NHS
University Hospitals Dorset
NHS Foundation Trust

Your knee replacement surgery at

The Royal Bournemouth Hospital

An information booklet to guide your return to activity
Please bring this booklet into the hospital with you

Website: **www.rbch.nhs.uk** ■ Tel: **01202 726223**

This guide book belongs to:

.....

Your orthopaedic consultant is:

.....

Your surgery date is:

.....

Patient goals:

1 .....

2 .....

3 .....

Pre-op range of movement

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You will find it useful to bring this guide book with you each time you visit the hospital.

Patient's guide to **knee replacement**

Contents:

Introduction:

Dear patient

This booklet tells you about total knee replacement surgery at The Royal Bournemouth Hospital. It is for people who have decided to have surgery after discussing the options, benefits and possible risks with their consultant or surgeon.

We have developed this guide to help answer any questions that you may have about your operation and recovery afterwards. It will be useful during each of your hospital visits so please bring it with you.

The booklet is a general guide and there may be variations in your care, as advised by your surgeon, anaesthetist, nurse or therapist. These alterations should take priority.

All members of the Orthopaedic Team are committed to providing you with the highest standards in care and we look forward to welcoming you.

Best wishes

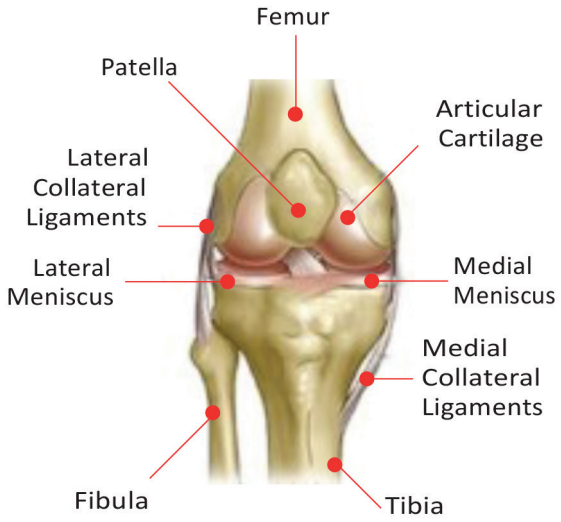
The Orthopaedic Team

Educational information

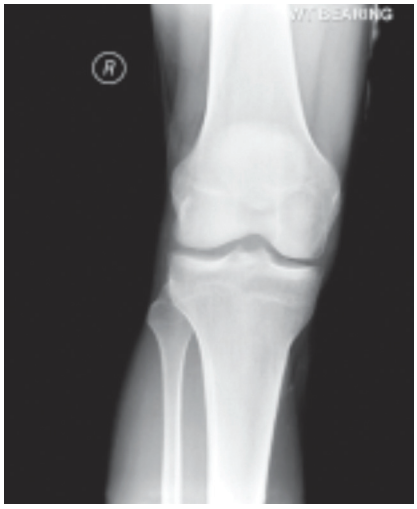
The normal knee

The knee joint is the largest joint in the body. During everyday activities the knee joint can support up to seven times your own body weight. The knee joint connects the thigh bone (femur) to the shin bone (tibia). The ends of these bones are coated with a thick, smooth layer of cartilage which protects the ends of the bones within the knee joint. Between these bones is a structure called the meniscus, which acts as a shock-absorber. The kneecap (patella) sits over the top of the joint and is attached to muscles that connect the femur and tibia. The knee joint is held together with strong ligaments; two cruciate and two collateral ligaments. The whole joint is enclosed in a capsule which produces synovial fluid that nourishes the joint and assists in smooth movement.

Diagram of normal knee joint



X-ray of normal knee joint



The arthritic knee

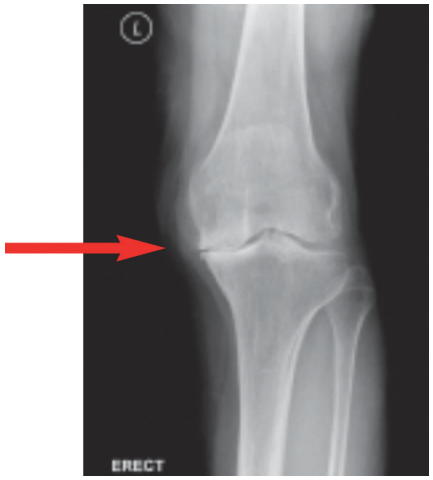
Arthritis of the knee wears down the cartilage covering the bones gradually over time. The most common form of arthritis is osteoarthritis. When exposed, the bones can then rub against each other, which may cause them to change shape. This can cause severe pain and stiffness.

The more the arthritis advances, the sooner the pain occurs, ultimately even at rest. When arthritis becomes advanced, patients mostly suffer with constant severe pain, stiffness and swelling. The causes of osteoarthritis in most cases are unknown, but there are factors that can contribute to osteoarthritis such as trauma, age, genetics and obesity.

Inflammatory conditions such as rheumatoid arthritis can also be a source for pain. Arthritis can affect different areas of the knee.

If there is significant wear in more than one area, a knee replacement may be appropriate.

X-ray showing arthritis affectingthe medial compartment of the knee



When is a total knee replacement (TKR) appropriate?

The aim of total knee replacement surgery is to reduce pain and increase a patient's mobility. If the arthritis has affected one or more areas of the knee joint then the ends of the femur and the tibia are replaced with metal implants, and a plastic insert is placed between them. If there is significant arthritis on the underside of the kneecap then this can be smoothed surgically. Occasionally a plastic button is implanted on the underside of the kneecap.

Surgery

The knee replacement is designed to fulfil the form and function of the natural knee joint. A knee replacement will never behave in the same way as a normal non-diseased knee joint - there will always be some restrictions.

Expectations

Your total knee replacement has been designed to relieve you of pain when you are walking and at rest. It should also help improve your ability to sleep at night - these are the main aims of surgery.

A proportion of patients experience discomfort when they try to kneel, and some find they can't kneel after a knee replacement. However, the vast majority of patients who have had a replacement couldn't kneel before surgery. Total knee replacements are not designed for sport, and activities such as running, tennis etc. are best avoided. If these activities are important to you though, should discuss your suitability for knee replacement carefully with your surgeon before undergoing surgery.
Gentle non-impact activities such as cycling and swimming are usually possible, but not always, as this depends on how mobile and active you were before the surgery.

The amount of movement from your new knee will vary. This is often influenced by how much movement you had before surgery. Most patients can achieve about 10° more bend on the knee than before surgery. It's common to have an area of numbness around the scar after your knee replacement surgery, and this is often permanent, but most patients don't find this to be a problem.

Knee replacements are metal and plastic mechanical devices so it's not unusual to experience some clicking and clunking. Provided this isn't painful then it's nothing to be concerned about.

It takes approximately one year for your knee replacement to be at its best, and your body to be fully used to it. At three and six months post operation, most patients haven't fully recovered and it's important to bear this in mind. By one year, the vast majority of patients are comfortable with no or little pain from the knee, and are much more mobile than before the surgery.

In general, about four out of five people are very pleased with their knee replacement. One in five people are less satisfied, and this is often as a result of failing to understand the expected outcome after a replacement. If you aren't sure that you are right for a knee replacement then please discuss it carefully with your surgeon.

