Hallux Limitus / Rigidus Management

Information for Patients, Relatives, & Carers

What is Hallux Limitus/Rigidus deformity?

You have been diagnosed with a Hallux Limitus/ Rigidus deformity, more commonly referred to as osteoarthritis affecting the big toe joint. The surface of a healthy joint is covered with cartilage, allowing one side of the joint to glide freely over the other. Loss of cartilage results in pain – particularly when walking or wearing high heels - and as the condition progresses, the body attempts to stop the painful joint from moving by laying down bone around the joint margins, thereby restricting (and potentially preventing) movement.

Osteoarthritis can be an inherited problem, but additional causes include abnormal foot function associated with a long first metatarsal and trauma (injury) related to sport or to the wearing of short shoes over many years. Osteoarthritis generally gets worse with time, although the rate of deterioration is hard to predict and varies from person to person.

How is the diagnosis made?

Clinical examination and a detailed history allow diagnosis. X-rays help to evaluate the degree of arthritis.

What are the treatment options?

Non-surgical treatment

There are several treatments that may reduce or relieve symptoms:

1. Good fitting footwear with a stiff rocker sole (avoiding high heels)
2. Glucosamine Sulphate with Chondroitin Supplements
3. Insoles/orthoses

4. Manipulation/exercises to maintain motion and/or splinting to limit motion – depending on the severity of arthritis and level of pain.
5. Anti-inflammatory gels and analgesics
6. Cortisone or Hyaluronic acid joint injections

Surgical treatment

If non-surgical treatment fails to relieve symptoms, we can offer a surgical procedure. The decision to offer surgical treatment is determined by the severity of the arthritis, lifestyle, expectations and age.

Surgical procedures for this condition are divided into two types:

- Joint preserving procedures – aiming to maximise the life of your toe joint, but with the possibility of further surgery in the future.
- Joint destructive procedures - including joint fusion, joint replacement or the removal of half the damaged joint - are reserved for people with severe arthritis.

Joint preserving procedures

Cheilectomy or Joint Debridement

This procedure involves the removal of bony outgrowths around the joint, and part of the metatarsal head at the top of the joint, to improve range of motion. Recovery is generally quick, and if poorly fitting footwear was the main cause, the condition can be significantly improved.

Sesamoidectomy

The two sesamoid bones (the first metatarsal bone has two sesamoid bones at its connection to the big toe) often become arthritic and fused to the metatarsal, contributing to reduced motion at the big toe joint. Removing the sesamoid bones can help to restore joint movement.

Bonney Kessel Osteotomy

This operation involves taking a wedge of bone out of the big toe, and lifting it up slightly so you do not have to bend the joint as much when walking. The toe bone is cut, re-aligned and secured in place with a screw or wire. The toe will not visibly stick up in the air.

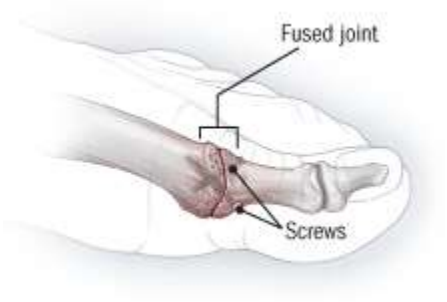
Decompressive Metatarsal Osteotomy

If the first metatarsal is long, it can cause the big toe joint to jam when walking. This operation involves shortening the first metatarsal to within normal limits allowing the big toe joint to function more normally again. The first metatarsal is cut, re-aligned and secured in place with screws. This procedure is often combined with a cheilectomy/joint debridement.

Joint Destructive Procedures

Joint Fusion/Arthrodesis

This operation is performed when there is severe, painful arthritis and joint movement is very restricted. The remaining cartilage/joint surfaces are removed and the bones are fixed together with screws and/or a plate.



