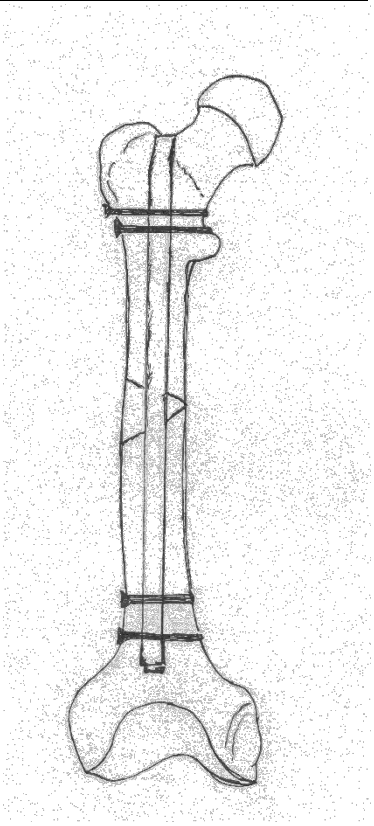
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Inter-medullary nail (IMN) fixation of the femur

This advice is for patients who have had an inter-medullary nail (IMN) fixation of the femur (thigh bone). This information is designed to help you get back to full fitness as quickly as possible after your operation.

Before you leave hospital a physiotherapist will teach you all the exercises on this leaflet and make sure that you do not have any problems.

What is an IMN fixation of the femur?



An inter-medullary nail fixation is performed where the shaft of the femur has been fractured and where there is a good chance that it will heal if held in place by internal fixation.

The inter-medullary nail consists of a large nail which goes down the centre of the shaft of femur and is secured by screws both top and bottom. This metal work will remain in place permanently, even once the fracture has healed.

Following your operation, you will be encouraged to mobilise as soon as possible and you must make sure that you have adequate pain relief to allow you to do this. You should be sat out of bed the day after the operation with assistance and a walking aid. Your doctor or physiotherapist will advise you of how much weight you can take through your operated leg, usually full weight, although this may initially be limited by pain.

Mobility will be progressed during your admission with the physiotherapist. He/she will advise you on how far you should be mobilising and what walking aids are appropriate for you (usually a walking frame initially and then progressing to crutches if able).

It is also important that you exercise to strengthen the muscles around the damaged hip. Your physiotherapist may advise you of additional exercises that may also benefit you.

Pain

After your operation some pain may persist for a further few weeks and you should use this as a guide when increasing your daily activities. A moderate ache which settles quickly is acceptable; severe pain which takes hours to settle is not. If you experience sharp pain, **stop activity immediately**. If symptoms persist, contact your GP for advice.

Wound care:

- On discharge you must arrange an appointment with your practice nurse for a wound check 10-12 days post-op.
- If you have any concerns about your wound i.e. it is red, weeping or bleeding please call the **Orthopaedic Outpatients Department on 0118 322 6938.** Please note this is an answer service only. It is checked in the morning on working days only (not weekends or bank holidays). Please leave a message and you will be contacted with an appointment as soon as possible.
- If you feel the problem cannot wait please leave a message and then either contact 111 for advice or attend your local Emergency Department (A&E). If you feel unwell or feverish and particularly if the wound appears infected please attend your local A&E.

Swelling

The swelling in the leg may remain for as long as three months. Having a rest period on the bed with the legs elevated (raised up) for a few hours a day will help control the swelling.

Mobility / Walking

You will need to use your frame/crutches until you are fully weight bearing and are confident to mobilise without them. This is very individual and some people will always be dependent on a walking aid.

Once fully weight bearing you may still need to use some sort of walking aid as you may still have a limp due to muscle weakness, become tired when walking further than expected or come to unforeseen obstacles.

Sitting down / standing up





- To stand up shuffle to the front of the chair, tuck your feet back underneath you. You may find it more comfortable initially to place the operated leg out in front of you. Push up with both hands on the arms of the chair, or push up with one hand on the arm of the chair holding your crutches in the other. Once balanced place both hands on the frame or crutches in both hands. ·
- To sit down, stand close enough to feel the chair against the back of your legs. Either let go of the walking frame and reach back to the arms of the chair with both hands or place both crutches in one hand and place the other on the arm of the chair. Step your operated leg forwards and gently lower yourself into the chair.
- Do not use the frame to pull yourself up or stand up or sit down with your hands still in the crutches.