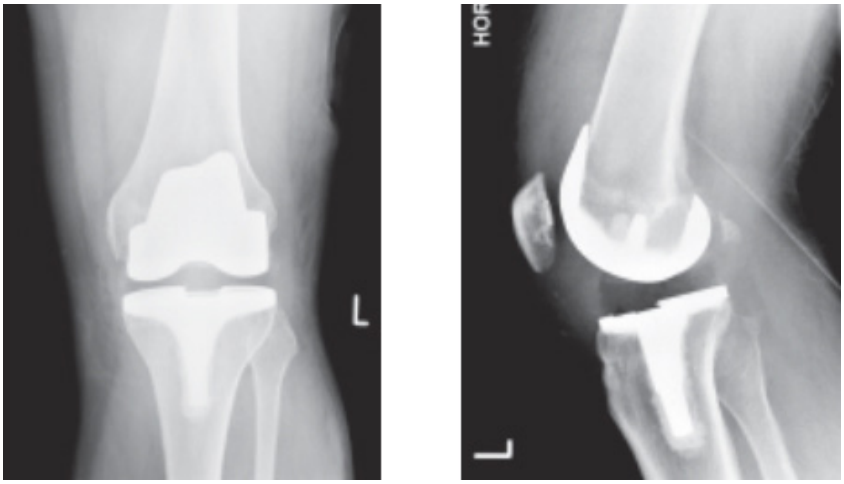
To decide if it's suitable for you, please access this decision making tool:
http://dorset.medicaldecisions.co.uk

Total knee replacement

A total knee replacement involves resurfacing the end of the thigh bone, and the top of the shin bone. The artificial knee (prosthesis) replaces the bone. The prosthesis consists of a metal alloy and high density plastic.

Your total knee replacement will consist of metal and plastic components that are designed to be durable. The picture below is an example of a total knee replacement. Please note, individual knee repleacements may differ.

X-rays of a knee with a total knee replacement in situ



Picture of TKR prosthesis

Complications

A total knee replacement is a major operation, and as with any operation there are risks. The risks outlined below are talked about in the following terms, but you should discuss what the risks are specific to you and your health with your surgeon.

Term	Numerical Ratio	Equivalent
Very common	1/1 to 1/10	A person in a family
Common	1/10 to 1/100	A person in a street
Uncommon	1/100 to 1/1000	A person in a village
Rare	1/1000 to 1/10,000	A person in a small town
Very rare	Less than 1/10,000	A person in a large town

Common

Bleeding

It is common to have a small amount of bleeding from the wound after surgery. Significant bleeding after a knee replacement is rare but on occasions a blood transfusion may be required. If there has been excessive bleeding resulting in significant swelling in the knee, a further operation may be required within the first few days to remove the clotted blood.

Scar

The scar from a knee replacement should form a fine white line down the front of the knee over a course of 2 years, however some individuals may produce more prominent and unsightly scars.

Stiffness

You will be shown exercises to improve movement in your knee and will have physiotherapy as an outpatient. However if you are struggling to bend the knee post-operatively you may require a manipulation of your knee under an anaesthetic to help improve the bending.

Pain
This operation is designed to remove arthritic pain caused by the knee joint. Initially after the operation you are likely to have pain due to the surgical procedure however the nursing staff will provide you with pain relief to manage this. This pain should resolve over time. However a proportion of patients may have continued discomfort despite the knee replacement itself working well.

Clicking and clunking
Your knee replacement is a sophisticated mechanical device made of metal and plastic. It will five some clicking and clunking sensations which are perfectly normal and nothing to worry about. Some people do not notice these sensations.

Post-operative nausea and vomiting
Anaesthetics may make you feel sick after surgery. If this is the case please let your nurses know and they will be able to give you some medication to help.

Urinary problems
It is likely you will have a catheter after your operation. This is because if you have a spinal anaesthetic (the most common kind of anaesthetic used) this is likely to affect the nerves which control your bladder for a short time after the operation. If you cannot urinate after your catheter has been removed, you may need to be re-catheterised to help you empty your bladder.

Chest infection
If this happens you may need antibiotics and physiotherapy.

Knee cap problems
Your surgeon will make a decision before or during your surgery as to whether to resurface your kneecap or simply smooth it off. There are pros and cons to each approach. If the kneecap causes on-going problems a second smaller operation may be required to address it.

Poor wound healing
Smoking has been shown to delay wound healing and increase complications post-surgery. Patients who stop smoking have a better outcome from surgery.

Blood clot in the leg (Deep Vein Thrombosis - DVT)
A DVT is a blood clot in the deep veins of the leg. This can cause pain swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. However, most clots are small and settle without causing any problems. You will be given anti embolism stockings, blood- thinning medication and exercises to reduce the risk of DVT. Getting out of bed the day after your operation with the help of the therapists also helps reduce the risk of this complication.

Loosening
Over a period of time your new knee joint may become loose and require further surgery. The lifespan of a knee replacement is variable but we generally expect it to last 10-15 years. The plastic component may also wear out, which will require further surgery.

Fractures of the femur or tibia
This can occur when the surgeon is inserting the components for your joint replacement if the bone is weak. Should this happen your surgeon may need to use different techniques to repair the bone or a different type of knee replacement and this can prolong your recovery.

Damage to tendons or ligaments
Ligaments or tendons near your knee can be damaged during surgery, in these circumstances they may need to be repaired with stitches or an artificial material.

Joint Infection
With any open surgery there is a chance of infection, despite all possible precautions being taken during your operation. To reduce the risk of infection you will be given antibiotics before and after surgery. Good hand hygiene is important and you are encouraged to use the alcohol gel or soap and water nearby. If you notice any swelling, discharge or itching around your wound when you are home you should notify your doctor. It is important to treat any signs of infection quickly, as an infected joint replacement that hasn't been treated may require another operation, and potentially, the removal of the implant..

Uncommon

Persistent and severe stiffness and pain (complex regional pain syndrome - CPRS)

CPRS is a poorly understood condition which the cause of is unclear. It can take months or even years for the knee to improve with this condition and may require further treatment with physiotherapy.

Nerve damage

The nerves in your leg might be damaged during surgery. This can cause temporary or permanent weakness, numbness and pain in the leg or foot (for example footdrop). If temporary, it can take several months to resolve. Numbness around the wound is normal; it can get better after several months but it could be permanent.

Blood clot in the lung (pulmonary embolism - PE)

This happens if a blood clot moves through your bloodstream to your lungs. A PE can cause shortness of breath, pain in your chest or back or cause you to cough up blood. You will be given anti embolism stockings, blood- thinning medication and exercises to reduce the risk of a PE. Getting out of bed the day after your operation with the help of the therapists also helps reduce the risk of this complication.

Death

Your anaesthetist will discuss the risks associated with the anaesthetic with you.

Heart attack

This can sometimes cause death. Your anaesthetist will discuss the risks associated with the anaesthetic with you.

Stroke

This is where your brain function is altered due to an interruption of the blood supply to the brain. This can sometimes cause death.

Damage to blood vessels

This can lead to loss in circulation to the leg and foot. If this happens you will need surgery immediately to restore the blood flow.

Amputation

In cases of chronic infection or severe bone loss that cannot be treated by revision surgery amputation can be required as a last resort.

Pre-assessment

Non-steroidal anti-inflammatory drugs (NSAIDs):

These are a group of medicines which work by blocking the production of a prostaglandin (a chemical), which is produced by the body in response to injury or certain diseases. Prostaglandin would otherwise provoke the body's own immune system to cause swelling, pain and inflammation. NSAIDs are often used to control orthopaedic pain.

