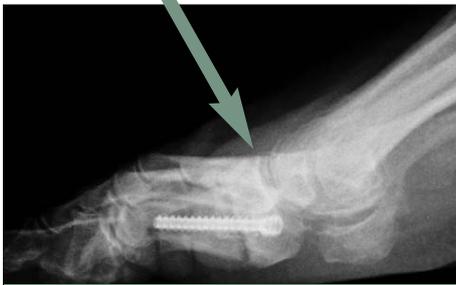


Cheilectomy procedure: Hallux Metatarsophalangeal Joint



Preoperative xrays show large lip of bone over the joint (osteophyte)

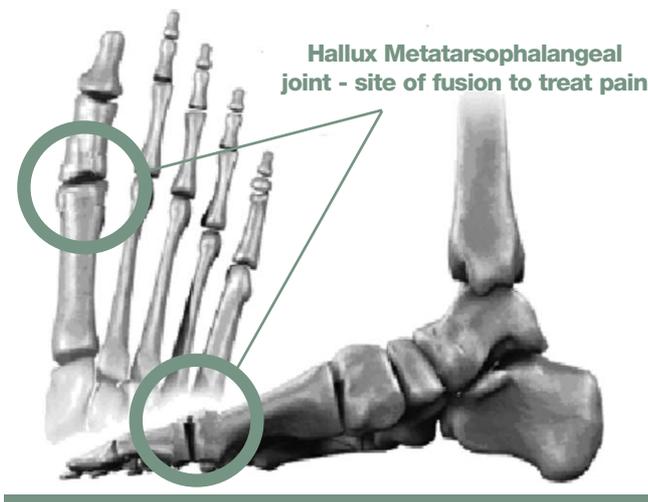


Post operative xrays show removal of the osteophyte and further surgery to the base of the big toe with screw fixation.

Movement of the big toe joint occurs in an up and down plane only (dorsiflexion and plantar flexion). The normal upward movement (dorsiflexion) is approximately 75 degrees, and the normal downward movement (plantar flexion) is 25 degrees. When the big toe has limited movement, this is called hallux rigidus.

This condition is often but not always associated with some form of arthritis of the big toe. Treatment of hallux rigidus often requires surgery but the joint can be made more comfortable with an appropriate shoe modification and analgesics (pain killers). The shoes are modified by stiffening the sole, inserting a very stiff orthotic support (insole) in the shoe and sometimes adding a small rocker effect (a metatarsal bar), which is glued on to the bottom of the sole of the shoe. Some "off the shelf" shoes can be similarly useful and your surgeon can advise you on these treatment options. In general, the thinner the sole of the shoe, and the higher the heel, the worse the symptoms from this condition (more stress is placed on the big toe joint, which obviously increases pain). A steroid injection can sometimes also be helpful as a temporary measure in trying to control painful symptoms in this condition and again, your surgeon will be able to discuss this with you.

The surgical treatment for hallux rigidus is determined by the extent of the arthritis in the big toe joint (metatarsophalangeal joint)



Hallux Metatarsophalangeal Joint Cheilectomy

What is this operation?

This operation is aimed at treating a stiff painful big toe joint in which early arthritis has developed. As a result of the arthritis, there is limited upward (dorsiflexion) movement of the big toe. The operation is intended to improve the pain that the patient experiences as the big toe bends upward. In addition to the improvement in pain, the aim is also to improve the range of motion in the joint but this is not always possible due to the arthritis. The key to a successful operation is to begin bending the big toe soon. As soon as pain permits, you need to start bending the big toe upwards. Because the underlying condition is arthritis of the big toe joint, the final outcome will depend upon whether the arthritis becomes worse with time.

The operation is most successful if the arthritis is in the early stages. If more advanced arthritis is diagnosed then other surgical options such as fusion or replacement may be discussed.

The operation is performed through one (or sometimes two) keyhole incisions (about the same size as the lead in a pencil) on the upper inner aspect of the big toe joint. Traditional "open" techniques use large incisions of approximately 5 cm which cause much more damage to the local soft tissues and blood supply. Through the keyhole, the surgeon can create a little pocket over the ridges of arthritic bone (osteophytes) which can then be removed using a high speed burr under xray guidance. The burr removes the bone creating a fine paste which is then washed away. Thus the "keyhole" technique allows the same surgery to be performed as was previously performed through much bigger "open" incisions of approximately 5cm. No stitches are required as the incisions are too small.

Sometimes, the surgeon may recommend that an extra stage of the operation be performed. This is performed through 2 additional keyholes and involves making a cut at the base of the big toe (in the proximal phalanx) to realign it or slightly shorten it. This will be fixed with a screw which is also inserted through a keyhole and under xray guidance.

Local anaesthetic is injected around the ankle at the end of the operation (whilst patient still asleep) to provide post operative pain relief. This is usually very effective and may last for approximately 10 hours. Following surgery, the toe is then protected in bandaging and a specialised post operative shoe. This surgery is usually performed as day case surgery. After 7 days, the bandaging and shoe can be removed to leave a simple dry dressing in place.

Elevation of the foot (above the hip) for the first 7 days is very important to minimise swelling and help prevent infection. The post operative shoe can usually be discarded once the bandaging has been removed at the 1 week review in outpatients.