Walking with a frame/crutches

- Move the frame or crutches first.
- Then step the operated leg forward.
- Push down through the frame or crutches and step forward with your non-operated leg.

Points to aim for when walking

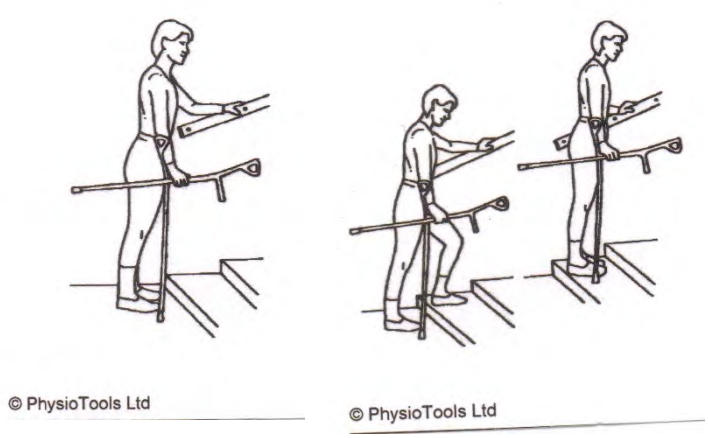
- Make sure that both steps are equal in length.
- Try to spend the same amount of time on each leg.
- Always put the heel of each foot to the ground first.
- Gradually increase your walking distance and amount of activity that you do each day.

Stairs

Your physiotherapist will practice stairs/steps with you prior to discharge if necessary. You may need to use a stick or crutches on the stairs if you only have one or no rails. You may also need to have an extra frame/ crutches/sticks to enable you to have something to walk with when you reach the top of the stairs.

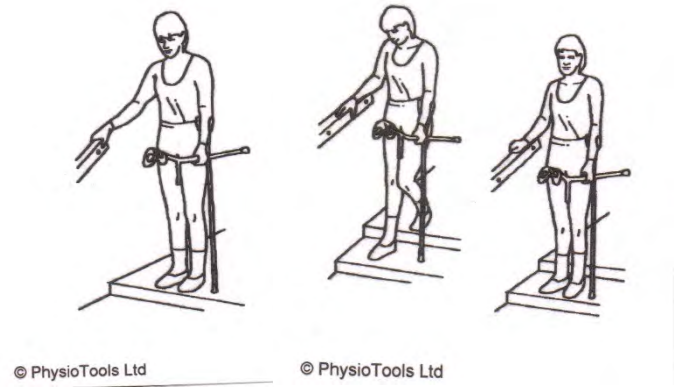
Ascending

- Hold on to your rail/rails.
- Step up with your un-operated leg first, then your operated leg.
- Followed by your stick or crutches.



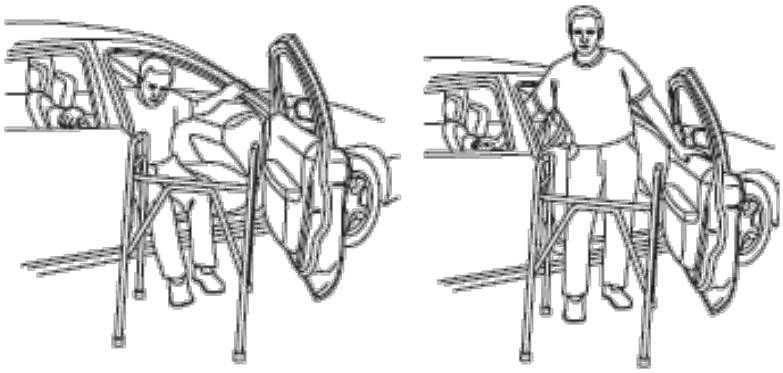
Descending

- Hold on to your rail/rails.
- Place your crutches or stick down one step.
- Step down with the operated leg first, follow with the un-operated leg.



