



Where we all
make a difference

NHS

The Royal Liverpool
and Broadgreen
University Hospitals
NHS Trust

Patient information

External Fixation for the Patient Having Planned Surgery

Trauma and Orthopaedics

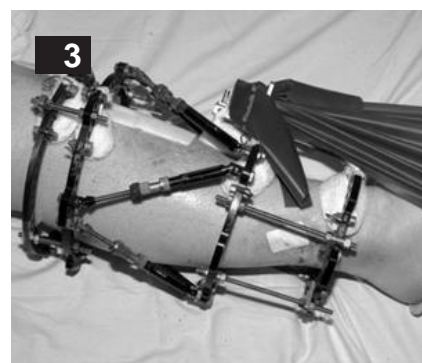
Your consultant /doctor has advised you to have an external fixator.

What is an external fixator?

Pins or wires are inserted into your skin and down into bone and these are fastened onto external scaffolding. External fixators can be used to treat bones which are broken (fractured), infected or have failed to heal properly. If required, a bone can also be lengthened and shortened by adjusting the fixator.

There are many types of external fixators in use. Some are temporary, used for a few days or weeks to control swelling or heal wounds after fractures and can be used as first stage treatment. Some are used for a longer period of time, typically a few months; however, they can stay in place longer.

1. Temporary External Fixator.
2. Monolateral External Fixator.
3. Circular External Fixator.



What are the benefits of having an external fixator?

By using the fixator as part of your treatment we hope to achieve better results for you. There are times when external fixation is the only option available. The consultant will explain why this method has been chosen for you. If there are other options which can be used they will be discussed with you.

What are the risks of having external fixation?

There is a risk with every procedure. With external fixation, pins or wires enter the skin - these areas are called pin sites. Pin site infection is a risk associated with external fixation. Advice, care and the management of your external fixator and pin sites will be given thus reducing the risk.

Significant pin site infection may need antibiotic treatment and, in some cases, surgery.

There is a risk of failure of treatment, such risks vary from patient to patient and your consultant will discuss these risks with you in full during the consent process.

What happens after I have agreed to surgery?

You are likely to be given an appointment to see both the specialist nurse and specialist physiotherapist. Here the information you have been given during your clinic visit will be repeated and you can exchange information. Problems can be highlighted and addressed at this time. The aim is that you will receive the best possible care during your stay and your discharge will be safe, effective and not delayed.

You will be given contact numbers should you wish to discuss your planned treatment before admission, or in the future. If you would like a family member or friend present this is acceptable and encouraged.

The effects of certain medication and smoking will be discussed. If you smoke you will be asked to stop until your bone is healed and your treatment is complete, as both active and passive smoking is known to have a delayed effect on wound healing and bone formation. It can prolong healing time and, in some cases, cause failure of treatment.

What happens to me after this?

You will attend the Outpatient Clinic before your operation. Your doctors will explain the planned operation and answer any questions you may have.

Again you will be told about the benefits and the risks involved. Your written consent may be taken in clinic. Consent is a legal requirement and it confirms you understand the procedure and what it involves.

A preoperative assessment will need to be completed and this may happen during this visit. A nurse will ask you questions about your general health and wellbeing. Routine tests will be done at this time e.g. blood tests /chest X-ray, to ensure you are well and fit for anaesthesia. You may see an anaesthetist during this visit.

You may meet other members of the Limb Reconstruction Team e.g. doctors, nurses, physiotherapists and occupational therapists; again questions can be asked and answers given.

What will happen if I decide not to have treatment?

Your consultant will explain what can happen if you decide not to have the recommended treatment. It is a patient's legal right to be able to refuse treatment at any time.

The day of your operation

Most patients are admitted to hospital on the day of surgery; you will receive written confirmation, advice and instruction. The admitting ward is usually SEAL Surgical Admissions Lounge) Broadgreen hospital, and you will go the operating theatre from there.

