

TREATMENT FOR RECALCITRANT INGROWING OR INVOLUTED TOENAIL(S)

Nail Surgery is a procedure where part or all of the nail is removed under local anaesthetic, using phenolisation to prevent re-growth and a tourniquet to reduce bleeding. The intended benefits of this procedure include.

WHAT IS A PARTIAL NAIL AVULSION?

A partial nail avulsion is where a sliver of nail is removed from the symptomatic border(s) of the nail under local anaesthetic. The nail is removed from 'root' to tip and a chemical (phenol) is applied to prevent that portion of the nail from growing back.

WHAT IS A TOTAL NAIL AVULSION?

A total nail avulsion is a similar procedure, however the entire nail plate is removed and the chemical is applied to the entire nail bed. This procedure takes longer to heal, and is typically only indicated when the nail is unsalvageable.

RISKS AND BENEFITS OF A PARTIAL OR TOTAL NAIL AVULSION

The intended benefits of the surgery are: -

- Pain relief
- Resolution of both short and long-term nail conditions and symptoms
- Resolution of infection
- Resumption of normal physical activity
- Prevention of potential future complications
- Increased comfort in footwear

Possible complications of the procedure include: -

- Post-operative swelling
- Post-operative infection
- Re-growth of nail (5% risk)
- Loss of sensation locally (*temporary*)
- Phenol burn (*common*)
- Pain (*temporary*)
- Altered cosmetic appearance, including post-operative hyperpigmentation (*typically temporary*)
- Bruising
- Delayed healing
- Loss of sensation/nerve damage (*typically temporary*)
- Complications due to poor compliance/aftercare (*can result in delayed healing i.e. can take more than 3 months to heal*)
- Temporary loss of nail plate (*if having a partial nail avulsion*)
- Allergy to local anaesthesia (*anaphylaxis, exceedingly rare*)
- Disturbance to local circulation due to the tourniquet (*exceedingly rare*)
- Severe infection ± tissue loss (*exceedingly rare*)
- Chronic regional pain syndrome (*exceedingly rare*)

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PRE- and POST-OPERATIVE ADVICE FOR A PARTIAL OR TOTAL NAIL AVULSION PROCEDURE

PRE-OPERATIVE ADVICE

If you have no medical history of note, please can you read section 1 and then you can skip along to ON THE DAY OF THE PROCEDURE.

1.0 Dealing with a Soft Tissue Infection

It is preferable for any soft-tissue infection to have been treated prior to your procedure.

An infection alters the pH of the skin and can stop the local anaesthetic from working.

Diligent twice daily saltwater baths, or application of Clinisept+, will help to resolve an infection.

1.1 Signs of Infection

A little redness and inflammation and pain represents a low-level soft tissue infection.

If the toe is hot/red/swollen/painful/discharging with or without granulation tissue ('proud flesh' alongside the nail which is ingrown, bleeds readily, harbours infection), this represents a significant soft tissue infection and you will need antibiotics prescribed by your GP.

The infection is caused by the ingrown nail breaching the skin, allowing local bacteria (normal bacteria found on your body) to colonise the area and cause an infection.

1.2 Treating a Low-Level Soft Tissue Infection

You may be able to treat a low-level infection with daily saltwater baths and/or soaking with Clinisept+ (soak a gauze swab and apply to the affected toe for a minimum of 2 minutes).

Application of a little Savlon®, Brulidine® or Germolene® can also help, as these are antimicrobial and will soften the nail, which can help to ease the pain.

Wear footwear that does not squeeze your toes, and avoid sport (including swimming) to allow the toe to settle.

1.3 Treating a Significant Soft Tissue Infection

If the infection persists or worsens, please contact your GP to request a course of antibiotics.

You can send a photo of your toe directly to your GP practice, advise that you have tried conservative treatment (i.e. saltwater baths) and state that you feel you require antibiotics and/or this has been recommended by your podiatrist (if we've been in contact).

Alternatively, I can arrange this for you (*administration fee applicable*).

2.0 Diabetes

If you are diabetic, a recent HbA1c will be required prior to arranging a surgical appointment. Your reading will ideally be 48mmol/mol (6.5%), although a higher reading will not preclude you from surgery. A higher reading can delay healing and promote post-op infection. However, you will be more closely followed up post-op (frequency dependent on your personal circumstances and need) regardless of your HbA1c.

