimes a stay in hospital is needed, often for **intravenous antibiotics** (where the antibiotics are given through a thin plastic tube which is injected into your vein).

Potentially, deep or spreading infection can be **limb or even life threatening** and further surgery may be essential on a **non-elective** basis and this might involve the removal of the infected bone/tissue, which may have long term consequences.

Residual pain

It is possible that you may continue to be troubled with some degree of discomfort in your foot despite the operation (37%). Rarely patients may have increased pain following their operation (8%).

Recurrent neuroma

Unfortunately, despite our best efforts, Morton's neuroma can come back after surgery (20-25%).

Happens only very occasionally

Need for further surgery

Sometimes further surgery is needed (for example: recurrence of the neuroma).

Transfer metatarsalgia (pain in ball of foot)

This operation sometimes leads to loss of fatty padding under the ball of the foot with more prominent bones and a sensation like walking on pebbles. This is usually treated with a soft insole but occasionally persistent symptoms may need further surgery. Further surgery involves altering the alignment ("breaking") of the underlying bones to reduce the pressure and pain.

Alteration to gait

This may lead to problems with other joints or muscular pain

Tender (hypersensitive) scar

Scars can become tender or hypersensitive. If this happens, hopefully it is only temporary and will eventually improve with time. Usually, simple measures can help improve this such as massaging the scar. Only very rarely does this become a lasting problem.

Hypertrophic scarring or keloid scarring

Very occasionally, the scar tissue produced is excessive. This may lead to a reddened and unsightly scar but is not likely to give you any pain. Some people are more likely to develop this problem than others.

Complex regional pain syndrome

Complex regional pain syndrome (CRPS) is caused by damage to, or malfunction of, the nerves, usually after an injury or surgery. CRPS is characterised by prolonged or excessive pain and mild or dramatic changes in skin colour, temperature, and/or swelling in the affected area. There is no cure for CRPS and symptoms can be disabling and long lasting.

Unlikely to happen

Deep Vein Thrombosis (DVT)/Pulmonary Embolism (PE)

A deep vein thrombosis is a blood clot in your leg. If this happens it can be very serious and can be life threatening if the clot moves to your lungs (**pulmonary embolism**). However, it is very unlikely to occur with this procedure and measures will be taken to guard against this happening. If you are at higher risk from DVT, additional measures such as blood thinning medication will be given to you after your operation.

(A further Patient Information Leaflet is available which explains DVTs in more detail).

Very unlikely to happen

Amputation

Severe infection or other complications of surgery may lead to loss of toe(s) or foot or leg. The risk of amputation as a result of your operation is increased with pre-existing medical conditions such as: diabetes, peripheral vascular disease, if you are immuno-compromised, if you take immune-suppression medication (e.g. steroids or rheumatoid medication) and if you are a smoker.

Death

Death may arise as a result of complications of your operation or anaesthetic (such as: blood clots or severe infection). The risk of death as a result of your operation is increased with pre-existing medical conditions such as: heart disease, lung disease and kidney disease.

Patient dissatisfaction

Lastly, there are no guarantees regarding the outcome of Morton's neuroma excision surgery. We will do our utmost to improve your situation, but you should be aware that there is a risk that you may not be satisfied with the outcome of your surgery.

COVID-19

There is good evidence that tells us that there is a greater risk of complications after surgery if you have experienced symptoms of COVID-19. You will be given information about this when you attend the pre-assessment clinic.

The above list has tried to include most complications that potentially may arise as a result of Morton's neuroma excision surgery- however, it is impossible for us to cover all eventualities.

Consent - asking for your consent

We want to involve you in decisions about your care and treatment. If you decide to request an operation, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves. If you would like more information about our consent process, please ask for the "*Giving consent information booklet*".

Operating podiatrist/trainees

Your operation may be carried out by a **Podiatrist**. Podiatrists are **not** registered medical practitioners (medical doctors). The podiatrist is fully capable of performing this procedure to the highest standards and you will receive the same care as provided by a surgeon.

Surgeons/Podiatrists/Trainees

Another surgeon other than the surgeon taking consent may perform the operation. This may be an orthopaedic surgeon or a consultant podiatrist.

Part or all of your operation may be performed by a trainee under supervision. The trainee may be an orthopaedic trainee or a podiatrist trainee. They will have adequate training and supervision.

Frequently asked questions

When will my operation take place?

Unfortunately because of the coronavirus COVID 19 pandemic, it is very difficult to say with any certainty when your operation will take place. It may be as much as six months- however it may be longer if further restrictions are needed. We will endeavour to do your operation as soon as possible.

Where will my operation take place?

Your operation will take place in the Day Surgery Unit (DSU) at St John's Hospital in Livingston.

What is the recovery time?

Recovery following Morton's neuroma excision surgery can be lengthy and you need to be prepared for this. You must wear a special shoe for two to four weeks following your operation. You will then spend the next few weeks getting back to your usual activities. However pain, swelling and reduced function are to be expected for many weeks and months after your operation. It can take up to one year or more before your post-operative symptoms have settled completely.

Will I have a general anaesthetic or a local anaesthetic?

Your operation can be done under a general anaesthetic which means you are asleep for your operation or local anaesthetic where we numb your leg with a spinal anaesthetic or numb your foot with an "ankle block". You will have an opportunity to discuss this with the anaesthetist on the day of your operation.

How long will my operation take?

Typically your operation will take about 30 minutes. It will take longer if combined with other operations.

Will I be given a plaster cast or special shoe to walk in?