The toe is fixed in a position that allows you to roll off the side of the foot when walking. You will be immobilised in a cast and walker boot for 6 weeks after the operation to allow the bones to fuse. After this operation your toe will be slightly shorter and will no longer bend. You will be able to return to sporting activity, but the heel height of shoes will be limited. Sometimes this procedure is performed in younger active patients due to pain levels and unsuitability for an implant at a young age.

Joint Replacement

This operation is recommended for patients with moderate to severe joint arthritis. The damaged joint is removed and replaced with an artificial one, leaving the toe more flexible without shortening it. The implant is made of silicone and has been used in foot surgery for over 20 years. The lifespan of an artificial joint is 10-15 years, so they are not offered to patients who are very active or under the age of 65. If the implant wears out, it can be replaced but this is not always straightforward as the bone quality may have deteriorated.

Joint Excision/Arthroplasty

This procedure is reserved for patients with severe arthritis. A section of the joint is removed, allowing more flexibility and motion, but shortening the big toe and decreasing its function/stability. This can result in pain under the ball of the foot.

What are the risks associated with this type of operation?

Specific complications of hallux limitus/rigidus surgery include:

- Recurrence of deformity/deterioration of osteoarthritis
- Joint stiffness
- Transfer pain or skin lesion (Decompressive Osteotomies & Arthroplasty)
- Implant failure, dislocation, and fracture or tissue reaction/rejection.
- Bone spurring or re-absorption around the implant. (Joint Replacements)
- Non-union of bone (Joint Fusions)
- Mal-alignment
- Short, upturned or less functional big toe (Arthroplasty)

General Complications of foot surgery include:

- Prolonged swelling
- Continued pain
- Infection
- Blood clot
- Delayed healing
- Thickened scarring
- Screw or pin movement
- A chronic pain syndrome
- Further surgery may be required

Before your surgery

We will ask you to come to the clinic before your operation for a pre-operative assessment. This appointment will last approximately 30 minutes, when you will be asked about your medical history, medications and allergies. Your blood pressure will be taken, you will be tested for MRSA (this procedure is explained in a separate leaflet), and asked to sign a consent form.

If you have any questions or concerns, or if you do not understand anything that is said during this appointment, please do not hesitate to ask.

Getting things ready for your return home after surgery

- Ensure that you have a supply of over-the counter analgesics at home, ready for your return after surgery. You can take Paracetamol 500mg or Co-codamol 8/500mg and/or Ibuprofen 200mg.
- Move essential items to a height that means you do not have to bend down low to reach them.
- If you have a freezer, stock it with easy-to-prepare food. Ensure you have ice or frozen vegetables in your freezer to apply to the back of your knee after your operation.
- Arrange for relatives and friends to do your heavy work (such as changing your bed sheets, vacuuming and gardening) and your shopping, as you will find it difficult to carry shopping whilst on crutches.
- If you live alone, set up a place where you can eat your meals in the kitchen. This is because it will be difficult to carry items such as plates or cups and maintain your balance.

Is there anything I should do to prepare for the operation?

- Please arrange for a friend or relative to escort you home after your operation. You will need to organise your own transport home by car with someone else driving, as you will not be able to drive and should not travel home on public transport.
- **You can take all your medications as usual. However, if you take blood-thinning medications such as Warfarin or Aspirin**, it is very important that you inform us before you come for your surgery as you may need to stop taking them for several days beforehand. **If you have asthma or angina, please take your medicines as normal and bring a supply with you when you come for your appointment.**
- On the day of your operation, please wash your feet thoroughly with warm soapy water, lightly scrub around the toenails with a soft brush, and remove all nail polish (as appropriate).
- You can eat and drink normally unless we have told you otherwise.
- **Please do not wear make-up**, nail varnish or jewellery (including body piercings) when you come for your procedure.
- To help you relax during the operation, you can bring a personal stereo or something to read. You may spend up to three hours at the Surgery Centre on the day of your operation, so you might like to bring a drink and a snack with you.
- As your foot will be bandaged after the operation, please wear either wide-legged trousers or a skirt that you can get over your bandage. You may also wish to bring a pair of shorts with you to wear under your theatre gown.