If your circulation is compromised, the procedure will be referred to secondary care.

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3.0 Anticoagulant Therapy

If you take a blood thinner (e.g. aspirin, clopidogrel, warfarin, apixaban) liaison with your anticoagulant clinic will be arranged prior to surgery. A recent INR will be required if you take warfarin, and the reading must be between 2 and 3.

You may experience prolonged post-op bleeding, but this will be managed in concert with the podiatrist.

4.0 Immunosuppression

If you are taking immunosuppressant drugs and biologicals you will be at risk of developing post-op infections and a delayed healing time due to your immunity being compromised. Autoimmune disorders include Rheumatoid Arthritis, Crohns disease, psoriasis, connective and inflammatory disorders.

This will not preclude you from surgery. The pros and cons of the procedure will be discussed with you and your rheumatology team and appropriate follow-up arranged (i.e. you will be followed up more closely by the podiatrist in order to expedite management of any potential infections).

Alternatively, after consultation with your rheumatology team, it may be decided that surgery would be best completed in secondary care. This will depend on your personal disease process and history.

4.1 Asthma

This is not a contraindication to surgery, but you should bring your inhaler to the procedure so that you are prepared in case you have an attack.

5.0 Epilepsy

Administration of local anaesthetic can induce a seizure in patients with epilepsy. If your seizures are well controlled and you have not had any seizures in the last 6 months then nail surgery in primary care can be considered. This will be discussed with your GP.

6.0 Heart Conditions

The current advice from the National Institute of Clinical Excellence (NICE) is that prophylactic antibiotics are not indicated for patients with endocarditis, or those whom have had rheumatic fever. Your individual case will be reviewed and appropriate management planned with your GP or specialist.

6.1 Angina

Stable angina is not contraindicated in the provision of nail surgery in primary care. You should bring GT spray as a precaution, should you have an attack during the procedure.

If you have unstable angina, options will be discussed with you and managed jointly with your GP.

7.0 Peripheral Vascular Disease

If your circulation is compromised, conservative treatment is the preferred management option for persistent ingrowing or involuted nails.

If conservative treatment has failed, nail surgery will be performed in secondary care and the appropriate referral will be discussed with you and arranged.

8.0 Raynaud's Disease & Chilblains

This will be reviewed on a case-by-case basis, but if not otherwise contraindicated (in which

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case, ongoing conservative treatment or referral to secondary care can be offered) the procedure will be performed in the warmer months, with close monitoring by the podiatrist on follow-up.

Please note: this list is not exhaustive, and your particular medical requirements will be considered, discussed with you and managed safely and appropriately prior to proceeding to nail surgery.

ON THE DAY OF THE PROCEDURE

Peri-operative Advice

- Patients under the age of 16 will need to attend with a parent or legal guardian.
- Bring suitable loose-fitting footwear that you will be able to get on over a large dressing on your toe, i.e. sandals or flip flops
- Please remove any nail polish
- You cannot drive after the local anaesthetic (your toe/s will be numb and your insurance void) so please make alternative transport arrangements
- Please do not drink any alcohol 24 hours before your procedure
- You must not have had local anaesthetic in the preceding 24 hours before the procedure (i.e. dental or dermatological appointments)
- Take your normal medication as prescribed by your GP and/or follow any additional advice that may have been arranged in advance of your procedure i.e. changes to the regime of anticoagulant therapy
- Eat normally on the day of your nail surgery
- You may bring a friend or relative to the surgery with you
- You are welcome to bring something to read or music to listen to during the procedure
- The procedure is typically completed within 1 hour, allow 2 hours if you are having both toes treated.

Immediately Post-Operative Advice

- You cannot drive until the local anaesthesia has worn off
- The local anaesthetic will wear off within 2 hours. After that if you experience any pain you may take a mild painkiller such as you would normally take for a headache e.g. paracetamol. Do not take aspirin or ibuprofen (this encourages bleeding).
- It is important that you do not disturb the dressing put on after surgery and that you keep it dry. Should blood come through the dressing do not remove it but apply another dressing over the top of the existing dressing.
- Please rest for the remainder of the day, preferably with your leg elevated. The more you are able to rest in the first few days after surgery, the faster it will heal.
- Avoid wearing tight footwear or hosiery that puts pressure on the toe after surgery.
- It is recommended to avoid any exercise that may impede normal healing for 2 weeks' post-procedure (e.g. running, swimming, football, karate)

PLEASE NOTE: The phenol applied to prevent the nail from growing back causes an **intentional chemical burn** which means that **healing is slower than a normal wound**. This can be mistaken for an infection. Signs of infection include increased pain, redness, swelling, heat, malodour and a raised body temperature. If you develop an infection, you may require a course of antibiotics (see earlier advice on [Signs of Infection](#)).