Aspirin

Aspirin contains the active ingredient acetylsalicylic acid and belongs to the group of medicines called non-steroidal anti-inflammatory drugs (NSAIDs). Aspirin in low doses (75 - 100mg) is used as an anti-clotting or blood-thinning agent.

If you have been prescribed aspirin by your GP or hospital doctor, you should continue to take these medicines up to your operation. If you are taking this medicine on a non-prescribed basis please stop seven days before your operation.

NSAIDs and orthopaedic surgery

There can be a slight increase in bleeding in patients who are taking NSAID's during surgery.

If you are taking **ibuprofen,diclofenac or indomethacin, stop one day before surgery**

If you are taking **celecoxib or naproxen, stop two days before surgery**

If you are taking **meloxicam or piroxicam, stop 10 days before surgery**

Stopping these medicines may change the control of your pain. You may be advised to discuss this with your GP who may alter your pain killer prescription for a short period.

Please don't hesitate to contact us if you want to discuss this further.

Orthopaedic pre-assessment nursing staff: 01202 704102

Preventing blood clots in hospital

Being unwell and in hospital can increase the possibility of blood clots or a deep vein thrombosis (DVT). This can occur in the deep veins of the leg.

A DVT can cause pain, swelling and the leg to become hot and red. However a DVT may not produce any obvious symptoms.

Occasionally part of the blood clot can dislodge and go to the lungs. This is called a Pulmonary Embolism, which can cause difficulty in breathing and pain in the chest.

There are several factors which increase the likelihood of you getting a DVT. These are:

- injury of the veins in your legs
- slowing of the blood flow through your legs (if you are immobile)
- pregnancy
- having a condition that increases the tendency of your blood to clot

Every patient that comes into hospital will be assessed for the risk of developing blood clots.

What measures will be taken to help prevent blood clots?

The most important factors in helping to reduce blood clots are keeping well hydrated and mobile. It's very important that you walk or exercise your legs whenever possible, even if you are in bed or in a chair.

You may need a pair of anti-embolism stockings. These work by gently compressing your legs which increases the speed of the blood flow and prevents the veins in your legs from expanding.

- These stockings should be worn day and night
- These stockings should be removed each day to allow you to wash and inspect your legs. Any concerns should be reported immediately
- These stockings should be changed every three days.
- Don't allow your stockings to roll down as this may cause constriction and impede your blood flow.
- If you're sent home with the stockings, ensure they're removed daily and washed regularly. Follow the washing instructions given to you.
- When moving about you must wear slippers or shoes to prevent you from slipping.

Your doctors might prescribe a drug called low molecular weight heparin. This helps prevent blood clots from forming. It's normally given as a small, once daily injection. Low molecular weight heparin is a porcine (pig) derivative. Please feel free to ask to speak to a member of staff to discuss this. If you're Muslim a copy of the Fatwa is available on the Fatwa website: **www.fatwa-online.com**

All these measures are aimed at helping to reduce your chance of developing blood clots. Remember, by exercising your legs, even if it's just in bed, it will help keep your veins healthy.

Before surgery

Once you have your date for surgery you can do several things to prepare for your operation and improve your recovery.

Smoking

Smoking has been shown to delay wound healing and increase complications after surgery. Patients who stop smoking benefit from long term improvements to general health, decrease the risks associated with anaesthetics and have better outcomes from surgery. You can speak to your GP or Pre-Assessment nurse for advice and local services to help stop smoking.

Important note: This hospital has a no smoking policy.

Weight Management

Even though you may feel fit and healthy at your current weight, patients with a higher body mass index (BMI) are more likely to experience potentially serious complications both during and after surgery. You can speak to your GP or Pre-Assessment nurse for advice and local services to help with weight loss.

Planning ahead

It's important to plan and make arrangements for how you will manage when you are home from hospital. Stocking up your freezer with easy cook items is advised (particularly if you live alone), as you may find it difficult to walk to the shops initially. If you have family or friends who can stay with you or visit regularly this may make your recovery easier both for helping with house jobs and moral support, particularly in the first week.

Exercise

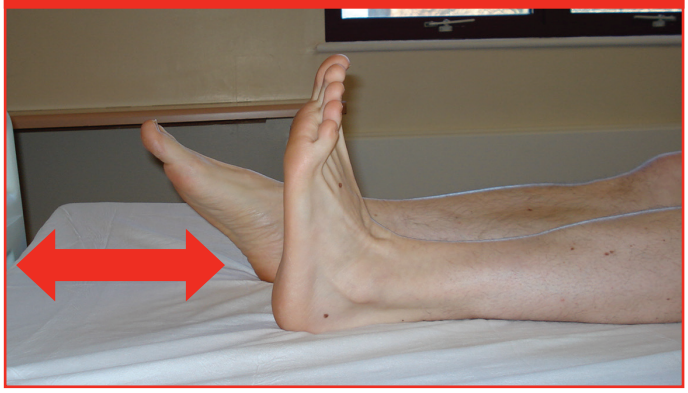
Try to keep active before your surgery to help strengthen your knee as this will speed up your recovery following your knee replacement. There are exercises on the following page which you can do before the operation to improve your strength. You should try to complete these exercises three times a day.

Physiotherapy exercises (for pre-strengthening):

Static quads

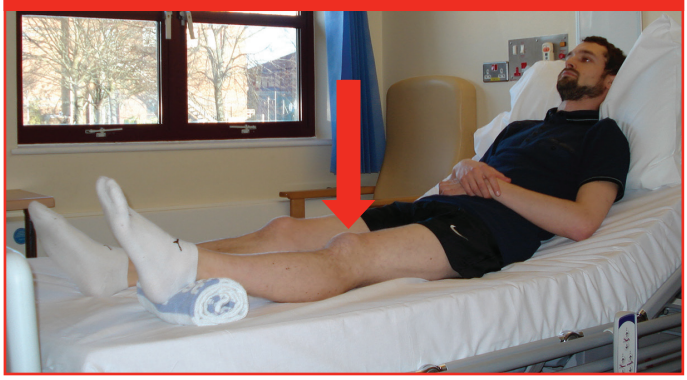
- Lie on your back or sit up in bed
- Push your knee down into the bed
- Pull your toes up towards you
- Hold this position for five seconds and relax.

Ankle pumps



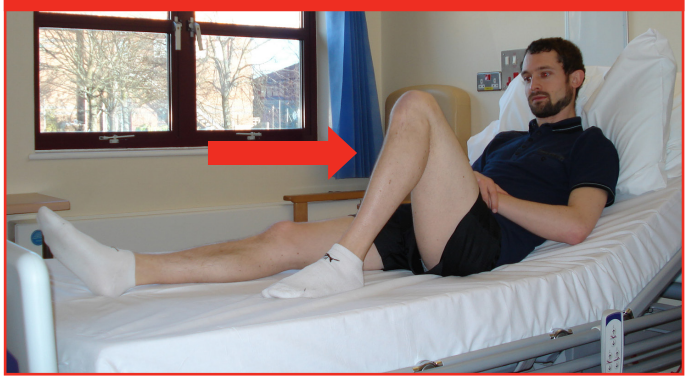
- Lie on your back or sit up in bed
- Using both feet, point your toes up towards the ceiling and then down towards the floor
- Repeat 10 times.

Hamstring stretch



- Lie on your back or sit up in bed
- Place a roll under your heel
- Using your thigh muscles, push your knee down
- Hold this position for five seconds and gently relax.