What happens on the day of my operation?

When you arrive at the surgery centre on the day of your operation, please report to the reception desk on the first floor. The surgeon will ask you to confirm your consent for them to do the operation. If you require a Medical Certificate ('sick note') for your employer, this should be requested from your team.

We will ask you to change into a hospital gown (and shorts if you have brought a pair with you) before taking you to the prep room. First, we may insert a Venflon (small needle, or 'cannula') into the back of your hand, which will allow us to give you fluids or medicines in the event of an emergency.

Next, we will ask you to lie on your side, to allow us to insert a small needle behind your ankle for the local anaesthetic. As the anatomy behind the ankle varies a little from person to person, sometimes we use a nerve stimulator to accurately identify the nerves. This sends a small electric current down the needle, which stimulates the nerve and also the muscles controlled by it, causing them to contract and relax. When your foot starts to kick on its own, we know that we have identified the correct nerve and can then inject the anaesthetic with precision.

You will then be left to rest for a short time to allow the anaesthetic to fully take effect before surgery. You will be shown how to use crutches (if required) and given advice about coping with stairs and issued with a leaflet reminding you how to use them.

When the area is completely numb, we will take you into the operating theatre. The procedure takes 30-60 minutes. The wound will be closed with absorbable sutures (stitches) and covered with a dressing and a 'tubigrip' bandage, which must stay in place until your next clinic appointment.

What happens after the operation?

You will return to the recovery room, where the Venflon (if fitted) will be removed from your hand and your operated foot will be fitted with a surgical shoe. Providing you are well, you should be able to go home approximately 40 minutes after your operation.

We will give you a 3-day supply of pain medication to take home with you. It is important that you start taking the painkillers before the anaesthetic completely wears off, as this will allow you to remain comfortable and pain-free.

Is there anything I need to watch out for at home?

You should seek assistance immediately if you experience the following symptoms:

- Unbearable pain, not relieved by painkillers
- Tight bandages – constant tingling, pins and needles or blue toes. In an emergency, you can loosen the bandage yourself, but please seek medical advice as soon as possible.
- Pain or swelling in your calves or the veins in your legs
- Difficulty in breathing or chest pain

- A high temperature or fever (38° or above)

If a problem arises during clinic hours (8am – 6pm, Monday – Friday) please contact the Podiatric Surgery Department at Sidney West Primary Care Centre, Burgess Hill on 0300 303 8063. Press 2 and ask to speak to a member of the on-call surgical team to discuss your symptoms and advise you on how to proceed.

If a problem arises outside of clinic hours for the first 4 days after your procedure, contact 111 for advice. If you have a clinical emergency after this time period please contact your GP on-call service or attend A&E.

Will I need to visit the Surgery Centre again?

Yes. You will need to return to the clinic for follow-up appointments.

How do I look after my foot at home?

For the first 7 days after surgery

- Keep your leg elevated (raised) as much as possible, as this will help minimise swelling and pain. Only walk to the toilet and back, always using your crutches and wearing your surgical shoe. Do not drive.
- You must wear your surgical shoe at all times when you are weight-bearing (i.e standing or walking) but it can be removed when resting or in bed.
- Take your painkillers at regular intervals and as prescribed, starting before the anaesthetic wears off. Even if you do not have any pain, it is advisable to take the anti-inflammatory tablets (if prescribed), as they reduce swelling.
- Ice can be used to reduce pain and swelling. At home, you should wrap some ice cubes or a bag of frozen peas (or similar) in a damp tea towel and place behind your knee; this should be held in place for no more than 20 minutes at a time, but you can do this several times a day. We advise that you place it behind your knee rather than on your foot, as this will prevent your wound from getting wet and can also help the anaesthetic last longer. Always check your skin afterwards, as ice can burn and cause blisters. For this reason, you should never place plastic bags of ice or frozen vegetables directly onto the skin.
- To reduce the risk of DVT (deep vein thrombosis) or the formation of blood clots:
    1. drink plenty of fluids, but avoid alcohol
    2. do not smoke, as smoking impairs wound healing.
- Help your blood circulate to your operated foot by:
    1. Rotating the ankle and bending the knee regularly
    2. Keeping the tubigrip up to knee level
    3. Walking to the toilet and back again
- Please keep your wound dry (do not bath or shower) until you have had your second follow-up appointment, approximately 2 weeks after surgery.