General recovery facts

- Operation performed under general anaesthetic or regional anaesthetic
- You are able to walk on the foot the day of surgery (walk in surgical shoe)
- You may not drive after the surgery for at least 1 week unless you have an automatic vehicle and only the left foot has undergone surgery
- The surgical shoe is worn for 7 days

Hallux Metatarsophalangeal Joint Cheilectomy

Post-operative Course

Day 1

- Foot wrapped in bulky bandage and surgical shoe
- Start walking in surgical shoe only
- Elevate, take pain medication (usually very little if any pain)
- Expect numbness in foot 12-24 hours
- Blood drainage through bandage expected - Do not change bandage
- Do not remove surgical shoe

Day 7

- Review in outpatient department - surgical shoe removed
- An ordinary shoe may usually be worn at this stage (eg trainer)
- Begin moving the toe as instructed (Stretching exercises of big toe, 3 x day for 5 minutes at a time)
- Physiotherapist often involved at this stage to help achieve movement in the joint
- Usually pain gone by this stage but pain medication to continue if not so that exercises can begin
- Elevate as much as possible still
- May drive depending upon the advice of your surgeon
- Shower when incision dry

6-8 weeks

- Follow-up in the outpatients with xray on arrival
- Shoes may be worn as comfort allows but no high heel is worn for two months post surgery

Hallux Metatarsophalangeal Joint Cheilectomy

Main Risks Of Surgery

Swelling - Initially the foot will be very swollen and needs elevating. The swelling will disperse over the following weeks and months but will be apparent for up to 6-9 months.

Infection - This is the biggest risk with this type of surgery. Smoking increases the risk 16 times. You will be given intravenous antibiotics to help prevention. However, the best way to reduce your chances of acquiring an infection is to keep the foot elevated over the first 10 days. If there is an infection, it may resolve with a course of antibiotics.

Wound problems - Sometimes the wounds can be slower to heal and this does not usually cause a problem but needs to be closely observed for any infection occurring.

Scar sensitivity - The scars can be quite sensitive following surgery but this usually subsides without treatment. If persistent sensitivity occurs then this can be treated.

Nerve Injury - The risk of the small nerves in the area being directly injured by the surgeon is approximately 1%. However, the nerves can become bruised by the surgery as a result of the swelling (10%). Whilst this usually recovers, you could end up with some permanent numbness over the big toe area, which might cause irritation.

CRPS - This stands for complex regional pain syndrome. It occurs rarely (1%) in a severe form and is not properly understood. It is thought to be inflammation of the nerves in the foot and it can also follow an injury. We do not know why it occurs. It causes swelling, sensitivity of the skin, stiffness and pain. It is treatable but in its more severe form can take many months to recover.

Delayed and non-union - (only relevant if osteotomy of hallux P1 performed in addition to cheilectomy). This is when the bones fail to join and bone has not grown across the cut bone. If this is painful then further surgery may be needed. The risk of this is approximately 10%.

Deep Vein Thrombosis (DVT) - This is a clot in the deep veins of the leg and the risk of this occurring following foot and ankle surgery is low (generally < 1%). The fact that you are mobile after surgery and able to take weight through the operated foot helps to minimise this small risk. However, it is sensible to try and move the toes and the ankle regularly following the surgery and probably also sensible to avoid a long-haul flight in the first 4 weeks following surgery. If a deep vein thrombosis (DVT) occurs then you will require treatment with heparin and Warfarin to try and prevent any of the clot travelling to the lungs (pulmonary embolus / PE) which can be much more serious.

Continuing symptoms - Most people (80%) are very happy with the results of their cheilectomy surgery but you can appreciate that if some of the above problems occur then this may also affect the end result. If the toe joint remains stiff and painful despite this surgery then other surgical options may need to be discussed such as fusion or hemiarthroplasty (replacement).

Sick Leave

In general 2 weeks off work is required for sedentary employment, 4-6 weeks for standing or walking work and 6-8 weeks for manual/labour intensive work. We will provide a sick certificate for the first 2 weeks; further certificates can be obtained from your GP.

Driving

IF have an AUTOMATIC VEHICLE and ONLY LEFT leg surgery then it is likely you will be allowed to drive after your outpatient review at 1 week post surgery. IF you have a MANUAL VEHICLE or RIGHT leg surgery then you will NOT be able to drive until 2 weeks post surgery (discuss with your surgeon).

These notes are intended as a guide and some of the details may vary according to your individual surgery or because of special instructions from your surgeon.

sussexfoot&anklecentre

The Sussex Foot & Ankle Centre was founded in 2005 by two orthopaedic surgeons, David Redfern and Stephen Bendall, with the aim of providing a high quality specialist service for the diagnosis and treatment of all foot and ankle problems. Both orthopaedic surgeons are specialists in problems affecting the foot and ankle and have many years of experience. They operate the service with outpatient clinics at the Brighton and Haywards Heath Nuffield Hospitals.

The sussex foot and ankle center strives to provide the best advice and treatment for all foot and ankle problems. This includes sports injuries and trauma, bunions, metatarsalgia, and arthritis. Both surgeons have particular interests in minimally invasive surgery and are at the forefront of developing such techniques in this country.

Both surgeons are also academically very active and have appointments within the national (BOFAS) and international (EFAS) professional foot and ankle surgery societies.

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