Active knee flexion



- Lie on your back or sit up in bed
- Slide your heel towards your bottom, bending your knee
- Slowly straighten your knee again.

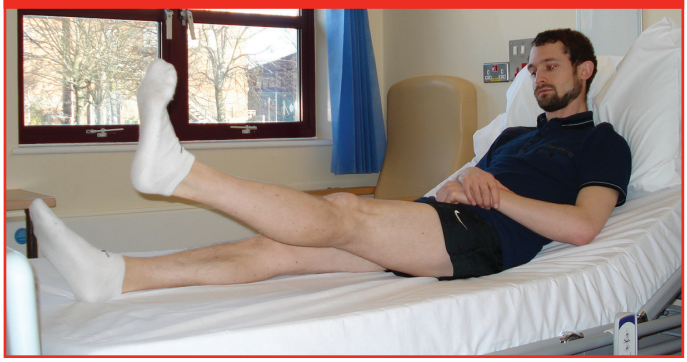
Inner range quads

- Lie on your back or sit up in bed
- Place a rolled level beneath your knee
- Push your knee down into rolled up towel.
- Lift your heel off the bed and straighten

your knee

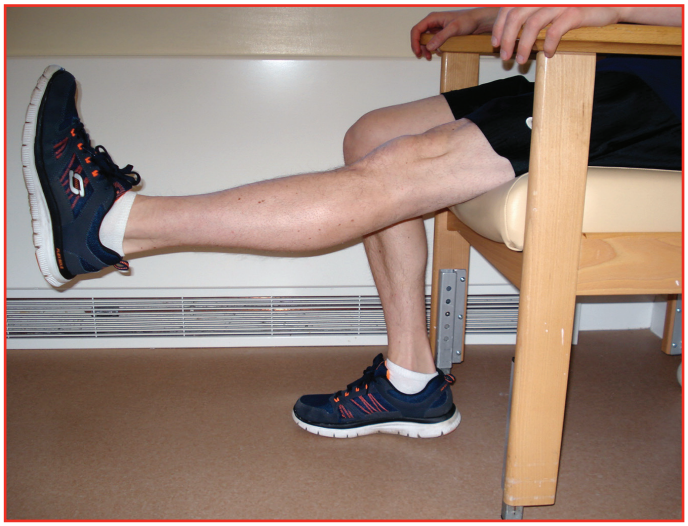
- Hold this position for five seconds and gently lower your heel back down.

Straight leg raises



- Lie on your back or sit up in bed
- Pull your toes up towards you
- Push your knee down into the bed
- Lift your whole leg up in the air approximately 10 cm off the bed
- Hold this position for five seconds
- Lower your leg back down onto the bed keeping your leg straight.

Active extension



- Sit on a chair, with your feet on the ground
- Pull your toes up towards you, tighten your thigh muscles and straighten your knee
- Lower your foot back down to the floor.

Patient reported outcome measures (PROMS)

There is a national arrangement to collect scores about the function of your knee and your general health before surgery and six months after surgery. This is done to assess how beneficial the surgery has been for you. Please complete the patient reported outcome measure (PROMS) questionnaires accurately, but bear in mind that your knee will not be at its best at six months.

At present these scores are not used to determine who gets a knee replacement, but there has been discussion of this in other parts of the country.

If you need help to fill it in, please ask a member of the Orthopaedics Team. If you have concerns or problems about your knee please raise these with your surgeon before the six month period. Questionnaires are not fed back to your surgeon and they are not meant as a way of raising concerns. If you want to discuss your knee replacement or are worried about it then please contact your consultant's team.

The National Joint Registry (NJR)

The NJR collects information about knee replacement operations from hospitals in England and Wales. The registry helps find out which are the best performing implants and which are the most effective type of surgery. You will be asked if you consent to your details being put on the register and to sign a consent form for this.

Preparation for your hospital stay

What to take into hospital:

- All current medications in their original boxes
- Personal walking stick/crutches (labelled) if you use them
- Shoehorn (labelled) if you have one
- Toiletries including flannels/towels (non- white)
- Slippers or shoes (loose fitting with backs and no laces - your foot may swell after knee surgery)
- Day clothes and night clothes (at least four days' worth - should be shorts, skirts or loose fitting trousers)
- All other paperwork you have been given regarding your operation
- Mobile phone, books, magazines, portable radio, tablet etc.
- Telephone numbers of friends and relatives
- Glasses and case

Please do not bring

- Large sums of money
- Laptop computers
- Unnecessary jewellery
- Any other valuables

Note - Please remove nail varnish and piercings.

Pre-operative education session

All patients are asked to attend an education session before coming in for surgery. This will be approximately one to two weeks before your surgery.

The class is run by physiotherapists, occupational therapists and specialist orthopaedic nurses who work on the orthopaedic wards. The location of the pre-operative session is the Patient Education Centre (map can be found on page 28).

Most patients find the group hugely beneficial and the session is designed to give you information about your hospital stay and recovery afterwards and aims to reduce any anxieties you may have. You are invited to bring a relative or friend with you and you will have the opportunity to ask any questions you may have before you come to hospital.

Hospital stay

Day of surgery

Eating and drinking:

- If your admission time is approximately 07:00am - you must not eat anything after 02:00am, and you must not drink anything after 05:00am.
- If your admission time is approximately 10:00am - you must not eat anything after 05:00am, and you must not drink anything after 08:00am.

If you normally take prescribed medicines in the morning please continue to take these on the day of surgery, apart from tablets you have been specifically told not to take by the pre-assessment team. Take them with a sip of water.

Arrival:

You will come into hospital on the same day as your operation. If you are having your surgery on our main orthopaedic ward (ward 7) then you will need to come to the Sandbourne Admissions Suite to be admitted for surgery. If you are having your surgery at the Derwent ward then please arrive at the Derwent ward reception.

A nurse will then admit you and complete your pre-operative checks such as taking your blood pressure and heart rate, in some cases they may need to do a blood test. You will also be visited by the surgeon and anaesthetist before your operation. You will have the chance to ask any questions you may have. You will then be asked to put on a hospital gown. All patients who are able will walk to theatre for their operation accompanied by a member of our nursing staff. You will be asked to remove any loose items such as glasses, false nails and dentures prior to your surgery.

During your stay you may be moved between our two orthopaedic wards. This could be due to a medical reason or for bed management. In this event you will be notified in advance.

The anaesthetic

Your anaesthetist will come to see you before your operation to discuss the type of anaesthetic that you will have. They will ensure the anaesthetic used is appropriate for you and answer any questions you might have.

All of our anaesthetists have the same goal, which is to provide you with the best anaesthetic possible. For knee surgery, this is usually a spinal anaesthetic. This is an injection in the lower back that makes you numb from the waist down and is combined with a light sedation. You will wake up with a catheter to aid urination as the spinal anaesthetic temporarily affects your control in passing urine.

Spinal anaesthetics are ideal for knee surgery because they make the operation easier for the surgeon. They provide excellent pain relief after the operation and cause less sickness and drowsiness compared to a full general anaesthetic. A small number of patients are not suitable for a spinal anaesthetic. If this is you, your anaesthetist will discuss alternatives with you. The anaesthetist may also administer a nerve block. This may cause the leg to be numb for slightly longer to enable better pain control.

Sedation can be given to meet your needs. Your anaesthetist will be with you throughout the operation to ensure you are comfortable at all times.

