King's College Hospital
NHS Foundation Trust

Intramedullary nail (IM nail) surgery for femoral (thigh bone) fractures

Physiotherapy information for patients, relatives and carers

This booklet aims to provide you with information about your time in hospital and help you get the best possible results following your injury and surgery. If you have any other questions or concerns, please do not hesitate to speak to the team looking after you.

Date: ……..

Name: ……..

Weight bearing status:……..

Confirming your identity

Before you have a treatment or procedure, our staff will ask you your name and date of birth and check your ID band. If you do not have an ID band we will also ask you to confirm your address. If we do not ask these questions, then please ask us to check. Ensuring your safety is our primary concern.

Introduction

The information in this booklet is only intended as a guide, and the information given may vary from patient to patient depending on the circumstances. Following your fracture you will need to be careful how you treat your leg as it takes time for the bone and muscles to heal. You will need to follow the advice given to you by the physiotherapists and surgeon.

Physiotherapy largely consists of advice and exercises that should be completed daily while you are in hospital and at home. The exercises aim to maintain or improve the movement, strength and function of your leg. It is your responsibility to continue these by yourself once demonstrated by a physiotherapist.

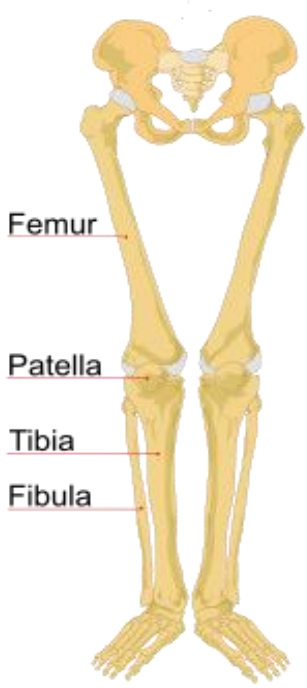
If at any point during your rehabilitation you have difficulty following our advice or the exercises the physiotherapist has given you, please phone the orthopaedic physiotherapy office using the contact details provided at the end of this booklet.

Anatomy

There are four bones in the leg:

- femur (thigh bone)
- fibula (calf)
- tibia (shin)
- patella (kneecap)

The thigh bone (femur) is the large bone in the upper part of your leg. A femoral fracture is a break in the femur. In addition to the fracture there might also be damage to the soft tissues (muscles, skin, nerves, and ligaments).



Management of the fracture

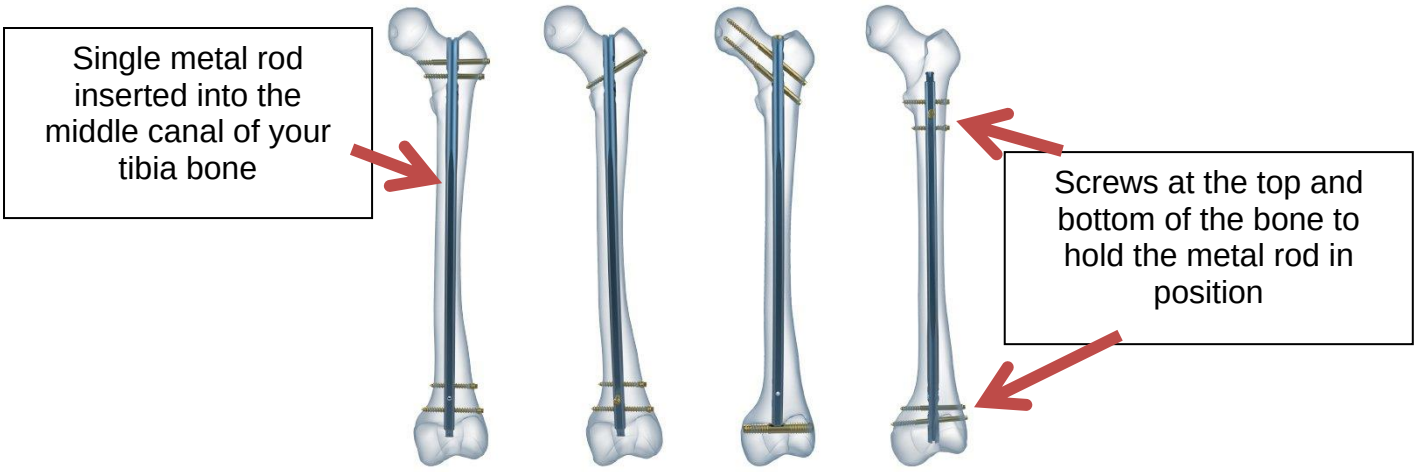
A fracture of the femur can be treated in several ways. The doctor will consider several factors when deciding how to manage your fracture, these include:

- the cause of your injury
- your overall health and pre-existing medical conditions
- the severity of your injury
- the amount of damage to your soft tissues (muscles, skin, nerves, ligaments)
- your normal level of function

In your case, the doctor has chosen to use an intramedullary nail.

What is intramedullary nail surgery?