5 – 7 days after surgery

- If all is well, you will be able to increase your activity, although it will still be a good idea to elevate your leg regularly as this will minimise swelling.
- We will advise you to start walking on your heel, using your crutches for balance and wearing your surgical shoe. Throughout the week, you should build up to putting weight on your whole foot, still using your crutches.
- You should continue to keep your wound dry and your tubigrip up to the knee at all times.
- If you still need painkillers at this stage, you may be trying to do too much and not resting your foot enough.

10 – 14 days after surgery

- We will ask you to return to the Clinic to have the stitches removed at either end of your wound – the other stitches will be absorbable. The dressing and tubigrip will also be removed at this appointment. **Please bring a thick-soled trainer or supportive lace-up shoe (for your operated foot) with you to this appointment.**
- We may give you some daily exercises to help with joint mobilisation and tendon strengthening. These exercises may cause some discomfort or pain, but they are essential to prevent joint stiffness. You should continue to do the exercises every day for the next 3 months.
- When your stitches and dressings have been removed, you will be able to bath, shower and swim as normal.
- You can massage your scar with vitamin E oil, cream or gel to improve its appearance.
- At this stage, we encourage most patients to wear a thick-soled trainer or supportive lace-up shoe for the next 6 weeks, as this protects the foot while the bone continues to heal and helps minimise swelling.

When can I get back to normal?

Recovery for osteotomies

Two weeks after surgery, the suture tags are cut and you can then bathe and swim. You will need to wear a thick-soled lace-up shoe or trainers at this stage, to help reduce swelling and protect the bones while they heal. You can drive when you feel confident enough to perform an emergency stop. It is normal for people to have four to six weeks off work for this type of operation.

Recovery for cheilectomy, sesamoidectomy, joint implant and arthroplasty

Two weeks after surgery, the suture tags are cut and you can then bathe and swim. You will need to wear a thick-soled lace-up shoe or trainers at this stage, to help reduce swelling

and protect the bones while they heal. You can drive when you feel confident enough to perform an emergency stop. Generally recovery is quicker than for osteotomies, as mobility and exercise are encouraged sooner (i.e. 2-3 weeks post-op).

Recovery for joint fusion

Following joint fusion, you will be in a partial weight-bearing cast for several weeks. The cast will be changed for the wound to be redressed at two weeks following surgery. You must not get the cast wet (a waterproof protector can be purchased if you wish to shower). X-rays will be taken to monitor healing. When the cast is removed at 2 weeks, you will provide you with a walker boot and use crutches for a further 4 weeks.

We advise that you do not drive until you are able to wear a shoe on your affected foot and you can perform an emergency stop without discomfort. It is important to inform your insurance company that you have had an operation to ensure that you are covered in the event of an accident.

How do I make a comment about my treatment?

We aim to provide the best possible service and staff will be happy to answer any questions you may have. If you have any suggestions or comments about your visit, please speak to a member of the surgical team or contact the Service Experience Team as follows:

The Sussex Experience Team
Sussex Community NHS Trust
FREEPOST (BR117)
Elm Grove
Brighton
BN2 3EW

Tel: 01273-242292

Email: SC-TR.serviceexperience@nhs.net