The operation

Your surgeon will make a cut over the front of your knee and remove the damaged bone in the joint. The artificial joint is fixed to the bone with special cement. You will be given intravenous antibiotics to reduce the risk of infection.

At the end of the operation, your surgeon will close the skin with stitches or clips.

Usually the operation lasts about one hour.

Recovery

Following the operation you will be taken to the recovery room, which is near to the operating theatre. You will have your own nurse and you will not be left alone. If you have pain or sickness, the nurse will treat it promptly. You may need to breathe oxygen through a light plastic mask and you will have a drip in your arm.

The recovery staff will check your blood pressure, heart rate and oxygen levels.

When the recovery room staff are satisfied that you have recovered safely from your anaesthetic, you will be taken back to the orthopaedic ward.

Back on the ward

When you have returned to the ward after your operation, the nursing staff will monitor you closely for the next 24 hours.

Pain relief

The nurses will offer you regular painkillers and it is sensible to take them to avoid pain becoming too much of a problem. If you had a spinal or a nerve block you may not have any pain. It is sensible to start taking oral painkillers so that when the spinal or nerve block wears off you will already have some painkillers working. If you are having trouble with pain, you should discuss this with your nurse, so that we can increase your pain relief medication. It is important to act early because if pain is allowed to become severe it may delay your recovery.

Physiotherapy

You can start the basic circulation exercises (exercises one to four as shown below), as soon as you are able after your operation. These are important as they encourage the circulation of your blood to reduce the risk of blood clots (DVTs). The exercises will also help to reduce the stiffness and pain you might experience.

Physiotherapy exercises:

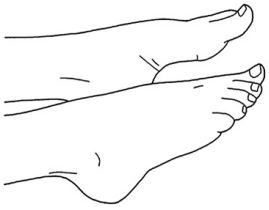
These exercises are important for your recovery. You will normally stay in bed until the following day.

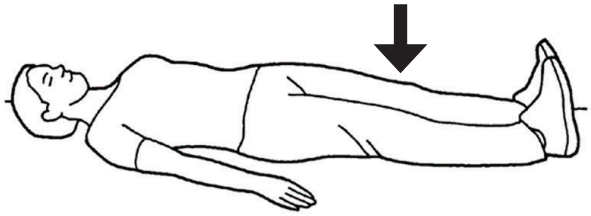
Early exercises

You should continue these exercises regularly until your physiotherapist progresses you onto the advanced exercises.

Exercise one

When lying or sitting, bend and straighten your ankles briskly.
Repeat this 10 times every hour.



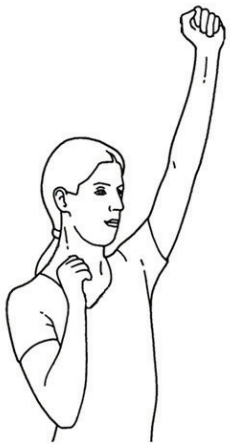


Exercise two

Lie on your back with your legs straight. Pull your toes towards you and push your knees down firmly against the bed. Repeat this 10 times every hour.

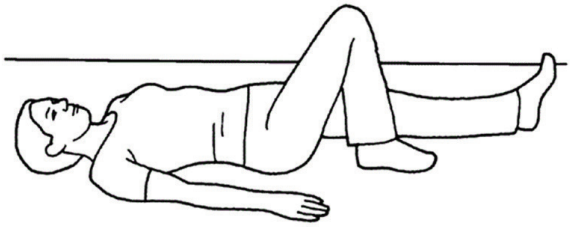
Exercise three

Sitting up in bed, lift one arm up above your head then return it to your side.
Repeat with the other arm. Do this alternately 10 times every hour.
Take care if you have a drip in your arm.



Exercise four

Regularly take three deep breaths whilst lying in bed.



Exercise five

Lie on your back with your leg out straight on the bed. Bend and straighten your hip and knee by sliding your foot up and down the bed. Repeat this 10 times.

Only complete exercise five with your physiotherapist present initially. Once you have practiced this exercise with the physiotherapist you will be asked to do this regularly by yourself.

Day one

Physiotherapy

After your operation it is very important that you don't try to get out of bed by yourself for the first time. A few necessary checks need to be made including checking your blood pressure. We will also ensure the feeling has returned to your legs and check with your surgeon about how much weight you are allowed to take through your operated leg.

You will be provided with an ice pack to use regularly while you are in hospital. This is a special type of ice pack which can be used for 20 minutes at a time, every two hours. This helps to reduce the swelling around your knee and will make your knee more comfortable. It is important that you use this regularly. A physiotherapist or nurse can assist you to use this if you require help.

On the first day after your operation the physiotherapists will assist you to get out of bed for the first time and take your first few steps. Most people will be allowed to take their full weight through the operated leg immediately. However, you will need to use a zimmer frame initially because this gives you a good support to lean on. You can then start to walk around your room and to the bathroom with the help of a nurse until you are able to do this safely by yourself.

You should continue with your exercises hourly throughout the day.

Day two

Occupational therapy

The occupational therapist will also visit you and ask how you are managing with 'transfers' which means getting on and off the bed, the chair and the toilet. If you are struggling they will teach you a different way to do it. In some cases they will provide equipment so that you know that these everyday things will be manageable when you go home.

The same applies to washing and dressing. If you are struggling, the occupational therapists can provide you with tips and tricks to assist you and, if necessary, provide some equipment to help you.

X-ray

You will have an x-ray to check that your new knee is positioned well.

Physiotherapy

Initially you will be given as much help as you need, and as you improve you can start to walk alone. Once you are walking well with the help of the zimmer frame you will be shown how to use crutches or walking sticks. You can then practice your walking on the ward.

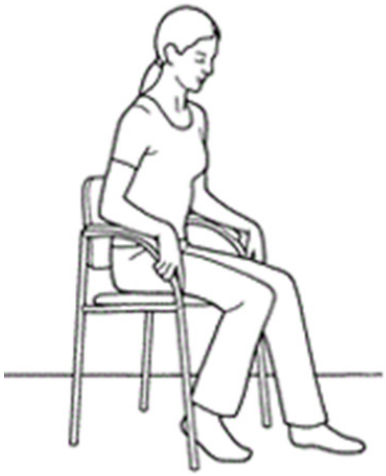
It is important to continue with the ice pack because your knee will be quite swollen after the operation.

When you are ready, the physiotherapists will progress your exercises. We need to see that you can bend and straighten your knee well before you go home.

It is important to practice going up and down steps and stairs so that both you and the physiotherapists know that you will be able to manage them safely when you get home. The physiotherapists will show you the correct way to do this.

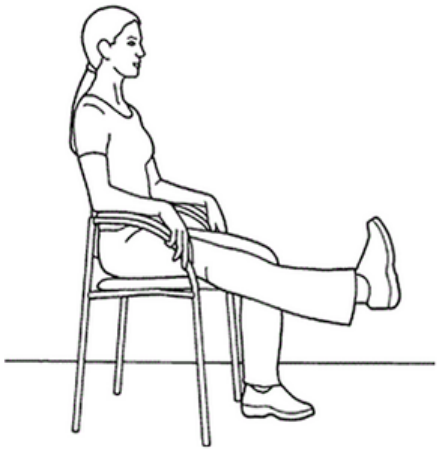
Advanced exercises (post op)

Gradually increase the number of times that you repeat the exercise.
Your muscles will get stronger if you continue until you start to feel tired.