On arrival:

- A theatre gown and disposable underwear will be provided for you to wear. If you have any difficulties don't worry, you will be helped by the nurses looking after you.
- You will be asked to remove jewellery - plain bands can be worn but they will be taped.
- Any body piercings will have to be removed as well as false nails, nail polish and make up.
- If you are on regular medication, you will be told if you need to take it, as usual, on the day of your surgery.
- A bracelet with your personal details will be attached to your wrist.
- A doctor will use a marker pen to draw an arrow on the limb to be operated on.
- An anaesthetist will see you and may prescribe some medication for you to take before your operation. A member of the nursing staff will give this to you.
- You will be taken to the operating theatre, a nurse and porters will accompany you.
- If you have dentures, glasses or a hearing aid they can stay with you on your journey to the operating theatre.
- When you arrive in the theatre area, the ward nurse will leave you with the theatre staff who will check your details with you again.

What should I expect after my operation?

- After your operation you will be in the theatre recovery room before being transferred to a ward.
- You will be given oxygen to breathe through a mask, your doctors will decide when this can stop.
- You will be given some fluids intravenously. Again, your doctors will decide when this can be stopped.
- At regular intervals a nurse will check your pulse, blood pressure, breathing rate and the limb you have had operated on. You will be given regular painkillers. It is important if you feel your pain is not being controlled that you inform the nurse immediately.

- You will be transferred to an orthopaedic ward (usually Ward 3) after surgery. It may be necessary to transfer you to a different ward. If this happens you will be transferred to an orthopaedic ward when there is a bed available.
- The nursing staff will also advise you when you can start taking sips of water. Anaesthetic can make some people sick. If you feel sick we advise you not to drink until this feeling has passed. The nursing staff may offer medication to help this sick feeling go away.
- If the fixator is being applied to one of your lower limbs then you are at risk of knocking the fixator against your other leg when you are recovering from the anaesthetic. A bandage will be applied to your other limb to protect it from injury, this is known as a 'buddy bandage', it will have been applied in the operating theatre, it can be removed when you are fully awake.
- Almost all patients are given an injection or tablet of a blood thinning drug daily, this is to reduce the risks of clots forming in your lower limbs which can occur after lower limb trauma, surgery, external fixation and reduced mobility. You may have to continue having the injections or tablets when you are discharged home. Your doctors will tell you if this is required.
- If your surgery is necessary because of infection then samples will be taken so that we can identify the bacteria that caused the infection. You will be given antibiotics.
- You will have some post-operative tests: e.g. blood tests, repeat X-ray.
- A physiotherapist and occupational therapist will see you.
- Physiotherapy is a vital part of limb reconstruction, you will be assessed and the amount of physiotherapy you will require will be decided and organised.
- When you see the Occupational Therapist postoperatively, he/she will make an assessment as you may require splintage, modification of footwear or aids/help with your personal care. This can be arranged during your hospital stay and outpatient visits.
- It may also be necessary for your clothing to be modified to fit over the fixator, which can be bulky and easily catch on clothing and bedding causing damage. Track suits with zips or buttons on the outer part of the leg can be worn; trousers can be altered to fit too. Many patients prefer to wear shorts. Ladies usually like to wear a long skirt. You may be asked, with your consent, questions about your home, the height of your bed, chairs and width of doors for example. It is important that we know you will be safe and able to manage.
- You may, with your consent, be seen by a hospital social worker who can offer advice and organise services that may be required for your safe discharge.
- The pin sites are cleaned and redressed at regular intervals throughout your treatment. The dressings will be changed daily for the first three days and then approximately every seven to ten days.