During this procedure a metal rod is inserted into the centre of the femur then fixed at both ends with screws, as shown in the image below:



Pain management

Pain is to be expected after a fracture and an operation. In the first few days after your operation you must take regular pain relief to participate in physiotherapy and regain your independence. There are many types of pain relief available – the doctors will advise what is best for you.

If you do not have a plaster cast or heavy dressing, using an ice pack may give temporary relief from any discomfort and swelling. You can make an ice pack by putting ice cubes in a plastic bag and wrapping this in a damp cloth. This can be applied to the affected area for 10 to 15 minutes at a time. You must be careful not to get the wound or dressing wet. Please ensure you do not place ice directly onto skin – it must be covered.

It is important to check the skin during and after using the ice pack. If the skin remains discoloured following the removal of the ice pack, or you develop any sudden and severe increases in pain, loss of feeling in the skin, ice burns (change in colour and/or broken skin) or wheals (a raised, itchy area of skin), stop using the ice pack and seek medical advice.

Complications

If you develop any changes in sensation, severe pain and/or swelling to the area, discolouration or oozing of the wound when you are on the ward or back at home, please alert a member of the medical team or seek advice from your GP.

First day after your surgery

The physiotherapist will come to see you on the first day after your operation. They will start your exercise programme and help you to get out of bed and sit on a chair. The physiotherapist will advise you how much weight you can put through your leg; this will be decided by your surgeon.

Weight bearing status: This refers to how much of your body weight you are allowed to put through your operated leg. The physiotherapist will inform you of your weight bearing status and this will be documented on the front of this booklet.

Walking aids: The physiotherapist will provide you with a suitable walking aid such as a frame or elbow crutches, and will teach you how to use your aid/s to help you to regain your independence. Using a walking aid allows you to take some or all of your weight off your affected leg, and will also help you to balance and to regain your independence.

Advice on positioning: It is important to keep your leg elevated when resting so that your ankle is higher than your hip. This position can help reduce swelling. Always rest with the knee in a straight position to maintain muscle length. The physiotherapist will advise you on where to place the pillows in order to keep your leg elevated.

Subsequent days

The physiotherapist will progress your exercises and mobility with the aim of helping you become independently mobile again.

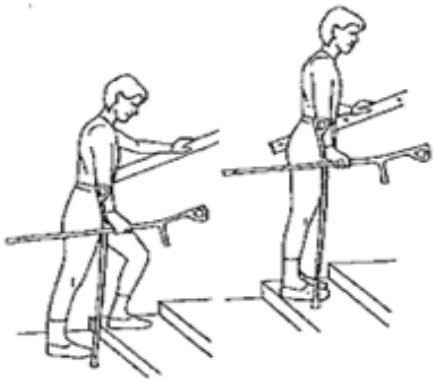
You should continue to practice your walking and complete your exercises in between your physiotherapy sessions, with the help of the nursing staff or family members if needed.

Stairs

If you have stairs at home, your physiotherapist will teach you how to go up and down the stairs. Always use a stair rail or bannister if available, as well as your walking aid. If you have any weight bearing restrictions, the physiotherapist will teach you the correct technique for going up and down the stairs.

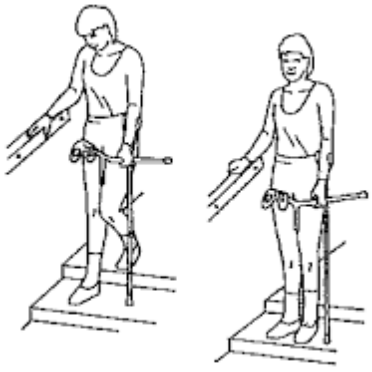
Going up

1. Non-operated leg
2. Operated leg
3. Crutch/stick



Going down (the opposite applies)

1. Crutch/stick
2. Operated leg
3. Non-operated leg



If you are worried about managing the stairs at home, please discuss this with the physiotherapist and occupational therapist.

Leaving hospital

Following your surgery, when you are medically well, the team of doctors, nurses and therapists will plan your return home with you. The physiotherapist will help you set goals that identify what you need to be able to achieve to go home. They will give you advice to help you plan for a safe discharge from hospital. If you require any equipment or help at home this will also be organised prior to your discharge.

Rehabilitation after leaving hospital

If you need any additional physiotherapy, the physiotherapist will arrange appropriate follow-up physiotherapy for you when you leave hospital. This will be either at your home or in your local physiotherapy department.