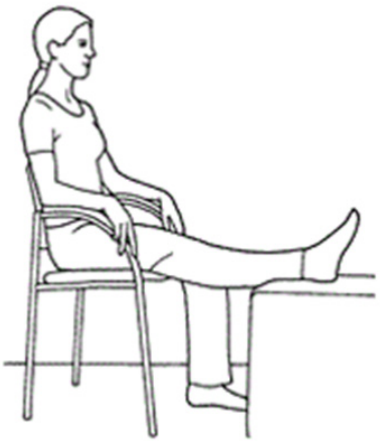
Exercise one

Sit on a chair with your feet on the floor.
Bend your knee as much as possible
by sliding your foot back towards the chair.
Use your other leg to help you bend it further.
Repeat this 10 times every hour.



Exercise two

Sit on a chair with your feet on the floor. Pull your toes up towards you, tighten your thigh muscle and straighten your knee. Hold for three seconds then slowly lower your leg back down to the floor. Repeat 10 times hourly.



Exercise three

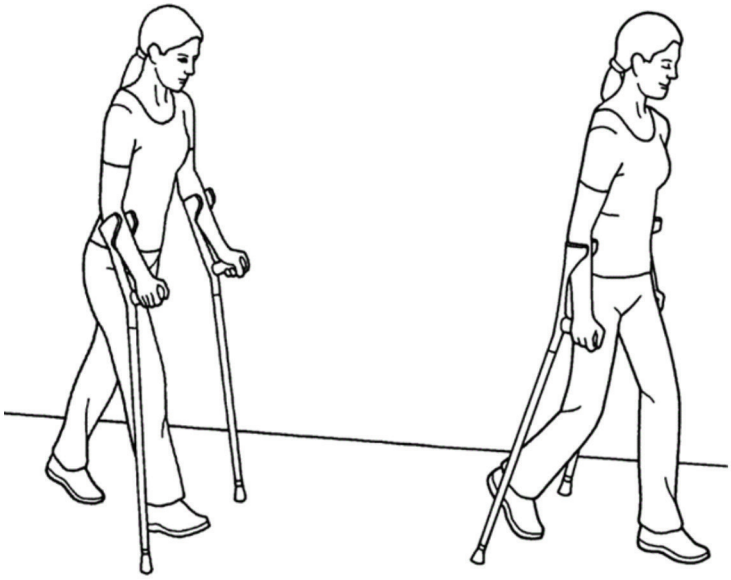
Sit in a chair with your leg elevated on a stool for 10-15 minutes. Keep your leg as straight as possible.

Exercise four

Lie on your back on a bed. Place a large rolled up towel or blanket under your heel and allow your leg to relax and the knee to straighten. Build up the length of time that you can tolerate this for. Aim for 10-15 minutes.

Walking with crutches

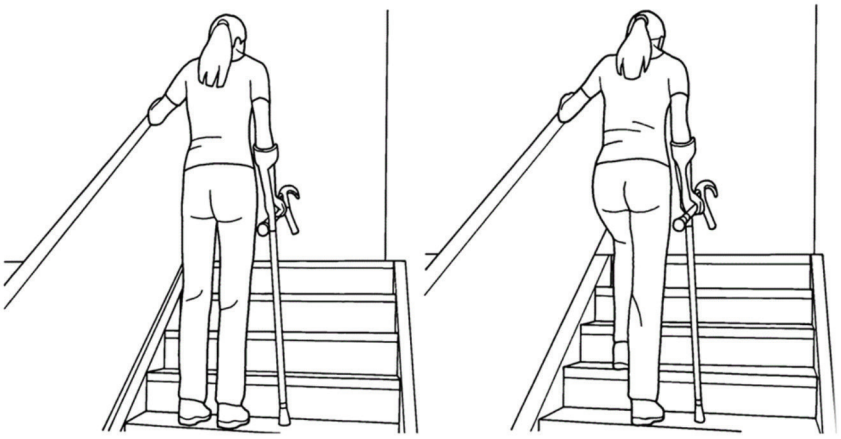
- Put your crutches forward first
- Step your operated leg forward
- Then step forward with your other leg, aiming to step past the operated leg
- Take small steps when turning around to avoid twisting
- Never stand up or sit down with your arms in the crutches
- Once you are home and walking becomes easier you can progress to using just one crutch or stick. To do this, use the crutch/stick in the hand on the opposite side to your operated leg
- When you feel that you no longer need the crutch or stick for support you may stop using it



How to go up and down stairs

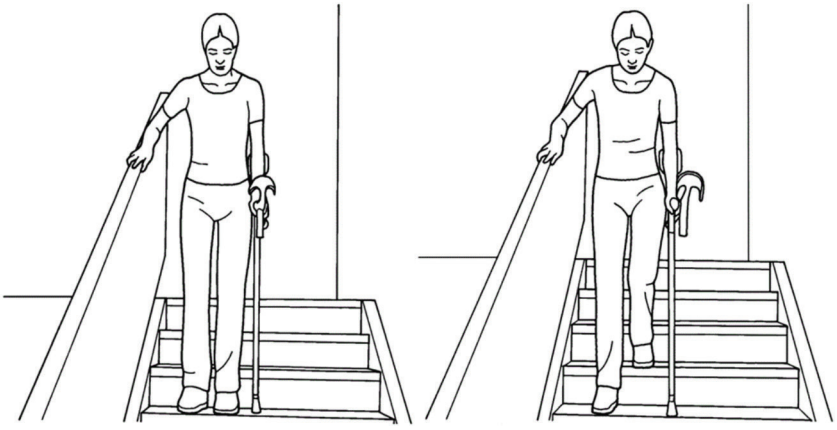
To go up a step or stairs

- Step up with your non-operated leg
- Then bring your operated leg up onto the same step
- Lastly bring your crutch(es) up onto the step



To go down a step or stairs

- Put your crutch(es) onto the step below
- Then put your operated leg down onto the step
- Lastly, bring your non-operated leg down onto the same step



Day three

The majority of patients meet their discharge criteria by day three enabling them to go home safely. Some patients may meet these criteria before day three or may be required to stay longer to achieve these goals.

Discharge home

How long will I stay in hospital?

We aim for you to be discharged home on the third day after your operation. So if you have your operation on a Monday, you can plan for discharge on the Thursday.

We give you this as a guide so that you can plan to have someone around, should you need them, on your discharge. However, we find that some patients are ready to go home sooner and some may require an extra day or longer to be ready to go home.