- You may find the cleaning of pin sites a little uncomfortable at first but this usually settles. You will be given the opportunity to learn how to perform the pin site care. It is important that the dressings are left undisturbed unless the cleaning is taking place.
- Pin sites can, at times, become infected. You will be told how we deal with this problem. Sometimes antibiotic treatment and occasionally surgery is required.
- If adjustments to the fixator is required as part of your planned treatment then you will be shown how to do this. The aim is that when you are discharged you will be able to manage the adjustments confidently and competently.
- Once the frame is in place your consultant may want you to complete a set of corrections/adjustments on the frame by using either a spanner, Allen key or turning struts. This is normally a procedure which will commence seven to ten days post operatively and can take anything from ten days to a few months to complete.
- Depending on the type of frame you have will depend on how you will complete these corrections/adjustments at home.
 - During your stay you will be encouraged to undertake your personal care which also includes looking after the external fixator and pin site care; this will give you confidence and ease when handling the fixator. The Limb Reconstruction Team and ward staff will be available to teach you this and answer any queries.
 - The first time you get out of bed, please make sure a nurse or physiotherapist is with you. You may require aids e.g. crutches to assist mobilisation you may also feel a little dizzy, this is normal and usually settles fairly quickly.
 - During your treatment it is important that you receive a healthy diet to assist with wound and bone healing. If eating and/or weight loss becomes a problem then a dietician may assess you to help provide your dietary requirements.
 - You may be transferred to another ward or hospital during your stay, if this happens then your doctors, in consultation with other members of staff, will have made the decision.
 - The length of stay is, on average, between seven to ten days. Occasionally, for some patients, the stay may be longer. However, we aim not to keep you in hospital any longer than necessary. We need to ensure you are comfortable, fit and safe for discharge.

Going home/ discharge information

Many patients are concerned about going home and how they will manage. We do try to make your journey through the limb reconstruction process easier by providing you with support, advice and care throughout treatment.

- All the information you need will be provided to you in verbal and written format when you are discharged.
- You will be given appointments to attend outpatient clinic and outpatient physiotherapy.
- Contact numbers will be given to you so that if you do have a problem, no matter how small, you can contact us for advice and information.
- The nursing staff will arrange for a District Nurse to call at your home to provide wound/pin site care if required.
- You will be provided with a supply of medicines and dressings.
- Advice on returning to work, driving, exercise and what social activities you can do will be given.
- If you pay for prescriptions it is often more cost effective if a 'season ticket' is purchased. This covers all prescription costs for a period of three or twelve months.

What happens during my treatment period?

- You will be seen in the outpatient clinic on a regular basis. Our clinics are usually very busy, we ask for your patience if the clinic is running late.
- Most patients undergoing limb reconstruction also attend specialist physiotherapy here at Broadgreen Hospital Ward 3, initially once or twice a week.
- The team will also review you there as the need arises.
- It is important that we know what medication you are taking. You must let us know if someone outside the Limb Reconstruction Team prescribes medication for you, or you are taking 'over the counter' medicines as there are some drugs which can affect bone healing.
- Your consultant will give you further advice on returning to work, driving, exercise and what social activities you can do.
- We can also help in filling out forms with regard to the Department of Health and Social Security and employment issues.
- It is important that you try to lead as normal life as possible.

What happens if I have problems with my fixator?

If, at any time you find coping with the fixator difficult, then let us know so we can address your concerns. We offer a 'drop-in' service on most days of the week; you do not have to wait until your scheduled appointment, but please ring 0151 706 3545 / text phone number: 18001 0151 706 3545 or contact our Specialist Nurse before coming in so that we can arrange for someone to see you promptly.

If you are doing adjustments and come across a problem e.g. not able to complete the correction, or unexpected pain, this can be for many reasons depending on what frame you have. If this happens, **do not worry**. Stop the turns at that point. If between 8am – 4pm Monday to Friday, contact one of the LRS team using the numbers given in this leaflet and we will advise from there.

If you are not able to contact one of the team please contact 111 or attend your local Emergency department (A&E).

What happens when the bone has healed?