Exercises

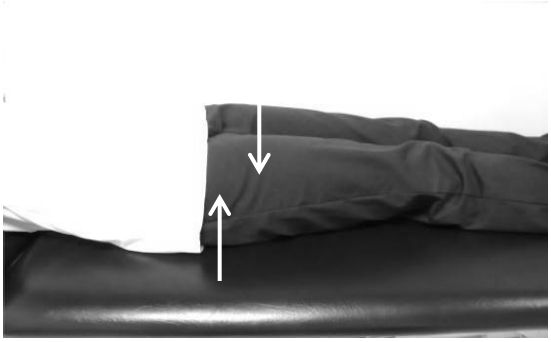
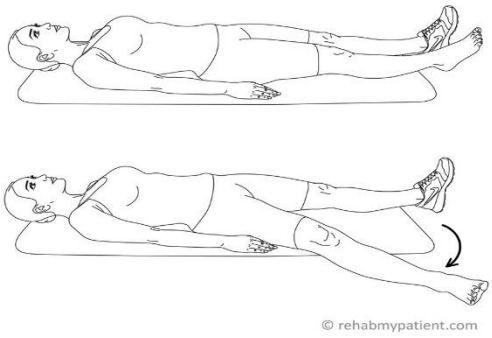
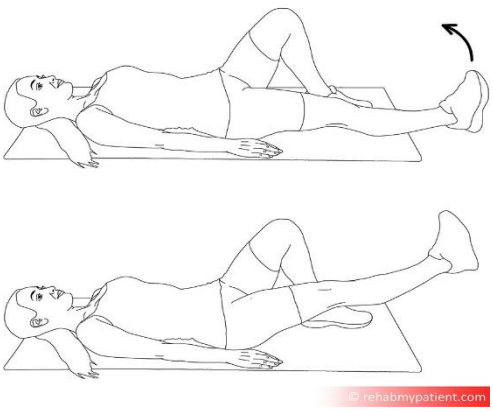
These exercises aim to:

- improve movement and muscle strength
- prevent joint stiffness
- prevent muscle tightness
- increase/maintain circulation

You may find it helpful to take your pain medication before completing your exercises to enable you to get the most out of the exercises.

Complete the exercises that have been marked by the physiotherapist three times per day. Repeat each exercise 10 times.

	Exercise	**Description**
☐	Ankle pumps 	Lying or sitting with your back supported, move your ankles up and down. Repeat 10 times every hour. This exercise will help the circulation in your legs.

☐	Static quads 	Lie on your back with your legs straight. Push your knee into the bed by tightening your thigh muscle while pulling your toes towards you. Hold 10 seconds. Relax.
☐	Static gluts 	Tighten your bottom muscles together. Hold 10 seconds. Relax.
☐	Hip abduction in lying  	Lying flat on your back. Keep the leg straight and slowly move it out to the side as ar as comfortable. Return to the start position.
☐	Straight leg raise  	Lie on your back with your legs straight. Pull your toes towards you and lock your knee straight. Keeping your knee straight slowly lift your foot 10 cm off the bed. Then slowly lower your leg.

☐	Knee flexion 	Lie on your back with your legs straight. Slowly slide your heel towards you to bend your knee as far as you can, then straighten your leg.
☐	Inner range quads 	Place a rolled pillow or towel under your knee. Pull your toes towards you. Push your thigh into the blanket and slowly lift your foot off the bed to straighten your knee. Hold 10 seconds. Relax.
☐	Knee extension in sitting 	Sit in a chair or on the edge of the bed with both feet on the floor. Pull your toes up towards you and slowly lift your foot to straighten your knee, then slowly bend your leg and lower your foot to the floor.
☐	Knee flexion 	Stand facing the wall with your hands at shoulder height. Slowly bend your knee to lift your foot up behind you as far as you can, then lower your foot back down to the floor.
☐	Hip flexion	

		Stand on the unaffected leg and hold onto a firm support. Move the affected leg forwards and upwards bending at both the hip and the knee. Slowly lower the leg to the ground and repeat.
☐	Hip abduction 	Stand in an upright position, hold onto a firm support and keep your upper body still. Move your affected leg sideways away from your body and then back to the centre. Move your leg in a slow and controlled manner and keep your kneecap facing forwards.
☐	Hip extension 	Stand on the unaffected leg and hold onto a firm support. Keep your knee straight, move your affected leg directly backwards as far as is comfortably possible and then bring your leg back to the starting position. Keep your upper body still throughout.

Useful contacts

- Inpatient Orthopaedics Kings College Hospital 020 3299 2368
- Inpatient Orthopaedics PRUH 016 8986 4632
- Inpatient Orthopaedics (Orpington) 016 8986 6255
- Outpatient Physiotherapy (Denmark Hill/Dulwich Hospital) 020 3299 8220
- Outpatient Physiotherapy (Beckenham Beacon) 016 8986 6660

Sharing your information

We have teamed up with Guy's and St Thomas' Hospitals in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at Guy's or St Thomas'. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Care provided by students

We provide clinical training where our students get practical experience by treating patients. Please tell your doctor or nurse if you do not want students to be involved in your care. Your treatment will not be affected by your decision.

PALS

The Patient Advice and Liaison Service (PALS) is a service that offers support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you. They can also pass on praise or thanks to our teams.

PALS at King's College Hospital, Denmark Hill, London SE5 9RS
Tel: 020 3299 3601
Email: kch-tr.palsdh@nhs.net

PALS at Princess Royal University Hospital, Farnborough Common, Orpington, Kent BR6 8ND
Tel: 01689 863252
Email: kch-tr.palspruh@nhs.net

If you would like the information in this leaflet in a different language or format, please contact our Communications and Interpreting telephone line on 020 3299 4826 or email kch-tr.accessibility@nhs.net

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