

Advice for Patients in an External Fixator

Information for patients

**Orthopaedic Trauma
Elective Orthopaedics**

This document can be provided in different languages
and formats. For more information please contact:

Nottingham Frame
Service Queen's Medical
Centre
Tel: 0115 924 9924 ext 62472
Tel: 07875 165 691

Introduction

This booklet aims to give you and your family or carers information to be a reference during your treatment in an external fixator. This will assist in preparing you for the changes to your daily routine with some practical solutions, so that you can plan ahead for adaptations such as clothing.

Most of the Information refers to circular frame fixators on lower limbs, but information will remain relevant to your treatment.

The frame may be in place for a few weeks or many months dependant on the specific reason for your frame.

Consultant

Frame Nurse Practitioner

Why you are having treatment in a frame:

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How is the frame fixed?

Your external fixator will be fixed into the bone by pins and wires dependant on the type of frame. Pins are screwed into the bone attached onto the frame, whereas the wires attached to the frame are inserted all the way through the bone fixing onto the frame.

If you have a circular frame there will also be struts or rods between the rings to make the frame stable (see picture opposite). These can be used to make adjustment to the frame if required during your treatment so that the bone is gradually moved into an improved position.

Do I need to tighten the screws on the frame?

Daily, use a 10mm spanner to ensure the bolts and nuts holding the struts / bars to the frame are tight. The struts on a circular frame may be able to turn around freely, but if the bolts and nuts holding them become loose, the strut will fall off. This occasionally occurs.

If this happens to you and you can't remember where it fastens, reapply your foot drop splint and don't put weight through the limb. Contact your Frame Nurse Practitioner as you may require an x-ray to check the position of your bone. For your reference of strut position it can be helpful to take a photograph of your frame at different angles.

Frame adjustments

Your consultant will inform you if you need to undertake adjustments to your frame and your Frame Nurse Practitioner will teach you and your family / carer. Additional written information will be provided if this is part of your treatment.

Adjustments to your frame are undertaken if the bone position requires to be moved into an improved alignment prior to the bone healing. If your treatment involves regenerating new bone then frame turns will be explained for a process called 'bone transport'. It is advisable to take analgesia prior to adjusting your frame.

Pin-site care

Refer to your separate pin-site care booklet for guidance.

Pin-site infection

You may experience a pin site infection to the skin and surrounding tissues at some point during your frame treatment. Sometimes it is necessary to come into hospital for intravenous antibiotics for a pin site infection that doesn't settle with oral antibiotics.

Refer to your pin-site care booklet for signs to look out for and contact your GP and frame service for advice. Seek medical review earlier rather than wait if concerned.

Pin breakage

A broken pin or wire may need to be removed in clinic or in the operating theatre. If your pin or wire breaks at home, apply your foot drop splint and keep weight off your leg and contact your frame service.

If this happens during the night, unless in severe pain that does not settle with your current analgesia, you can wait until the morning to contact the frame service.

Swelling

It is normal for the ankle and foot to swell following your frame application, in particular after walking or having your leg down. It is important to rest and elevate the leg when this happens.

Swelling may occur throughout the frame treatment but should go down after elevation. If this doesn't settle or if you have new worsening pain, you should contact your Frame Nurse Practitioner's mobile number / Trauma Co-ordinator to attend the hospital for review. Out of hours, attend your nearest urgent care centre or Emergency Department.

Pain

The pain following your surgery will gradually improve as you recover. During your frame treatment you may experience an increase in discomfort at certain times. For example if you are given frame adjustments to undertake or if you experience a pin-site infection.

Contact your GP to monitor your pain and re-prescribe pain killers on discharge from the hospital. Speak with your medical team, physiotherapists and Frame Nurse Practitioner in clinic if concerned.

Frame removal

Your consultant will discuss when it is time for the frame to be removed. You will have x-rays during your frame treatment that will help to guide this decision with the bone healing. Sometimes your frame will be loosened for a few weeks prior to frame removal.

Your frame can be removed in fracture clinic by the Frame Nurse Practitioner or doctor using gas and air pain killer (Entonox).

Sometimes it will be removed in the operating theatre with an anaesthetic. Frame removal will be discussed with you during your treatment and you will receive further written information at this time. You will also have the opportunity to speak with other patients who have had their frame removed.