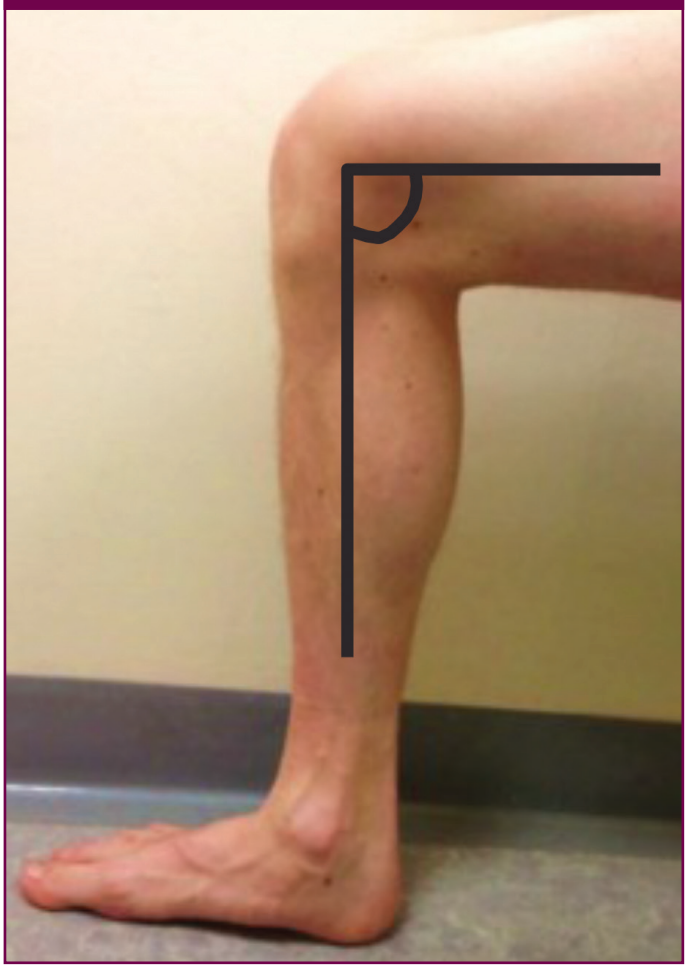
Discharge criteria - when will I be ready to go home?

You will be able to go home when all members of the orthopaedic team are happy with your progress and we know you will manage safely at home.

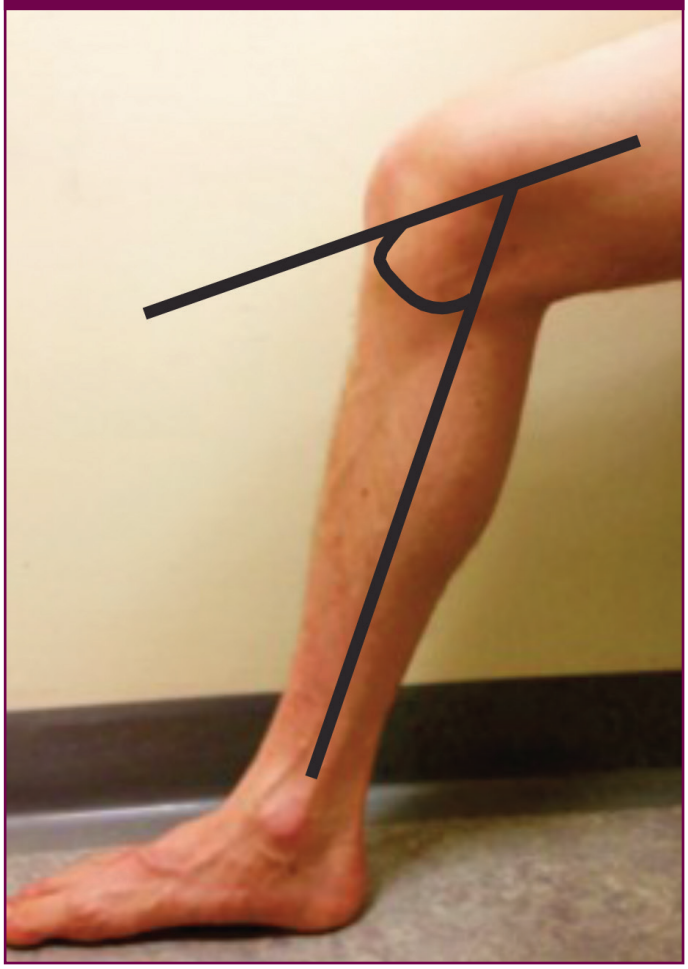
To ensure you are ready to go home we need to check the following:

- You must be able to walk safely around the ward with either crutches or walking sticks by yourself (although in special circumstances some patients may go home with another type of walking aid)
- You must have managed a set of stairs or a step safely (depending on what you have at home)
- You need to be able to get on and off a bed, toilet and chair by yourself
- Your wound needs to be showing signs of healing
- Your blood results and x-ray of your new joint must be satisfactory
- Your pain needs to be under control
- You need to be medically fit
- You must achieve a minimum bend of 75 degrees in your knee

90°



75°



What do I take home with me?

Before leaving the ward, you will be given:

- a telephone number for the ward which you can use to contact us if you have any questions or problems once you are home
- any equipment loaned to you for home, such as walking aids or toilet frames
- a letter to take to your GP about your hospital stay
- a letter for the district/practice nurse who will check your wound and remove the clips (12-14 days post operation) once you are home
- a spare pair of stockings. Most patients will be asked to wear a pair of compression stockings for the first six weeks after the operation

Physiotherapy appointments

We shall refer you to your local hospital to see a physiotherapist within approximately one to two weeks of you going home. They will check on your progress and work with you until your knee is strong and you are moving it well. If there are any activities that you are keen to return to then let your physiotherapist know, and they can plan your rehabilitation to meet your needs.

General advice for daily life

Walking and resting

We recommend you spend the first few days getting used to being back in your home. After this, and when you feel ready, you may start to walk a short distance outside with your crutches. Listen to your body. If you are very sore or tired in the next 24 hours you may have walked too far. Gradually increase the distance you walk but make sure you also have plenty of rest.

Walking with crutches

You should use the crutches or walking sticks as long as you feel you need to. When you feel ready you can progress from using two crutches or sticks to using just one. When using just one crutch or walking stick you should hold this in the hand on the opposite side of the body to the operated leg. In time you will find you can walk without any support. You may find you need more support when walking outside or when walking further. Don't be tempted to walk without the support of these too soon.

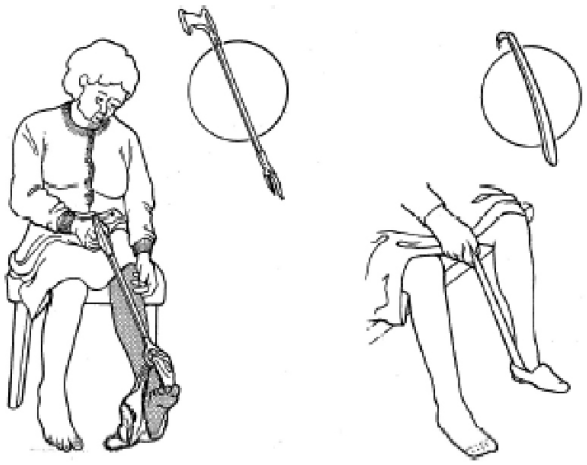
Walking is very good to strengthen up your body. You will also be shown exercises to move and strengthen your knee joint. These are the advanced exercises and can be found on page 19. We advise you to continue these exercises three or four times a day, until you attend your outpatient physiotherapy appointment. You will then be guided on what exercises to do next.

Washing

Your dressing over the wound will be splashproof so you can get it wet. If you have a cubicle shower and the physiotherapist is happy you are able to go up/down a step, you can shower. If you have a shower over your bath, you may use this but it may be difficult until your knee moves easily. Do not have a bath until your wound is fully healed, you should contact your local nurse if you have any doubts.

Getting dressed

You will be able to dress your upper half normally but you may need assistance with dressing your lower half. A long handled shoe horn can be used to help you put your underwear and shoes on until your knee can bend easily. The long handled shoe horn has a hook at the other end. This can be used to hook your underwear over your feet and up to your knees. Once you have them up to your knees, you can grab hold of them. We advise you to dress the operated leg first.