Getting in/out of the car

- Positioning the car: you should sit in the front passenger seat of the car after your operation as there is more leg room. Make sure the car is parked away from the kerb, so you can be on the same level as the car before you try to get in.
- Push the seat back as far as possible and slightly reclined. Go bottom first into the car and lower yourself slowly to the edge of the seat. Use your arms and lift your bottom further across the seat towards the driver's side. Lift your legs into the car slowly.
- A plastic bag will help you swivel your legs in more slowly, but must be removed before you drive off.
- Reverse this procedure to get out.



Driving

- Don't drive until you are fit enough to do an emergency stop. This is normally six weeks after the operation; however, if you have an automatic car and have injured your left leg you may be fit to drive earlier.
- In order to drive you need to be nearly pain free, not be dependent on walking aids, have a good range of movement and have sufficient reflexes to manage an emergency stop.
- Remember to have a 'test drive' and practice an emergency stop with an experienced driver.
- You need to contact the DVLA and your insurance company if you are not driving after 3 months because of the injury. Failure to do so can result in a fine and prosecution if you are involved in an accident.

Work

Check with your GP when you can go back to work. If you have a desk job you will be able to return sooner than if you have a very active job.

Sports and hobbies

- Low impact activities such as walking, swimming and gardening are recommended.
- Avoid high impact activities until around 3 months post-op to ensure fracture healing.
- All heavy activities such as digging and heavy lifting should be avoided for 3 months post-op.

General advice

- Do have regular rest periods each day.
- An increased ache in the hip region usually means that your level of activity has increased.
- If you experience a sharp pain, stop activity immediately.
- If symptoms persist, contact your GP for advice.
- Aim to be as active as you can within the limits of pain.

Discharge

When the ward team feels you are ready, you will be discharged, either home or to a further rehabilitation centre. Before leaving, your physiotherapist should discuss with you which exercises to continue at home and how to progress your mobility.

Exercises

The following exercises should be started the day after your surgery and should be done 10 times each, up to four times a day with each leg. A small number of exercises done several times a day is more effective than a large number of exercises once a day. Your physiotherapist will help explain how to do them.

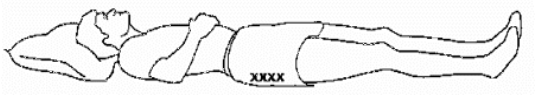
Static quads

- Lying with your legs out straight in front of you, tighten the muscles on the front of your thigh by squashing your knee down in to the bed and pulling your toes up towards you.
- Hold for a count of 5-10, relax completely.



Gluteal squeeze

- Squeeze your buttock muscles together as tightly as possible for a count of 5-10, relax completely.



Hip flexion/ Heel slide

- Lying with your legs out straight in front of you, slide the heel of your operated leg up towards your bottom, allowing your hip and knee to bend. Slide your heel back down again, relax completely.



Hip abduction



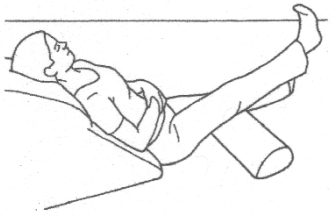
- Lying with your legs out straight in front of you, keeping both legs straight and your toes pointing towards the ceiling throughout, move your operated leg out to the side slowly.
- Return your leg to the start position, relax completely.
- Repeat 10 times.

Straight leg raise



- Sit or lie with your leg straight out in front of you.
- Tense your thigh muscles (quads) as for exercise 3, then lift your leg approximately 2 inches off the bed.
- Hold for a slow count of 10.
- Repeat 10 times.
- It is essential that you at least attempt this exercise. Even if you are unable to achieve this straight leg raise you will still be working the muscles in your leg.

Inner range quads



- Sit supported or lie on the bed.
- Place a rolled up towel wrapped around something solid like a tin under your knee.
- Straighten your knee, lifting your heel off the bed.
- Hold for a slow count of 10.
- Relax and repeat 10 times.

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Knee flexion in sitting



- Sitting on the edge of the bed or in a chair.
- With the foot on the floor bend the knee as far as possible.
- Hold for 2-3 seconds then relax.
- Repeat 10 times.

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Long arc quadriceps



- In your chair, kick your foot forward and straighten your operated leg slowly, hold for 5-10 seconds and slowly lower back down. Relax completely.