- Your doctors will keep you informed as to how your bone is healing. Sometimes you may have to have more operations to help the healing process. Again, this will be explained to you and, as before, you will be asked to give your consent.
- When the bone is healed the fixator can be removed during a clinic visit. You will be offered Entonox (Gas and Air) to breathe which will help as this is an uncomfortable procedure. Alternatively, you can be admitted to hospital, usually as a day case. You will be taken to the operating theatre and given an anaesthetic to allow removal of the fixator.
- The pin sites will be dressed and usually heal in a matter of days. You may have a splint/support or plaster applied to temporarily support the limb.
- You will be given information on how to manage and what care we need to provide you with when the fixator is removed.
- There is always a risk that the bone may bend or break again. Although very uncommon, you need to be informed of the risks. Again, any questions or concerns you may have can be discussed with your doctors and/or other members of the Limb Reconstruction Team. The aim is that your treatment and management will be successfully completed without problems being encountered.

Surgery and the limb reconstruction process can affect many people in many different ways, both emotionally and physically, **this is a normal response**. Please remember that we are here to help and support you throughout the treatment phase. If you have any concerns then please do not hesitate to call us.

Feedback

Your feedback is important to us and helps us influence care in the future. Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

Limb Reconstruction Secretaries (Mr Fischer, Mr Giotakis, Mr Narayan, Mr Nayagam, Mr Peterson, and Miss Thorpe)

Tel: 0151 706 3545 or 0151 706 3440

Text phone number: 18001 0151 706 3440

Limb Reconstruction Team

Donna Britton, Specialist Nurse

Tel: 0151 706 3529

Text phone number: 18001 0151 706 3529

donna.britton@rlbuht.nhs.uk

Paula Whittaker and Giles Stamps

Specialist Physiotherapists

Tel: 0151 282 6928

Text phone number: 18001 0151 282 6928

Fiona Daglish

Specialist Physiotherapist

Tel: 0151 600 1934

Text phone number: 18001 0151 600 1934

Madeleine Mooney

Specialist Occupational Therapist

Tel: 0151 600 1934

Text phone number: 18001 0151 600 1934

Liverpool Limb Reconstruction Unit

www.limbrecon.com

Twitter: @limbreconuk

Directgov.

www.dwp.gov/directgov.uk

Disability benefits

Tel: 0800 121 4600

Employment and Support Allowance and Incapacity Benefit

Tel: 0345 608 8545

Author: Trauma and Orthopaedics.

Review Date: September 2021

All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

يمكن توفير جميع المعلومات المتعلقة بالمرضى الموافق عليهم من قبل انتمان المستشفى عند الطلب بصيغ أخرى، بما في ذلك لغات أخرى وبطرق تسهل قراءتها وبالحروف الطباعية الكبيرة وبالصوت وبطريقة برايل للمكفوفين وبطريقة مون والإلكترونية.

所有經信托基金批准的患者資訊均可以其它格式提供，包括其它語言、易讀閱讀軟件、大字

體、音頻、盲文、穆恩體 (Moon) 盲文和電子格式，敬請索取。

در صورت تمایل میتوانید کلیه اطلاعات تصویب شده توسط اتحادیه در رابطه با بیماران را به اشکال مختلف در دسترس داشته باشید، از جمله به زبانهای دیگر، به زبان ساده، چاپ درشت، صوت، خط مخصوص کوران، مون و بصورت روی خطی موجود است.

زانیاری پیوندیدار یو نه خوشانه ی له لایمن تراستوه په سمند کراون، نه گمر داوا بکړیت له فورماتمکانی تردا بریتی له زمانمکانی تر، نیزې رید (هاسان خویندنمه)، چاپی گموره، شریتی دهنګ، هیلی موون و نه لیکترونیکی همیه.

所有经信托基金批准的患者信息均可以其它格式提供，包括其它语言、易读阅读软件、大字
体、音频、盲文、穆恩体 (Moon) 盲文和电子格式，敬请索取。

Dhammaan warbixinta bukaanleyda ee Ururka ee la oggol yahay waxaa marka la codsado lagu heli karaa nuskhado kale, sida luqado kale, akhris fudud, far waaweyn, dhegeysi, farta braille ee dadka indhaha la', Moon iyo nidaam eletaroonig ah.