King's College Hospital
NHS Foundation Trust

Intramedullary nail (IM nail) surgery for tibia (shin bone) fractures

Physiotherapy information for patients, relatives and carers

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

Date: ……..

Name: ……..

Weight bearing status:……..

Consultant: ……..

Tel: ……..

Physiotherapist: ……..

Tel: ……..

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.

www.kch.nhs.uk

Introduction

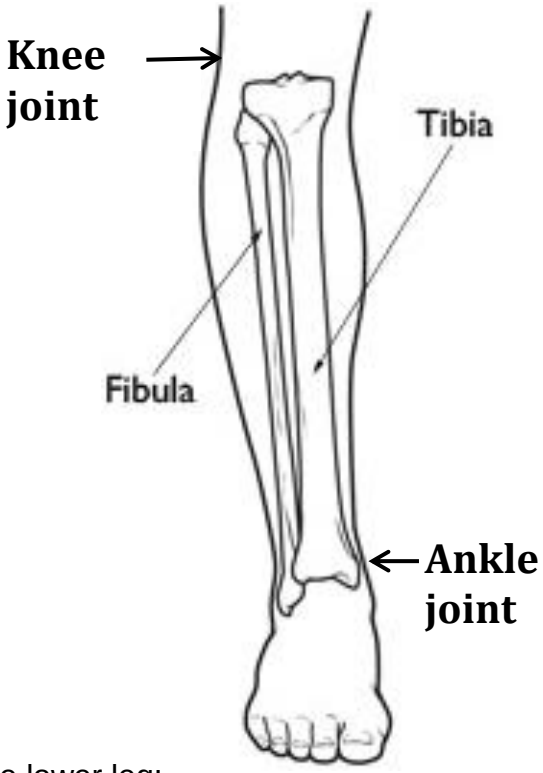
The aim of this booklet is to provide you with some general information about your time in hospital and to help you get the best possible result following your fracture and surgery.

This 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 muscles to heal and you will need to follow the advice given to you by your physiotherapist and surgeon.

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

If at any point during your rehabilitation you have difficulty following our advice, or the exercises your physiotherapist has given you, please phone the therapy department on 020 3299 2368 and ask to speak to one of the physiotherapists.

Anatomy



There are two bones in the lower leg:

- tibia (shin)
- fibula (calf)

The tibia (shin) is the larger of the two. It makes up part of the knee and ankle joints. A tibial fracture is a break in the bone. There may also be associated injuries to the muscles and ligaments along with the fracture. In some cases, the fibula may be fractured as well.

Types of fractures

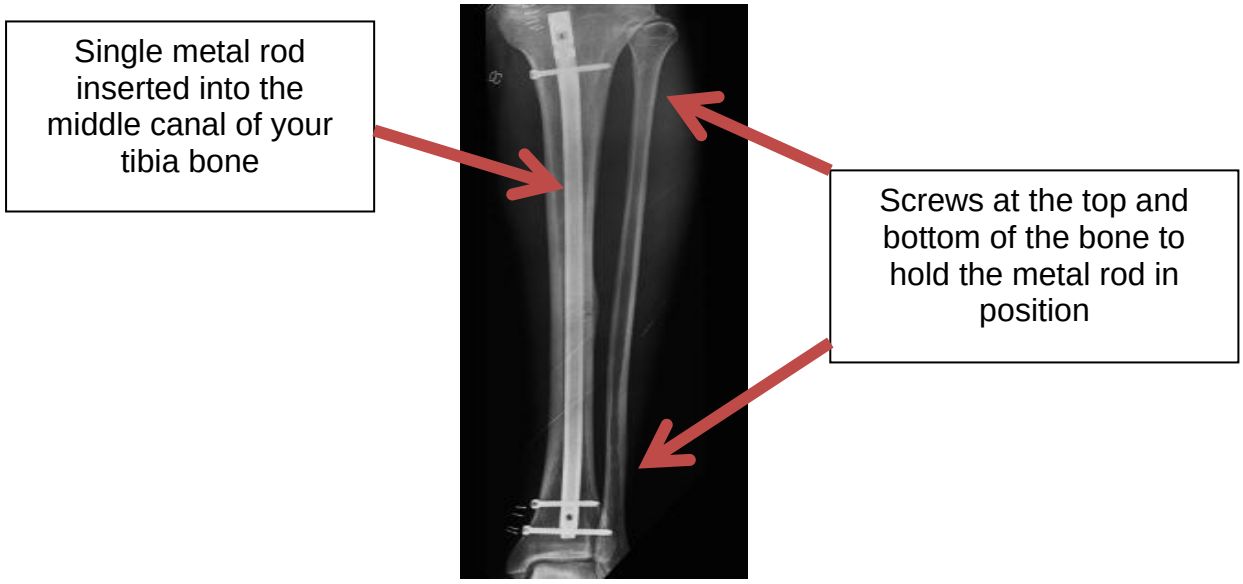
The tibia can fracture in many different ways depending on how the injury happened. The fracture may affect the middle section of the bone, or the ends, which may also involve the ankle or knee joints.

Management of the fracture

A fracture of the tibia can be treated in several ways. In this circumstance, your consultant has chosen to use an intramedullary nail.

Intramedullary nail

During this procedure, a metal rod is inserted from the front of the knee down the centre of the tibia and then fixed at both ends with screws, as shown in the following X-ray.



After your operation

Pain management

It is important to remember that 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 cast or heavy dressing, using an ice pack may give temporary relief from any discomfort and swelling. You can make up 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 medical advice from your GP.

First day after your operation

Your 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 in a chair. Your physiotherapist will advise you on 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 affected leg. This will be documented on the front of this booklet.