Once you are mobile with a frame or crutches you can progress to the following exercises. Make sure you are holding onto a firm surface for all standing exercises. Again, you should be doing 10 of each exercise, four times a day.



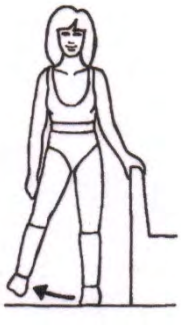
Hip flexion

- Slowly lift the knee of your operated leg towards your chest. Lower your foot back down, relax completely.



Hip extension

- Keeping your body upright throughout the exercise, slowly move your operated leg as far back as possible, return to the starting position, relax completely.



Hip abduction

- Keeping your body upright throughout the exercise, slowly move move your operated leg out to the side, keeping your toes pointing forwards. Return to the starting position, relax completely.

2 weeks onwards

Once any clips/sutures have been removed and the wound is fully healed you may start to massage the scar if you wish. This will help loosen and soften the scar.

Massage the scar with your thumb, making small circular movements along the incision. Change direction of the circles frequently. Do 10-15 circles in each area, then move about one inch along the scar and repeat.

Use of creams such as body lotion, vitamin E cream or E45 is purely one of personal choice; they will not harm the scar and will probably make the massage more comfortable.

Gradually increase the distance that you walk every day. You may also wean yourself off your walking aids if you feel confident to do so. We recommend that you continue to use walking aids if you have a limp or until you have walked as far as you need to and you don’t feel that you need a walking aid.

You can now try the following exercises when you are confident to do so. Everybody is different and if you feel these exercises are too difficult for you don’t worry either miss then out or leave them for another time.

Squats



- Stand holding onto something solid.
- Bend both knees.
- Go as far as you can comfortably then return to the upright position.
- Repeat 10 times.

Heel raises in standing



- Stand, holding onto something solid.
- Rise up and down on your toes, lifting your heels off the ground.
- Repeat 10 times.

Single leg balance

- Hold onto something solid.
- Put all of your weight onto the operated leg and lift your good leg off the ground.
- To make this exercise harder, let go of your support.
- Aim to build up to holding this position for up to 30 seconds, repeat 5 times.

Step ups



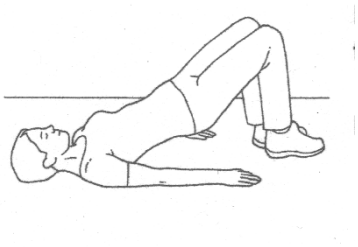
- Stand facing the stairs.
- Place operated leg on the bottom step.
- Hold onto the banister, and try and lift your weight up on the operated leg and place your other foot on the bottom step.
- Lower the good foot back down to the floor.
- Repeat 10 times.

Step downs



- Stand on the bottom step facing down the stairs.
- Hold onto the rail.
- Try and lower your good leg to the floor.
- Straighten up and return foot to the bottom step.
- Repeat 10 times.

Bridging



- Lie on your back with your knees bent.
- Tuck your hips under and lift your bottom off the bed until your hips are in a straight line with your knees and shoulders.
- Hold for a slow count of 10. Relax and repeat.

Hip abduction in side lying

- Lie on your good side, with the knee of your operated leg straight or only slightly bent. Lift your leg towards the ceiling taking care to not turn the toes towards the ceiling or to roll backwards.
- Hold for a slow count of 10, relax and repeat 10 times.

Useful numbers and contacts

Royal Berkshire NHS Foundation Trust **Orthopaedic Physiotherapy Department** Royal Berkshire Hospital London Road, Reading RG1 5AN Tel: 0118 322 7812	Royal Berkshire NHS Foundation Trust **Occupational Therapy Department** Royal Berkshire Hospital London Road, Reading RG1 5AN Tel: 0118 322 7560
Elderly Care Physiotherapy Department Woodley Ward Battle Block Royal Berkshire Hospital London Road, Reading RG1 5AN Tel: 0118 322 8272	Maple Ward: 0118 322 7335 or 7336 Dorrell Trauma Unit: 0118 322 5720 Emmer Green Ward: 0118 322 8272 or 6901

Visit the Trust website at www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Physiotherapy Department
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