After your frame is removed you may have a plaster cast, brace or splint until the bone is strong enough to walk without. Your medical team and Frame Nurse Practitioner will inform you about what support you may have and for how long.

Frequently asked questions from patients

Q. How long will I have a frame?

A. The length of time you need to wear a frame varies, dependent on the reason for your treatment. Some people may only have a frame for a few weeks or months whereas some are in a frame for over a year. Your medical team and Frame Nurse Practitioner will be able to answer your questions about your specific treatment plan. X-rays at your clinic appointments will show how the bone is healing and when it is time for the frame to be removed.

Q. Will I have another operation after the frame is removed?

A. This is dependant on the reason for your frame and your treatment plan. During your frame treatment your consultant will explain whether you may require further surgery and what this would involve.

Q. Can I swim / bath / shower when in a frame?

A. Showering is fine once wounds are healed and you are safe to access a shower. At the Nottingham Frame Service we prefer that you do not bathe or use swimming pools (including hydrotherapy pools). This advice may be different to other frame centres.

Q. I have a pain around a pin-site, what should I do?

A. This could be a pin-site infection, in particular if there is some redness or oozing around the pin-site and walking is painful. Contact your Frame Nurse Practitioner / contacts end of this booklet for further advice. You may require antibiotics. Out of hours and at a weekend, contact your GP or attend your local urgent care department (refer to separate pin-site care booklet for further detail).

Q. I have new pain after falling onto or knocking the frame.

A. If the pain is around a pin-site, it could also be a pin-site infection. If you have banged the frame very hard, it is important to come for an x-ray to check there has been no movement, even though circular frames are strong.

Q. I have new pain around my calf

A. Contact the frame service for advice but if your calf is painful, hard or tender to touch you should attend your nearest urgent care centre or Emergency Department to be examined.

Clothing

You will have the opportunity to meet other people in frame treatment for ideas. Over-sized loose-fitting trousers split at the sides and held with velcro is a popular option. Other ideas have included covers sewn in a tube shape wrapped around the frame, fastened with velcro or tied together. Stretchy leg warmers are good during the colder weather.

Smoking

One of the most important things you can do to improve your chance of the bone healing is to quit smoking. Smoking can slow the bone healing process and can sometimes result in non-union of a bone.

Smokers also have more anaesthetic related complications such as a chest infection, wounds that are slower to heal and may remain in hospital longer.

Drinking alcohol

Heavy drinking can cause brittle bones and affects the body's ability to absorb calcium, important for bone healing. If you are taking strong pain killers, you should avoid alcohol. You should not exceed the weekly limit of 14 units weekly spread over the week.

Diet

A healthy diet with sufficient vitamin D, vitamin C, protein and calcium is important. Discuss with your Frame Nurse Practitioner and medical team if you require further information around improving your diet for bone healing.

Sleeping

It may be helpful to find a cover for the frame (such as a pillowcase) to protect bed sheets and if you share a bed. A pillow either side of the frame can help to support a comfortable sleeping position.

Driving

If your surgeon is satisfied you are safe to drive (this will require an automatic car due to you being unable to control pedals with affected limb) you must contact both the DVLA and your insurance company to ensure you are covered.

Can I work with my frame on?

This depends on the job that you do. You should discuss this with your medical team or Frame Nurse Practitioner for advice. Discussing with your employer early is recommended for considering whether any adaptations to your work environment and work duties you undertake will be required.

Can I go on holiday with my frame on?

This depends on the destination and it is recommended you discuss with your frame team first. Avoid direct sunlight as the metal wires and pins conduct temperature. If you are considering travelling abroad, it depends on the destination and you would need to check if you have adequate travel insurance in the event of you having a complication whilst away.

Follow up frames clinic

You will receive appointments to see your medical team and Frame Nurse Practitioner. Your first clinic appointment will be arranged for you by the ward team which is usually one week following discharge. At this appointment you will see the Nurse Practitioner and Physiotherapist.

Your first consultant appointment is 1 - 2 weeks following discharge. During your treatment, the frequency of your medical review will be dependent on your treatment plan and will be discussed at each clinic appointment.

You will have appointments with your Frame Nurse Practitioner in between your consultant / medical team review.

Contact your Frame Nurse Practitioner or fracture clinic if you have not received your appointment.

Occupational therapy

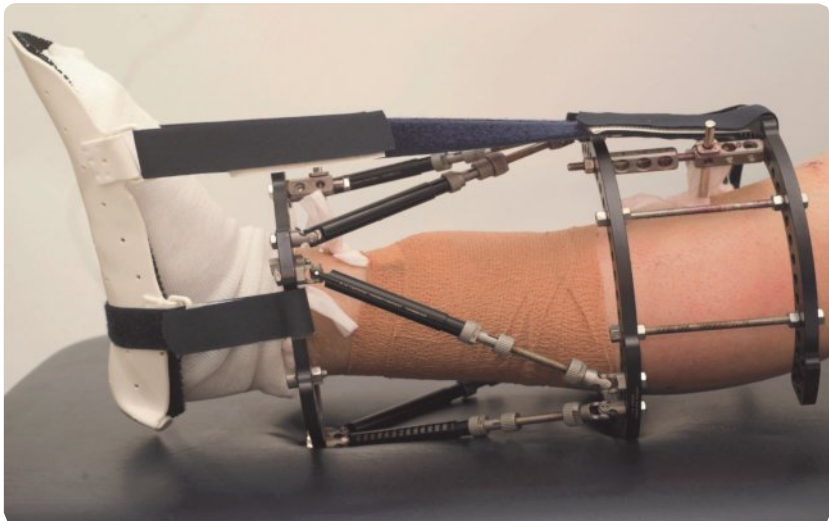
Splinting

Following the application of your external fixator frame, if it is on your lower leg, your consultant or Frame Nurse Practitioner may refer you for a floating foot drop splint. The purpose of the splint is to position your foot in a position which may reduce pain and maintain a good foot position, preventing shortening of your calf muscle.

Discharge planning

You may be seen by an occupational therapist on the ward to see how you will manage day to day tasks. You will be assessed to see if you need any aids or advice to enable you to maintain your safety and independence at home.

It is often useful to hire a wheelchair for discharge as initially you will only be able to mobilise short distances with your walking aid. This will enable your friends and family to take you out further when you feel ready, such as around the park on a dry day.



Physiotherapy

After your surgery you will be advised on how much you can weight bear and you will see the ward physiotherapist. Weight bearing varies depending on your injury and the stage you are at post operatively.

At your first clinic appointment, you will be assessed by the physiotherapist and you will be invited to attend our frame class in the physio gym (details will be provided) where you will meet other people having treatment in a frame.

The Frame Nurse Practitioner also attends the frame class to answer any queries you may have regarding your frame or wound, pin sites or other problems.

If you live a long way from the hospital then sometimes it is necessary to be referred to your local physiotherapy centre. Attending your regular physiotherapy session is important for your rehabilitation.

The frame service teams

Useful contact numbers

The Frame Nurse Practitioner mobile number is contactable:

Monday to Friday..... 8 - 4pm

Weekends..... 9.30 - 4pm

The Trauma Co-ordinator can be contacted for urgent advice or messages left on the Trauma Nurse Practitioner office answerphone.

When the Frame Nurse Practitioner is on leave, follow the above advice as texts will not be answered during leave.

For urgent problems out of hours and when feeling unwell please contact your emergency GP or attend the urgent care centre / Emergency Department.

Frame Nurse Practitioner	07875 165 691
	0115 924 9924 ext 62472
Trauma Nurse Practitioner Office.....	(answerphone)
Trauma Co-ordinator.....	07812 275 693
Fracture Clinic (plaster room).....	0115 924 9924 ext 61037
Fracture Clinic Reception.....	ext 83040 / 85951
Occupational Therapy Splint Room...	0115 849 3312
Physiotherapy Frame Class.....	ext 62414

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Feedback

We appreciate and encourage feedback. If you need advice or are concerned about any aspect of care or treatment please speak to a member of staff or contact the Patient Advice and Liaison Service (PALS):

Freephone: 0800 183 0204

From a mobile or abroad: 0115 924 9924 ext 65412 or 62301

E-mail: pals@nuh.nhs.uk

Letter: NUH NHS Trust, c/o PALS, Freepost NEA 14614, Nottingham NG7 1BR

www.nuh.nhs.uk

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