



People caring for people

# Knee Joint Surgery

This is your booklet to use during your stay with us and when you go home.  
Here are a few people you will meet:

My Named Nurse: .....

My Matron: .....

My Physiotherapist: .....

# Welcome to Ramsay Health Care UK

Throughout your stay in hospital you will be under the expert care of our hospital team. We will ensure you receive all the treatment and advice to ensure a rapid recovery following your surgery.

This booklet is designed to give you information about your stay in hospital, and the exercises and advice you need to follow after your return home.

The aims of your physiotherapy treatment are:

To be able to walk and carry out functional daily activities independently by the time you are discharged home (including up and down the stairs).

To give you an exercise programme to carry out at home independently. Instructions will be given during your physiotherapy sessions, whilst you are in hospital.

## Pre Operative Assessment

You will be invited to attend a pre operative assessment which aims to complete any pre surgery tests or checks you may need, to ensure that you are fit for your anaesthetic and surgery. During this time, you will be encouraged to ask any questions you may have about your forthcoming surgery and rehabilitation afterwards. You may also meet a physiotherapist who will advise you about any special equipment you may need at home during your recuperation and the exercise programme you will follow during your hospital stay and rehabilitation after discharge.

Your surgeon will have advised you on the best type of surgery for your needs. There are several types of knee joint replacement surgery operations including:

- patella femoral
- total knee replacement (TKR) - both sides of your knee joint are replaced
- partial (half) knee replacement (PKR) - only one side of your joint is replaced in a smaller operation with a shorter hospital stay and recovery period



# Your Hospital Stay

You will be asked to come into hospital at a particular time – this is to ensure there is plenty of time to get you ready for theatre.

On arrival you will be shown to your room and given an explanation of how everything works (including the call bell). You will have time to become familiar with your new surroundings, and meet the staff involved with your care – including your nurse and physiotherapist.

You will also be seen by your surgeon and anaesthetist, who will complete any last checks and ensure that you are happy to proceed with your surgery.

## **What to bring with you:**

- Toiletries and flannels
- Nightwear—boxer shorts, short nightdresses or short leg pyjamas may be more comfortable
- A pair of shorts, loose fitting trousers or skirt
- T-shirts or comfortable tops
- Comfortable walking shoes or trainers (remember that your lower leg and foot may swell post operatively)
- Slippers—ensure they have a ‘back’ in them (around your heel)
- Dressing gown
- Things to do! (e.g. reading materials)

You will be expected to wear your normal clothes during the day.

The hospital environment is usually quite warm so avoid very thick clothing. Please do not wear any make-up, jewellery or nail varnish on the day of your surgery.

You will stay in hospital until you are considered well enough to manage at home (from 2 / 3 days according to how well you recover and mobilise post surgery). This also depends on the type of surgery you have had – i.e. whether you have had your whole knee joint replaced or just a part of it.

# Post Operative Information

## Position in bed

After your operation you can lie in bed as you feel comfortable. Your mobilisation programme can commence as soon as your surgeon and physiotherapist feel you are ready.

## Additional oxygen

If you need additional oxygen, it may be given via a face mask or a small tube which lies just beneath your nostrils. This will cause no discomfort and will be discontinued when no longer needed.

## Intravenous fluids

Until you are able to drink again normally, it is important that you don't become dehydrated. In order to do this, extra fluids may be given via a 'drip' going into the back of your hand. Once your condition allows, the drip will be removed.

You will be able to drink as soon as you are fully awake and eat something light when your nurse feels you are well enough to tolerate food.

## Pain relief

All surgery involves some degree of pain and your anaesthetist will discuss the best way for this to be dealt with, to make your recovery as comfortable as possible. Please advise your nurse if your pain relief is not easing your pain. Remember that you need to be comfortable at all times in order to be ready for walking and exercising. This means that you will need to take your pain killers regularly.

You will also be provided with painkillers when you go home and it is still important to take these regularly as you have been advised. Gradually decrease the amount taken as your pain allows. Your GP can prescribe more painkillers if required, once you have finished your supply from the hospital. If pain persists and is not controlled with the medication you have been advised to take, please contact the hospital or your GP for advice.

## Wound drain

As part of the healing process, the area around your new knee joint may fill with fluid or blood. To remove this, your surgeon may have inserted one or two small wound drains during the operation. If you have a drain, you will see a small tube leading from your wound to a container which hangs at the side of your bed. This is removed 24-48 hours after your operation.

## Continuous Passive Motion (CPM) Machine

Occasionally a machine called 'CPM' is used to help bend (flex) your knee. One of the Healthcare team may adjust the degree of bend (flexion), in order to get your knee joint moving as soon as possible after your operation. Sometimes this is also used at a later stage in your recovery, if your knee becomes stiff and you are finding it difficult to bend.

## Cold Therapy

This consists of a cool wrap which can be placed around your knee. This may be used to help reduce swelling and discomfort caused by your surgery.

## Bladder and Bowel

Most patients manage to pass urine without problems following their surgery. Until you can get out of bed, you will be offered a bedpan to use. If you do have problems passing urine, it may be necessary to insert a catheter to allow the free flow of urine which will collect in a small bag at the side of your bed. If we feel this is necessary and will relieve any discomfort, it will be discussed fully with you first. The catheter will be removed once you are more mobile and able to pass urine normally.

You may not feel the need to open your bowels for a few days after your surgery. If you are uncomfortable, however, please discuss with your nurse.

## Check X-ray

An X-ray will be performed a day or two after surgery, just to check that your new knee is in the correct position.

## Washing

Your nurse will assist you with your washing needs, as required.

- Generally it is fine to have a shower after the initial dressing has been removed, if you are able to walk into a shower cubicle. Please follow the instructions given by your nurse or physiotherapist.
- Try not to use soaps, lotions, creams or powders directly over the wound.
- Let the clean water wash over the wound gently - do not rub or try to clean it with your hands as this could cause pain and prevent healing.
- Dry your wound carefully-patting it with a clean towel.
- You should wash your hair either in the shower or by sitting on a high chair with your back to the basin.
- You may find the following items useful, as they are designed to help you perform your normal activities.
- Long handled sponge.
- Long handled shoe horn.
- Helping hand (grabber).
- Raised toilet seat.
- If possible, have a shower rather than a bath when you get home, as it may be difficult initially to get in and out of a bath. It is also not advisable to allow your wound to soak in the water for any length of time.
- If your shower is over the bath, it may be easier to use a bath seat initially.
- You should always use an anti-slip mat when standing in a shower.

# Post Operative Information

## Getting dressed

Until you are able to manage on your own, your nurse will assist you with dressing. There are a few things to remember:

- Dress sitting down.
- Avoid tight clothes around the knee area, as they will put pressure on the scar.
- You may find 'slip on' supportive shoes easier to wear in the early stages.

## Diet

It is important to remember that some painkiller medications can cause constipation.

It is, therefore, important that you eat a healthy well balanced diet, rich in fruit and fibre and drink plenty of water.

## Wound Care

Following surgery, you will have a dressing on your wound site. This will be checked frequently by your nurse and only changed if necessary.

You will have a dressing in place when you go home. This should remain in place until you are instructed to remove it by your surgeon or nurse. Do not change it unless:-

- it becomes loose
- it becomes wet

If the surrounding area becomes hot and red or if there is a discharge from the wound must inform the hospital or your GP.

## Swelling and Bruising

There may be some swelling and bruising around the wound site and down your leg which can persist for up to several months. This is normal and nothing to worry about unless you have any of the symptoms or signs below.

## Prevention of Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE)

When mobility is reduced, and more time is spent in bed, there is an increased risk that a blood clot may form in the veins of your calf or thigh – this is called a 'DVT'. Sometimes the clot travels to your lungs and causes a 'pulmonary embolism'.

You will be assessed prior to your operation to see if you have any factors or conditions which may increase this risk. Your nurse will continue to assess you during your recovery and check regularly for any signs that you may be developing a DVT or PE.

To help reduce this risk and increase your circulation, you may be asked to wear special compression stockings during your recovery.

We may also advise you to wear some special boots or calf wraps, which are attached to a small pump and increase the blood circulation in the legs. Leg exercises are also proven to be very effective.

Anticoagulant therapy may be used to help to thin your blood, and prevent the formation of a DVT. This treatment is started the day after your surgery and continues after you return home.

## Signs to look for when you go home:

A DVT or PE can also occur after you go home. To prevent this it is important that you keep as mobile as possible and that you continue to do your exercises, as instructed by your physiotherapist. If you are concerned you should contact your doctor immediately.

### **The signs to look for are:**

- increased pain or swelling in your leg
- increased heat in your leg or discolouration of the skin (excluding the area around your wound site)
- numbness in the feet
- shortness of breath
- coughing up blood
- chest pain

### **Prevention of Infection**

You can help prevent a wound infection by following the 'wound care' instructions on page 6.

To help prevent a chest infection, it is important to do the 'deep breathing' exercises you have been taught, as well as keeping mobile. If you feel you have a temperature, or are short of breath, or producing sputum, you should inform your GP. If in the future, you think you may have any sort of infection, e.g. tooth abscess, chest infection, urine infection etc, you should consult your GP or Dentist at the earliest opportunity. They will tell you whether you need antibiotic cover in order to prevent infection spreading through the blood stream into your joint replacement.