You will be given a special shoe immediately following your operation and you must wear this at all times, while the bandage is on for the next two weeks. You can take it off in bed and to shower. There is no need for a plaster cast.

Will I need crutches?

You may need crutches depending on your fitness and ability to mobilise after your surgery. If necessary, on the day of your operation, you will see the physiotherapist who will teach you how to walk in the special shoes with the crutches. This will involve walking up and down stairs with the crutches.

How long will I be off work?

You will need to be off work for about two to four weeks depending on the type of work you do. You will be off for longer if you do a manual job or spend a lot of time on your feet at work, and you will be off for less for more sedentary work or if you are able to work from home. Depending on circumstances, your employer may **not** allow you to return to work wearing the special shoe for health and safety reasons.

Will I receive a "sick note"?

If needed, a "sick note" (or "fit note") will be issued on the day of your operation.

When can I drive?

You cannot drive for about four weeks and you cannot drive with the special shoe on. You have to be safe to drive and you have to take responsibility for this. You have to be able to do an **emergency stop**. You should contact your motor insurance company to inform them you have had an operation before you start driving again.

If your left foot is being operated on and you have an automatic car, you should be able to drive quite soon after your operation- you should check this with your insurance company.

When can I fly after my operation?

There is a slightly increased risk of blood clots when flying soon after your operation. It is sensible to allow about six weeks before flying. However, if your flight is short (an hour or two), it should be safe to fly. Try to keep mobile during your flight, wear TED (Thrombo-Embolus Deterrent) stockings and be wary of pain and swelling in your calves. Seek medical attention if you are concerned. If you are going abroad, bear in mind that you may need medical attention as a result of your operation and this may be more difficult to access in a foreign country. You should inform your travel insurer that you have had an operation before travelling abroad.

Does smoking affect my surgery?

If you smoke, you should stop as soon as possible but at least two weeks before surgery and at least until your wound heals. Nicotine and other chemicals in cigarettes, e-cigarettes, chewing tobacco and marijuana narrow blood vessels in the foot and increase the risks of surgery- particularly the risk of **wound problems**. The risk of **blood clots** (DVT and pulmonary embolism) is also increased. We can help direct you to the *smoking cessation service* if you would like some help.

Will I have a scar?

The scar will be on the top of your foot. Eventually this will fade and will not be very noticeable. Very occasionally, some people produce excessive scar tissue (hypertrophic scarring) and this may give problems.

Where will my dressings be done?

Dressings will be changed by the practice nurse at your GP practice after about 10-12 days. You will need to arrange this.

Can I shower after my operation?

The dressing must be kept dry. You should avoid showers until the dressing is removed. However water proof protectors are useful and are obtainable online. Examples of the type of product available can be seen at limboproducts.co.uk. These are not supplied by us, you have to obtain them yourself, but they will allow you to shower after your operation.

Will we meet again before my operation?

Yes, you will be seen in the **Pre-assessment Clinic** at **St John's Hospital, Livingston** about two weeks before your operation date. During this visit, you will be seen by a nurse who will assess your health and suitability for an anaesthetic, your planned operation will be discussed again and you will be asked to provide consent.

When can I go out after my operation?

We advise that you remain at home for the first week or so after your operation. You should do minimal walking for the first two or three days and limit your walking to trips to the bathroom only.

Why do I have to keep my leg elevated after surgery?

Keeping your leg elevated reduces swelling, pain and risk of infection. It also reduces the risk of bleeding immediately after your surgery. Keep your foot on a small stool with your foot above your knee and your knee above your hip.

Will my operation be carried out by an orthopaedic surgeon or a podiatrist?

Your operation may be carried out by either an **orthopaedic surgeon** or a **podiatrist**. The Foot & Ankle service at RIE and St John's Hospital employs podiatrists to undertake forefoot surgery. Podiatrists unlike surgeons do not have a "medical qualification" and so are not "doctors" but the podiatrists in this service have been trained to carry out a specific range of foot operations to the same standard as the orthopaedic surgeons. If you would prefer to have your operation carried out by an orthopaedic surgeon rather than a podiatrist you should let us know in advance of your operation.

Can I have both feet done at the same time?

If you have both feet operated on at the same time you will be greatly incapacitated following your surgery, pain is greater, and you do not have a good leg to rely on. It is advisable to have one foot done, make sure you are content with the outcome of this surgery before progressing to have the other foot operated on. This can be discussed before your operation.

I am a runner; will I be able to run after my operation?

If you are a runner, it is possible that this operation may have a negative impact on your ability to run afterwards. Whilst we would hope that you will be able to get back to a modest level of running, there would be no guarantees regarding this and you should consider this factor carefully in making your final decision to go ahead with surgery or not. The same applies to other sporting activities.

Key facts

Whilst most patients benefit from this operation you should be aware of the following:

- Morton's neuroma pain is mostly managed adequately with non surgical methods, changing your shoes may be all that is needed
- Surgery is not essential
- The success of surgery is about 70%
- Morton's neuroma symptoms can come back despite surgery
- It will be 3 months before you return to usual activities
- You will need a special shoe for two to four weeks
- You will be off work for about two to four weeks (depending on your job)
- There are risks involved and outcomes are **not** always as expected
- You may be disappointed with the final result.

Further information

Further information is available on the internet in various websites. The following websites are recommended as reliable sources of information:

British orthopaedic Foot & Ankle Society (BOFAS) Website

www.bofas.org.uk/Patient/home

Blackburn Hyperbook

www.blackburnfeet.org.uk/hyperbook/

My notes/questions to discuss: