

Information for patients

Post Operative Care Of Your External Fixator



Foot and Ankle

Introduction

This leaflet is intended as a guide for patients who have had an external fixator applied to their lower leg or foot. It is important that you understand how to care for your fixator and the potential problems or complications that may occur.

What is an external fixator?

An external fixator is a device that either encircles (circular) or lies adjacent to (monolateral) the limb. It is attached to the skeleton by fine tensioned wires or metal pins. It is used to treat fractures, reconstruction/fusion of bones and joints that are deformed or damaged or in the treatment of infection. If an external fixator is required for your treatment, it may be very complicated in nature and involve a lengthy recovery period.

What are the benefits of an external fixator?

The main advantages of an external fixator are:

- The risk of infection at the site of the fracture or deformity correction is minimal, although there is a chance of infection where the wire/pins have been inserted through the skin.
- External fixators can allow bones to be reset or realigned correctly whilst still allowing for movement of the nearby joints. This can help minimize complications such as muscle wasting and oedema (the build-up of excess fluid) caused by total immobilization of a limb.
- External fixators are often used in severe traumatic injuries or for treatment of deformities where there is or in the past there has been damage to soft tissue. They permit stabilization of the limb while allowing access to soft tissues that may also need treating or protecting. This is particularly important when there is significant past or present damage to skin, muscle, nerves, or blood vessels.

Disadvantages of external fixation

- Meticulous skin and pin tract care are required to prevent pin tract infection.
- The frame can be cumbersome.
- Fracture through pin tracts may occur.
- Joint stiffness may occur if treatment of the fracture or correction of the deformity requires that the fixator immobilizes the adjacent joint.

External fixation may be contraindicated under the following circumstances:

- If you have a bone disorder or deterioration that make stabilization less certain.
- If you are not able or willing to properly care for the pins and wires.
- If you have a severely compromised immune system which puts you at a higher risk of infection.

What are the risks and complications associated with external fixators?

All procedures and/or treatments involving devices inserted into the body carry potential risks. Whilst healthcare professionals aim to make your treatment plan as safe as possible, there will be some patients who have complications.

Any serious risks will be fully discussed with you. Our aim is to ensure you are fully aware of all, including unlikely risks as part of the informed consent process.

Anaesthetic risk and general risks and complications of surgery:

Risks associated with anaesthetic and surgery will be discussed with you at your Pre-Operative Assessment. These are also all discussed thoroughly in the leaflet General Information for Patients undergoing Foot and Ankle Surgery.

Specific risks of external fixators

Pin site infection:

Pin site infection is the most common complication, occurring in 30% of patients.

The area where the metal pin and skin meet is called the pin site. It is important to keep the pin site clean in order to help prevent infection. Pin site infections can vary from minor inflammation remedied by local wound care, to superficial infection requiring antibiotics, local wound care, and occasional pin removal, to osteomyelitis (painful bone infection) which may require strong antibiotics and/or further surgery. Early identification and treatment of pin site infections is therefore essential.

How will I know if my pin site is infected?

An infected pin site will be:

- Painful
- Red and Swollen
- Yellow or green cloudy discharge from the pin site
- The pin may loosen
- You may feel generally unwell and have a fever (these are usually late features).

If you think that one or more of your pin sites are infected, contact us as soon as possible.

Clear discharge from pin sites close to a joint is common due to skin movement around the pin and is just normal tissue fluid. Drainage of serous (pale yellow but transparent) fluid often represents swelling and inflammation rather than infection. Bright red blood discharging from a pin site usually represents minor tearing of muscle or skin often resulting from trauma to the area.

Delayed Union/Non Union

In a small number of patients the bones may be slow to heal (Delayed Union) or do not heal at all (Non-union) or can heal at an incorrect angle (Mal-union). This might mean that you will need your frame for a longer time than initially expected. You may also need your frame adjusting by your Consultant or you may need further surgery to correct the problem. This will be discussed with you by your Healthcare Professional

Blood clots

Blood clots may form in your lower leg (Deep vein thrombosis -DVT) or may travel to your lungs causing a Pulmonary embolus (-PE). (Risk; 1 in 1,000), If you are at risk you will normally be prescribed an anti-clotting agent to help protect you from this. If you develop pain, swelling or redness in your leg or the surface veins appear larger than usual you may have a DVT and should seek advice straightaway. If you feel pain in your chest or back and become breathless, you may have a clot in your lungs and should call for an ambulance urgently or go straight to an Accident/Emergency unit informing them of your symptoms and that you have had recent surgery.

Joint stiffness

Stiffness in the joints either side of the frame can occur. This can happen if a joint has been spanned for some time or when a limb is being lengthened. The ankle joint tolerates this immobility far better than the knee joint.

Broken/loose components

Excessive forces on the frame can cause its components to break. If the frames fittings become loose or its wires break, the frame may not work as well as it should. These may need replacing, which may involve more surgery.

Is there anything i can do to increase the success of my recovery?

Stop smoking or don't start smoking

Smoking seriously affects bone healing cells so that any wounds and bones are less likely to heal; it also increases your chance of post anaesthetic chest infection and you are strongly advised to give up or at least cut down drastically to help reduce this.

Tibial fractures or osteotomies to realign the tibia can take up to 5 weeks longer to heal in smokers and non-union (bones not knitting together) almost always occurs in people who smoke.

Weight

If you are overweight, this puts excessive loading on your feet. Losing weight has many benefits for your planned surgery/recovery and your health in general.

Medication

It is important that you avoid taking anti-inflammatory medications such as Ibuprofen (Brufen, Nurofen), Diclofenac (Voltrol) or Naproxen. These drugs are known to slow down bone healing. If you need medication for pain relief, there are many alternatives that can be prescribed by your Healthcare Professional.

If you need advice about smoking cessation, weight loss or pain management, your healthcare professional can provide information to assist you.

How do i look after my external fixator?

- Check your frame daily to make sure that all the components are intact and not damaged or loose. The wires and pins should be rigid and feel solid and secure. Check the nuts and bolts on the frame, these should be tight and feel secure also. Check that your frame is clean and free from dust, dirt and any dressing residue. If any nuts, bolts, wires or pins are loose, please contact the hospital as soon as possible.
- Keep your fixator clean and dry. This means you will not be able to put the fixator in the shower or bath but you will be able to flannel wash the rest of the limb.
- Do not disturb your dressings. You will be expected to attend the hospital for weekly dressing and monitoring of the pin sites. If you live far away, we may be able to arrange for your local nursing services to dress your pin sites.
- Keep the limb mobile by regularly doing the exercises given to you by your Physiotherapist. This is important to reduce swelling, keep the muscles strong and to stop the joints from getting stiff.
- Frames can rattle (especially Taylor Spatial Frames), this is usually normal.

How long will i have the frame on?

This will depend on the type of surgery you have had done. Your Healthcare Professional will advise you on how long the frame will need to be on. It is generally on for several months.

Frames are usually removed in the operating theatre under a brief general or regional anaesthetic. This is usually done as a day case. Occasionally, frames are removed in the Outpatients Department by your Consultant.

Who do i contact if i am worried or have questions?

Main Outpatients Department (Monday – Friday 8am – 6pm) on
01691 404361 or **01691 404572**

Your Consultant's Secretary via the hospital switchboard – **01691 404000**

Sister Jane Herbert (Foot and Ankle Nurse Practitioner) on the Foot and Ankle help line: **01691 404202** leaving a message with your name, hospital number and contact number.

Where can i get more information?

The Ilizarov & External Fixator Wearer's Support Group

www.ilizarov.org.uk

A website offering support, information and Advice for users of external fixators. Where information on this site differs from the advice given within this booklet, we recommend that you follow the advice given to you by your Healthcare Professional.

NHS Choices

www.nhs.uk

NHS Choices provides online information and guidance on all aspects of health and healthcare to help you make decisions about your health.

If you have any comments on this leaflet please contact:

Sister Jane Herbert

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If you require a special edition of this leaflet

This leaflet is available in large print. Arrangements can also be made on request for it to be explained in your preferred language. Please contact the Patient Advice and Liaison Service (PALS) email: rjah.pals.office@nhs.net

Feedback

Tell us what you think of our patient information leaflet.
Please send your comments to the Patient Advice and Liaison Service (PALS) email: rjah.pals.office@nhs.net

Date of publication: October 2024

Date of review: October 2027

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