### **Getting the right balance between exercise and rest**

It is important to follow the exercise regime given to you by your physiotherapist.

It is also important to allow some time to rest in order that your body can recuperate.

You will benefit from a rest period during the afternoon. It is not advisable to sit with your leg down for long periods - try to keep it raised beside you on the couch or on a stool.

This will help reduce the amount of swelling as well as stretch out the muscles behind your new knee.

# Rehabilitation

Your goals to achieve before you leave hospital:

1. To be able to do your exercises at least three times a day.
2. To be able to get in and out of bed and a chair on your own.
3. To have a good walking pattern with your sticks or crutches.
4. To safely walk up and down a step or stairs, if appropriate.

It is very important to get your knee moving as quickly as possible after your operation.

## Other General Advice

It is normal for your knee to be stiff and sore to start with. Movement will help reduce stiffness, swelling and improve your walking and general comfort. A lot of people worry about moving their knee whilst the stitches/ clips are still in the wound – don't worry, the wound will not burst open!

## Avoid standing for long periods.

- If your leg is swollen, rest frequently on the bed preferably with two pillows under your lower leg. This is better than resting the leg on a foot stool.
- Avoid kneeling until you discuss this with your surgeon.



# Mobilisation

## Getting Off Your Bed

- Bend your non-operated leg, so you can use it to help you move.
- Put your hands behind you and sit up.
- Use your arms and non-operated leg to help move yourself to the edge of the bed.
- Try to keep your body straight, whilst sliding your legs one at a time, out of the bed.
- Prop yourself up on the edge of the bed.
- Push down on the bed with your hands and stand up.

## Getting Back Into Bed

- Ensure that the backs of your legs are touching the side of the bed before you sit down, and as you start to lower yourself, slide the operated leg out in front of you.
- Sit on the edge of the bed so your bottom is close to the pillows.
- Using your hands to assist you, shuffle backwards onto the bed.
- Start to turn yourself round, bringing your legs onto the bed, one at a time. You can use your non-operated leg to assist you if needed.

Follow the advice of the physiotherapist and use appropriate aids.

You may start your mobilisation with a walking frame and progress to crutches or walking sticks, as shown below:

## Walking with an aid

1. Move your walking aid forward first
2. Next move your operated leg forwards
3. Then follow with your non-operated leg
4. Repeat the process for the next step

This way of walking is called '3 point' walking

Turning round can be to either side, but you must prevent twisting or pivoting. To turn around, take small steps on the spot or walk in a small half circle.

**A** Walking frame

**B** Elbow crutches

**C** Walking sticks



# Mobilisation

If you become very skilled at three point walking we may teach you the more advanced way of 'reciprocal walking'.

1. Move your right stick forward closely followed by your left leg.
2. Now move your left stick forward closely followed by your right leg.

This way of walking takes quite a lot of coordination and not everyone can manage it. Don't worry if you find this way of walking too difficult for you – the '3 point gait' is just as good. When walking and changing direction, try to avoid 'twisting' on your operated leg. Make sure that you lift your feet and take small steps, rather than swivelling on the spot, as this will put strain on your new knee. Also try to vary your position as much as possible – for example sitting, walking, standing or resting.

## Stairs

Your physiotherapist will practise the stairs with you, before you are discharged from hospital. If you have a rail/banister at home, please use this at all times. On discharge from hospital, you should be able to complete the stairs independently and safely.

Please remember, when going up and down stairs:

- Up with the non-operated leg first
- Down with the operated leg first

## 1. To go up steps:

- Stand close to the stairs
- Hold the handrail with one hand and walking aids in the other
- First step up with the non-operated leg
- Then bring the operated leg up to the same step
- Bring the walking aids level
- Always go up one step at a time

## 2. To go down stairs:

- Stand close to the stairs
- Hold the handrail with one hand and walking aids in the other
- First put the walking aid down the step
- Step down with the operated leg
- Then step with the non-operated leg onto the same step
- Always go down one step at a time

*In this diagram the operated leg is shaded.*



## Sitting and Standing

When sitting down, hold onto the arms of the chair and lower your body down slowly, keeping your operated leg out in front.

When standing up, place your operated leg out in front, push up from the arms of the chair with both arms. As you stand up, straighten out your operated leg in front of you and take weight through the operated leg as able. Stand up tall and make sure that you are well balanced before you start to walk.



## Travelling by Car

Avoid driving a car until you are advised this is safe. The exact length of time will depend on the type of surgery you have had and which side has been operated on. You should have your surgeon's permission before driving.

Without this, your insurance cover may not be valid (always check with your insurance company to be safe).

Put a bin liner on the car seat to help you slide easily and make sure the seat is as far back as possible and in the highest position

- Turn your back towards the car.
- Hold on to the door frame and not the door, as it may close on you.
- Bend and carefully sit on the edge of the seat, keeping the operated leg out in front.
- Using your hand and non-operated leg, push your bottom as far back on the seat as possible.
- Slowly lift your feet one at a time into the car foot well. Avoid over bending and twisting.

To get out of the car, reverse the order.

If you are planning a journey of more than one hour it is advisable to stop every 30 minutes for a short walk.

# Exercise Programme

During the operation, the muscles around your knee are damaged and will be weak and stiff afterwards. You will need to do specific exercises to get your knee strong and mobile again.

Exercises should be done 3–4 times a day, in a slow and controlled manner. Follow these in hospital and then continue at home as shown by your physiotherapist. You do not have to be completely flat in bed to do these exercises.

## Ankle pumps/circulation exercises

Bend and straighten your ankles briskly, keeping your knees straight.

Repeat ..... times every hour during the first few days.



## Static quads

Lie on the bed with your leg out straight.

Tighten the thigh muscles (quadriceps) and hold for 5 seconds.

Repeat ..... times



## Heel slides

Lie on the bed.

Use a carrier bag, board or orthoglide to assist this movement.

Slide your heel up towards your bottom to flex your hip and knee.

Now straighten your leg out again.

Repeat ..... times



## Inner range quads

Lie on the bed.

Roll up a large towel and place this under your operated knee.

Push down onto the roll with your knee, lifting the heel off the floor to straighten the knee.

Hold for 5 seconds.

Repeat ..... times



## Straight leg raise

Sit with your leg out in front of you.

Point your toes to the ceiling and clench your thigh muscles.

Lift your whole leg up keeping your knee straight.

Raise your leg up until it is just clear of the bed.

Repeat ..... times



## Stretching exercises

Sit or lie with your leg out in front of you.

Put the heel up on a block or pillow so that the knee hangs in mid-air.

Let the knee stretch for five minutes, or less if it is too painful.

Repeat ..... times



## Gluteal exercises

Lie on the bed with your knees bent.

Tighten your buttock muscles together.

Lift your bottom off the bed.

Return to the starting position.

Repeat ..... times



# Exercise Programme

## Bending/flexing the knee exercises

Sitting on a high chair or on your bed, with your operated knee straight out in front of you and your foot resting on the floor.

Slowly slide the foot of the operated leg back on the floor as far as it will go.

Hold this full bend for a slow count of three and then slowly return your leg to the straighter position.

Repeat ..... times



## Hamstring exercises/knee flexion

Stand with support, holding onto a steady surface.

Bring the leg slightly backwards.

Bend your knee and lift your foot off the floor.

Repeat ..... times



## Calf raises/heel raises

Stand with support, holding onto a steady surface.

Go up onto your tip toes on both legs to strengthen the calf muscles.

Repeat ..... times



## Mini squats

Stand, holding onto a steady surface and support yourself with both hands.

Slowly bend your hips and knees (see photo), trying to push your bottom back.

Then stand up again, tightening your buttocks.

Repeat ..... times



## Step ups

Step up with one leg leading and then repeat with the other leg leading.

Repeat ..... times



## Lunges onto step

Place your operated leg onto the step and with support, slowly take body forwards over your foot, to bend the knee.

Your heel should be kept in contact with the step.

Ease back to straighten the knee.

Repeat ..... times



# When can I?

The following guidance may differ slightly depending on your progress and on the advice of your surgeon or physiotherapist.

## Walk outside?

As soon as you go home you are advised to take walks regularly through the day. How far you go is up to you and how you feel, but there is no limit on distance. It is good to have a walk outside every day as long as it is not wet or icy underfoot. Try to extend the distance you walk outside by a little each time you go. On the first occasion it may be advisable to have someone to accompany you.

## Get in and out of the car?

The physiotherapist will give you advice about getting safely in and out of a car, so you can go home after your operation. We do not advise long car journeys straight after your operation.

A maximum of about 20-30 minutes is recommended in the first 2 weeks. When you go for longer journeys you must stop and take a break regularly; get out of the car and walk for a few minutes to avoid stiffness.

## Go back to work?

This will depend on your type of work and on the advice of your surgeon. If possible go back on a part time basis and build up your hours gradually.

## Travel abroad?

If you are planning long distance travel e.g plane or ship in the first three months after surgery, please discuss this with your surgeon.

## Have sexual intercourse?

You may resume sexual intercourse as soon as you feel comfortable.

## Cycle?

Your physiotherapist may advise you to go on a 'static' exercise bike as soon as you can bend your knee far enough. You can progress this to cycling outside on a normal bike (on the flat) when you feel confident to do so.

## Play golf?

You may resume this at 3 months after your surgery.

## Swim?

Not until your wound is fully healed and you can safely get in and out of the pool (although you may be allowed aquatic therapy sessions before this). Avoid breast stroke leg kicks initially.

## Ski?

Ask your surgeon for advice.

## Garden?

Not before 2 months after your surgery. Try to avoid kneeling on your operated leg as this will put too much strain on your new joint.

## Dance?

Avoid any dancing involving twisting and over bending for 3 months after your surgery.

## And finally!

To enjoy the benefits of your new joint, you need to look after your general health as well as your new knee:

- Eat healthily in order to maintain a healthy weight
- Take regular exercise
- Continue your knee exercises until you have returned to your normal level of activity
- Allow yourself plenty of time to rest

This will help your knee replacement last as long as possible.

## References and further Information

1. British Association for Surgery of the Knee and the British Orthopaedic Association (latest review Oct 2016) Total Knee Replacement: A Guide for Patients. Available at: **[www.boa.ac.uk](http://www.boa.ac.uk)**
2. Knee Joint Replacements: PatientPlus article (latest review Aug 2014). Available at **[www.patient.co.uk](http://www.patient.co.uk)**
3. NHS Choices (latest review Jul 2016) Knee replacement - Recovery. Available at: **[www.nhs.uk/Conditions/Knee-replacement/Pages/Recovery.aspx](http://www.nhs.uk/Conditions/Knee-replacement/Pages/Recovery.aspx)**



# My Knee Operation Goals

## **At the end of my pre-operative assessment clinic appointment:**

- I have a better understanding about my forthcoming surgery and stay in hospital
- All of my questions have been fully answered
- I know who to contact if I have any further concerns before I go into hospital for my operation
- I have received written information about the procedure I'm going to have

## **Before I go for my operation**

- I have seen my anaesthetist and understand about the type of anaesthetic I'm going to have
- I have seen my surgeon and the knee which is going to be operated on, has been marked
- I know what will happen immediately after my operation when I'm in the recovery area
- I feel safe and well prepared for my operation

## **After my operation, when I'm back in my room:**

- I feel comfortable, with my pain and nausea controlled
- I'm able to complete my toes, feet and breathing exercises
- I feel confident about drinking fluids
- I am able to rest in-between my carers' visits
- I have stood by my bed with assistance

## **During the first day after my operation:**

- I'm feeling comfortable and my pain is controlled with medication
- I'm feeling more confident about my exercises
- I'm drinking and starting to eat a light diet
- I have stood by my bed and walked a few steps with assistance

## **On the second (and subsequent days) after my operation:**

- I am comfortable and taking regular pain relieving tablets
- I have walked around my room with a frame with a walking aid
- I am eating a well balanced high fibre diet and drinking plenty of fluids
- I have completed my exercises as instructed

## **Before going home:**

- I'm comfortable and taking pain relieving tablets as I need them
- I'm becoming increasingly independent and more confident each day
- I'm eating a well balanced diet
- I can walk competently with my walking aids
- I can go up and down stairs/steps safely

- I am aware of who to contact should I need advice when home
- I have a clear understanding of my follow up care

**At home:**

- I can walk competently with walking aids and manage stairs/steps safely
- I know how to care for my wound and what to look for if it isn't healing as well as it should
- My pain is controlled with the tablets I am taking
- I understand the physical movements I should avoid and why

## Do you know...?

Below are a few questions designed to check that you know about the most important aspects of your care before you go home.

If you don't know the answer to any of these questions, then please ask your nurse or physiotherapist before you go.

**I know...**

- What number to call and who to speak to, if I have any concerns once I am home
- What I can do on my own and what I need help with
- The importance of my exercises and how and when to do them
- How much pain, bruising or swelling I should expect when I get home (and for how long)
- How long I need a dressing on my wound and how to change it if it becomes loose
- When & where my stitches or clips will be removed
- When and how to take my medication
- What the side effects are of my medication, including my painkillers
- When my next physiotherapy appointment is
- When my next Doctors appointment is
- When I can shower or have a bath
- When I can return to normal activities (including sex)
- When I can do my usual sporting activities
- When I can drive again
- When I can go back to work
- How to put on my anti-embolism stockings and when they can be removed
- The symptoms of complications to look out for (e.g. wound infection or DVT)