Walking aids: Your 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.

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 to reduce the swelling. Always rest with the knee in a straight position to maintain muscle length. Your physiotherapist will advise you on where to place the pillows in order to keep your leg elevated.

Subsequent days

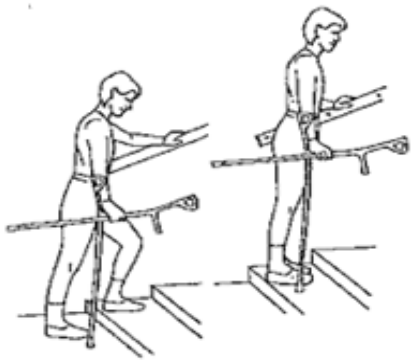
Your physiotherapist will progress your exercises and mobility with the aim of helping you become independently mobile again. They will practice going up and down stairs with you if necessary.

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 possible. If you have any weight bearing restrictions, your physiotherapist will teach you the correct technique for going up and down the stairs.

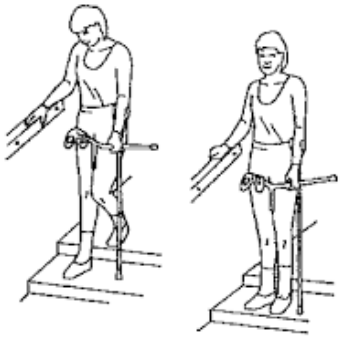
Going up

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 your 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 before your discharge.

Rehabilitation after leaving hospital

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

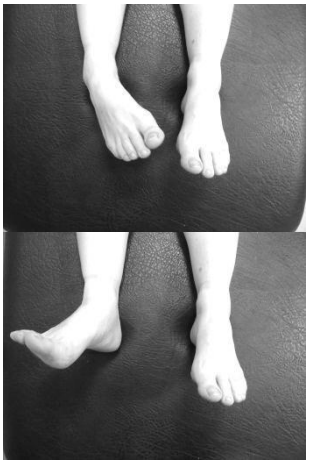
Exercises

These exercises aim to:

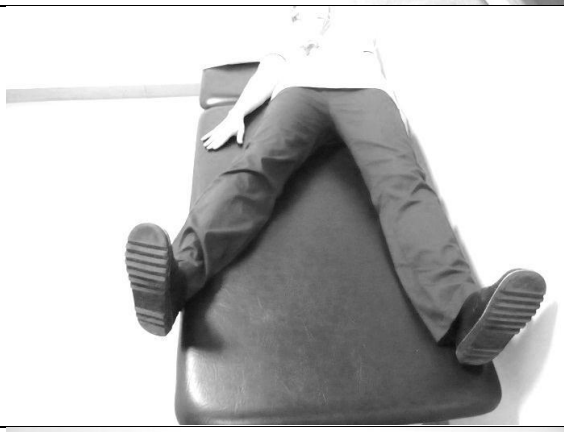
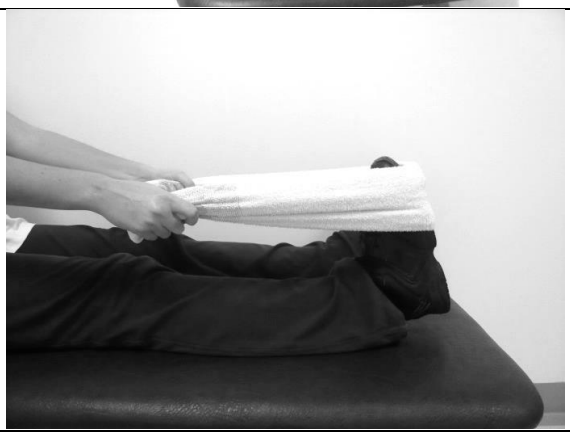
- improve movement and muscle strength.
- prevent joint stiffness.
- prevent muscle tightness.
- increase/maintain circulation

You may find it helpful to time your pain medication with your exercises. **Please complete the exercises that have been marked by your physiotherapist three to five times per day. Repeat each exercise 10 times unless stated by your physiotherapist.**

	Exercise	Instructions
☐		**1. 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.

☐		**2. Ankle inversion and eversion** Lie on your back with your legs straight. Slowly move your ankle so the sole of your foot faces inwards (big toe towards your head). Slowly move the ankle so the sole of the foot faces outwards (little toe towards your head).
☐		**3. Individual toe stretches** Sit up in bed with your knee slightly bent. Use your hands to gently move toes forwards and backwards.
☐		**4. 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 for 5 to 10 seconds. Relax.

☐		**5. 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 to straighten your knee. Hold for 5 to 10 seconds. Relax.
☐		**6. 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.
☐		**7. 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. Hold for 5 seconds, then slowly lower your leg to the bed. Relax.

☐		**8. Long arc quads** Sit in an upright chair 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.
☐		**9. Lying abduction and adduction** Lying on your back, gently move your operated leg out to the side and then return it slowly back to the middle.
☐		**10. Gastroc stretch** Sit up in bed with your leg straight. Use a rolled up towel wrapped around the base of your foot. Slowly pull the towel towards you until you can feel a stretch, keeping your knee straight. Hold for 30 seconds and then relax.

Useful contacts

- Inpatient Orthopaedics 020 3299 2368
- Fracture Care Team 020 3299 4041

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. The PALS office is located on the ground floor of the Hambleden Wing, near the main entrance on Bessemer Road - staff will be happy to direct you.

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

You can also contact us by using our online form at **www.kch.nhs.uk/contact/pals**

If you would like the information in this leaflet in a different language or format, please contact PALS on 020 3299 1844.

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