

Patient information

External Fixation in Limb Reconstruction

Therapies Department

What is external fixation?

External fixation stabilises bone by passing fine wires and pins through the bone which are then secured to an external metal frame.

External fixators are used for:

- Complex fractures
- Fracture non-union
- Bone infection
- Limb lengthening
- Bone and soft tissue deformity correction
- Joint arthrodesis (fusion).

Types of external fixation

Each fixator is built for the patient's individual needs.

You may have a circular fixator with rings that go around the limb or a rail that spans the length of the limb.

The external fixator is very strong and will not move on the limb.

Most external fixators will allow you to take weight through the limb. You will be guided by the limb reconstruction team.



Hospital stay and in-patient therapy

During your hospital stay you will be assessed by a Physiotherapist to identify how best to get you mobile and to start an exercise programme appropriate for you.

The exercises will help you regain movement and prevent stiffness of other joints. You will also be advised on how to manage swelling which may include ice and elevation.

The Occupational Therapist may also review you to assess for a splint to maintain your foot in a neutral position. If a splint is considered appropriate you will be instructed in the wear and care of same by the Occupational Therapist.

The Occupational Therapist may also look at how you will manage activities of daily living and provide advice and/or refer on for equipment as needed.



Discharge home

To go home you need to be safe with your mobility and your pain needs to be adequately controlled and managed with tablets.

You will be given a short supply of medication. Your GP will be informed about your surgery and medication. You will need to contact your GP practice for repeat prescriptions.

Clothing and footwear

Loose fitting clothing is advised.

Trousers may stretch to accommodate the frame, or alterations can be made such as splitting the side seam and adding fasteners.

Wear secure and comfortable footwear whenever possible. Larger sized footwear may be needed if your foot swells. If temporary or specialist footwear is needed it will be provided for you.

Out-patient therapy

The hospital has a specialist out-patient limb reconstruction therapy service.

Out-patient therapy will include:

Mobility aids

Walking aids most suited to your requirements will be provided, such a frame, elbow crutches or walking sticks.

You may find buying padded handle covers, or wearing cycling gloves helps to prevent your hands becoming sore.

As rehabilitation progresses you may be able to progress to unaided walking.

Exercise and manual therapy



All unrestricted joints should be moved to prevent joint stiffness and muscle weakness.

Early aims of therapy are often to get the knee straight and the foot flat to the floor.

At therapy appointments, you will be able to use gym equipment appropriate to your stage of rehabilitation.

A personalised home exercise programme will be provided for you. Your therapist will be able to provide an electronic copy of your exercises using the mobile phone application 'Physitrack'.

Functional rehabilitation

The therapy team will support you in trying to maintain independence.

They may practice activities of daily living with you such as the stairs and will advise on how you can stay as active as possible.



Pin sites

You may be taught how to care for your pin sites during your in-patient stay and may feel able to confidently care for you pin sites at home.

You can be referred to your local District Nursing team or may be advised to attend a local walk-in centre for pin site dressing changes when you are discharged from hospital.

Pin sites can become irritated, which is more likely with increased activity. Occasionally pin sites become infected. Additional leaflets on how to care for your pin sites are available and there is a video to watch:

Youtube: 'Pin Site Care – Liverpool Limb Reconstruction Service'
<https://www.youtube.com/watch?v=xd03h2prXUU>

Frame covers

In the winter months you may find covering the frame helps to stay warm. Snoods can fit well over the frame, or some patients choose to buy frame covers online or make a simple cover.

Possible complications

Swelling

Swelling of the affected limb is normal. Your limb should be regularly elevated throughout the day. Rest with the limb higher than the heart if possible. The swelling should reduce once the limb is elevated. If you have a change in the pattern of your swelling that is associated with pain and redness this should be reviewed as soon as possible. Please contact your GP or NHS 111.

Loss of fine wire or pin tension

Occasionally external fixator fine wires or pins can lose tension or snap. This is not an emergency unless your frame feels unstable. However, please contact the Limb Reconstruction Unit if you are concerned.

Skin and footcare

The skin on your leg and foot will become dry. Try to remove dead skin cells each day with a damp flannel. Applying an unperfumed moisturiser to the skin can help.

If you have a skin graft, please ask for advice that is individual to you.

Cut toenails straight across to help prevent in-growing nails.

Living with a fixator

It will take time to accommodate to living with a fixator. Activities are best spread throughout the day. Being active little and often is the best way to maintain function and stop pin sites becoming sore.

Your fixator may be in place for several months and it is important to try and resume normal activities as you feel able to do so.

Emotional reactions to fixators are normal. A fixator is often the result of an accident and/or a lengthy period with your limb not functioning how you want it to.

Common reactions include:

- Disturbed sleep
- Feeling irritable or angry
- Feeling panicky, anxious, or worried
- Feeling withdrawn or isolated
- Feeling tearful or depressed.

It helps to stay connected with others and with the limb reconstruction service who will support your recovery.

NHS talking therapies such as cognitive behavioural therapy and counselling are available via your GP.

You can access advice via NHS and national mental health service websites:
<https://www.nhs.uk/mental-health/>

Bone healing

Many factors affect the rate at which bones heal.

Weight bearing encourages new bone formation. It is important that you take weight through the limb if you are allowed to do so. A healthy balanced diet will also help bone healing and should include sufficient calcium, protein, vitamins, and minerals.

Smoking, including e-cigarettes, can prevent tissues in the body getting enough oxygen to repair themselves which can delay bone healing.

Non-steroidal anti-inflammatory drugs such as Ibuprofen, Naproxen, Diclofenac can also have a negative effect on bone formation. Please inform the Limb Reconstruction Team if you are prescribed this medication.

You can be given a separate leaflet on bone healing and how to help yourself.

Attending hospital appointments

The patient transport system can be used if you are unable to arrange your own transport to attend appointments.

Patient transport must be booked at minimum 48-hours prior to the appointment and be booked by the patient. You can access the transport service relevant to your residential area:

North-West Ambulance	0800 032 3240
West-Midlands Ambulance	0345 425 0050
Welsh Ambulance	0300 123 2303

Finance

If you claim certain benefits, costs incurred in travelling to and from the hospital can, in some situations, be reclaimed. If you think that you may be entitled to reclaim travel costs, please liaise with the limb reconstruction team who can provide contact details for who to contact.

If you are unable to work, you may feel that you need financial advice or need help understanding whether you are entitled to receive benefits.

Consider accessing national websites:

<https://www.gov.uk/browse/benefits>

<https://www.citizensadvice.org.uk/>

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

Contact: Limb Reconstruction Therapy Gym (Monday-Friday, 8am-4pm)
Ward 3
Broadgreen Hospital
Tel: 0151 282 6928

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

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