Post-Operative Advice

- The first redressing appointment will be undertaken 2 days after the procedure (or as close to this as possible; you'll probably be asked for a photo if an appointment within this timeframe isn't possible i.e. the procedure is undertaken on a Friday). The bulky dressing will be replaced by a much thinner sterile dressing.
- During the first redressing appointment, you will be shown how to carry out dressing changes at home, and you will be expected to continue with redressing the toe yourself.

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Please read 'How To Redress Your Toe' below.

- You will be provided with 2 weeks' worth of dressings. Further dressings can be purchased online, via my [website](#) (*includes Amazon affiliate links*) or in a pharmacy.
- During the first few weeks after nail surgery, small amounts of blood or discharge are normal and are an essential part of the healing process. This discharge does not mean that the wound has become infected.
- Please do not be tempted to use antiseptic creams, solutions or dressings (unless recommend by the podiatrist) as these may affect the wound healing process.
- If you experience a sudden increase in temperature, pain or excessive inflammation/swelling this may indicate that the toe has become infected. Please contact your GP, Felicity on 07902 407228 or Out of Hours Services for advice as further treatment may be required.
- **Strenuous/high impact exercise or sport should be avoided until the nail bed has fully healed.**
- A second redressing appointment will be scheduled for 2 - 3 weeks post procedure. If all is well at this point, you will be discharged.
- **A dry scab without any oozing at all indicates that the toe has healed.** Do not pick at the scab, it will ease off by itself. At this point, no further dressings are required and you can resume normal activities and sports.

Failure to comply with this advice is likely to impede normal healing and/or encourage an infection, and may also cause the nail problem to re-occur.

HOW TO REDRESS YOUR TOE

After your first or second review you will be given a dressing pack in order for you to change the dressings on your toe/s yourself.

You should redress the toe every other day. If the dressing becomes soiled on a 'none-dressing' day, you should redress the toe with a new clean, dry dressing.

If any wound exudate comes through the dressing, you should apply a new clean, dry, dressing. This is to prevent an infection.

An infection will delay/complicate healing.

You can keep the dressing on your toe dry by wearing a nitrile glove or dressing protector (e.g. [SealTight](#) or [Limbo](#); available online or via a pharmacy; *you will be provided a dressing protector as part of your dressing pack*) in the shower.

Redressing Protocol - Prefer to watch this advice? There's a video [here](#).

- Wash hands before and after dressing change
- Remove current dressing

Options:

- soak foot in a basin of tepid saltwater (add 1 or 2 tablespoons) for 5 – 10 minutes, remove the foot and allow to air dry, or pat gently with sterile gauze,
 - or cleanse the toe in warm salty water (a cup of tepid water with a dessert spoonful of table salt dissolved in it)
 - **Please Note:** you must use **table salt only**, not Himalayan crystal salt, not Celtic salt, not epsom salts etc - these salts contain irritants that will delay healing.
 - or soak a cotton swab with Clinisept+ and apply it to the toe/s for 5 minutes (however - please note that **saltwater bathing is the Gold Standard for the first 2 weeks' post surgery**. You can typically switch to Clinisept+ after the second redressing appointment).
- DO NOT stand in the shower and pour salt over the toes. Yes, this has been done before, and it is a recipe for delayed healing and infection!**

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- Apply inadine, sterile gauze/melolin, tubegauz and secure with mefix tape. Ensure the dressing is not too tight (this will impede healing).
- Repeat every other day, unless otherwise indicated, until a dry scab has formed over the surgical site.
- **Once the surgical site is completely dry (often with a scab in place), it is fine to discontinue redressing the toe/s.**

You can send photos or contact Felicity at any point* during the 2 weeks' post your procedure for advice or if you have any concerns at all.

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