Cooking

You should move items that you will need after your operation to the work surface or shelf at thigh height or above. This will reduce the need to bend down. It is best to avoid carrying food on your own. You will come home with two crutches or sticks so carrying things over distances will be difficult.

Driving

We suggest you don't drive until at least six weeks after your operation. Your insurance may not cover you within this timeframe. A member of the orthopaedic team will tell you when you can drive again on your follow-up clinic appointment.

Dos and don'ts

- You can use ice for up to 20 minutes every two hours to help reduce the swelling and to help relieve pain around your knee. Ensure the ice pack is wrapped in something like a tea towel so the ice isn't in direct contact with the knee due to the risk of ice burns.
- Continue to work regularly on your exercises to work towards getting your knee as straight as possible, and to increase the amount you can bend your knee. This can be quite hard but it will improve the outcome of your new knee. We recommend you continue your exercises at least three times each day on your return home. You should continue your exercises until you are advised differently by your outpatient physiotherapist.
- It's important to establish a balance between the amount you exercise and the amount you rest.
- If your leg is very swollen we recommend you spend some time each day with your leg elevated on a stool.
- Return your crutches or sticks to us when you no longer need them.

After six weeks

Approximately six weeks after your operation you will be asked to come back to see the orthopaedic team. This is to check on your progress and to give you advice about increasing your activities. At this point you will be told whether you can return to driving. If you are planning to return to work then this will usually be at six to 12 weeks after your operation. If you have a manual job then it will be more like three months.

Kneeling

Once your wound is clean and you have an appropriate bend, kneeling is permitted. This is usually not before six weeks after the operation. Kneeling stools are advised for comfort initially.

Frequently asked questions

Is it normal for my knee to be swollen?

Yes. This is usual after a knee replacement. It is a good idea to keep your leg elevated and iced once you are home. You could use a bag of frozen peas, wrapped in a tea towel for 20 minutes.

What can be done to minimise the risk of a blood clot forming (Deep Vein Thrombosis)?

Your doctor may prescribe a drug to help prevent blood clots from forming. This drug is given as an injection once a day for the first 10 days following your operation. You or a relative will be shown how to administer this.

What are the visiting hours for the ward?

Visiting times are 2-8pm. There may be occasions when we need to interrupt visiting to provide various aspects of your care. Where possible we try not to interrupt you whilst you have visitors but there are some occasions where it is necessary. Please be understanding about this. If it helps us with your care then you can get home sooner.

Can my visitors come in on the day of the operation?

Yes. Please advise visitors to ask the nursing staff if it's appropriate to visit on the day of your surgery as it's important that you get your rest and you may be groggy from the anaesthetic.

Can my friend/relative phone the ward to check how I am?

Yes, of course. We understand that your friends and family are keen to check on your progress. However, we would be grateful if one member of your family or one friend could take responsibility for keeping others informed of your progress. This allows the nursing staff to use their time to focus on caring for you.

Are there any other orthopaedic wards in the hospital?

You will be based on one of our two orthopaedic wards. There could be a possibility that during your stay you may be moved to another orthopaedic ward to continue your recovery. This will only occur if necessary. Both wards have experienced orthopaedic nurses, doctors and therapists and you will continue your recovery in the same way.

Is it safe to bring valuables into hospital with me?

There is a lockable drawer in your bedside locker but we don't recommend bringing too many valuables with you. Anything you do bring into hospital is done so at your own risk. Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust cannot take any responsibility for your belongings.

Are there televisions and newspapers in the ward?

All rooms have a combined television, telephone and radio system at the bedside. There is a charge to use the telephone and television. Payment can be made using a debit or credit card or by purchasing a payment card at the main entrance of the hospital. As the Derwent is separate to the main hospital building the ward doesn't have a daily newspaper trolley so you may wish to ask your visitors to bring newspapers or magazines in for you.

Can I use a mobile phone in hospital?

Yes it's possible to bring a mobile phone with you so you can speak to friends and relatives during your stay. We ask you keep calls to a minimum so as not to disturb other patients.

Some hospitals don't allow flowers on the ward. Is this true for Bournemouth?

Yes. We regret that we can't allow flowers or plants on the ward. This is because they can be a source of infection which could get into your or other patients' wounds. Please inform your visitors of this.

How soon can I travel after my operation?

Flying is not recommended for at least three months after your operation due to the risk of blood clots. Some consultants may vary with this advice. Please contact your consultant via their secretary if you need to fly before the timescales advised.

For any other long distance travel (car, train, coach), make sure you are able to walk around regularly. Take care when travelling on a bus or when getting into a car with a high step.

Will I be able to go swimming after my operation?

Yes, swimming is a good activity to strengthen your body. However, we advise that your wound needs to be fully healed before you go into the pool. You need to be confident with your walking so that you can manage to walk safely on the wet pool side. We recommend that you use a pool with a staircase leading into the water rather than a ladder to enter and exit the pool and avoid a breaststroke kick with your legs initially.

How far can I expect to walk in the future?

We hope you will be able to walk a reasonable distance in the long term following your knee replacement. You should increase the distance you walk gradually. It's unlikely you will be able to walk the distances which you could before your knee pain started. You may find the use of a walking stick beneficial to take some of the load off your knee.

Will I be able to walk up and down stairs in the 'normal' way after my knee replacement?

Initially you will find it easier to go up and down stairs using the diagram on page 20. This technique is required while you are increasing the strength and the movement in your operated knee. Some patients may be able to return to climbing stairs with only putting one foot on each step however this is not always possible.

How should I get in and out of a car?

This may be difficult to start with because your knee may not be bending much. We recommend the following:

- Before attempting to get into the car, ensure you have the front passenger seat positioned as far back as possible.
- Park the car away from the kerb if possible. Putting a plastic bag on the seat may help you to swivel your bottom round
- Get into the car bottom first, sit down then lift one leg into the car followed by the other.

Problems with my knee - What is normal and whatis abnormal with my knee?

Some people experience some increase in pain after being home a short time. This is often due to increasing your activity. If you are concerned then please don't hesitate to contact the ward or your GP.

Problem	Normal	Abnormal
Wound	To have: • some healing redness around wound in first six weeks	Your wound could be infected if it is: • red • hot • angry looking • pus present • oozing • offensive odour Seek advice from your GP
Hot knee	Your knee will be hot to touch for one year	If it is infected as above Seek advice from your GP
Pain worse at night than during the day	Muscles and soft tissues get stiff as you rest causing aching pain. To help reduce pain at night: • exercise during the day • take a walk • use pain relief	Severe pain 24 hours a day Seek advice from your GP
Stiffness	As soon as you rest or have rested for prolonged periods • exercise the knee • take a walk • use pain relief	Severe stiffness making it so that you cannot bend or straighten knee Seek advice from your physiotherapist
Swelling	Your knee, calf and ankle will swell for three months. Swelling will reduce overnight and increase during the day	If swelling doesn't fluctuate (change) and your knee, calf and ankle are constantly swollen Seek advice from your physiotherapist or GP YOUR GP

Timeline for your knee replacement

A few weeks before your operation	Attend pre-assessment clinic Attend pre-op education class
One week before	You may need to stop certain medications (as advised)
Day before	Remember to stop eating and drinking at the correct time
Day of surgery	Arrive at correct ward and time according to admission letter Visit from surgeon and anaesthetist
Day one	Start walking with the physiotherapist
Day two and three	Shower Progress walking and exercises Occupational therapy X-ray Aim for discharge

Continue with recovery until you are ready to go home

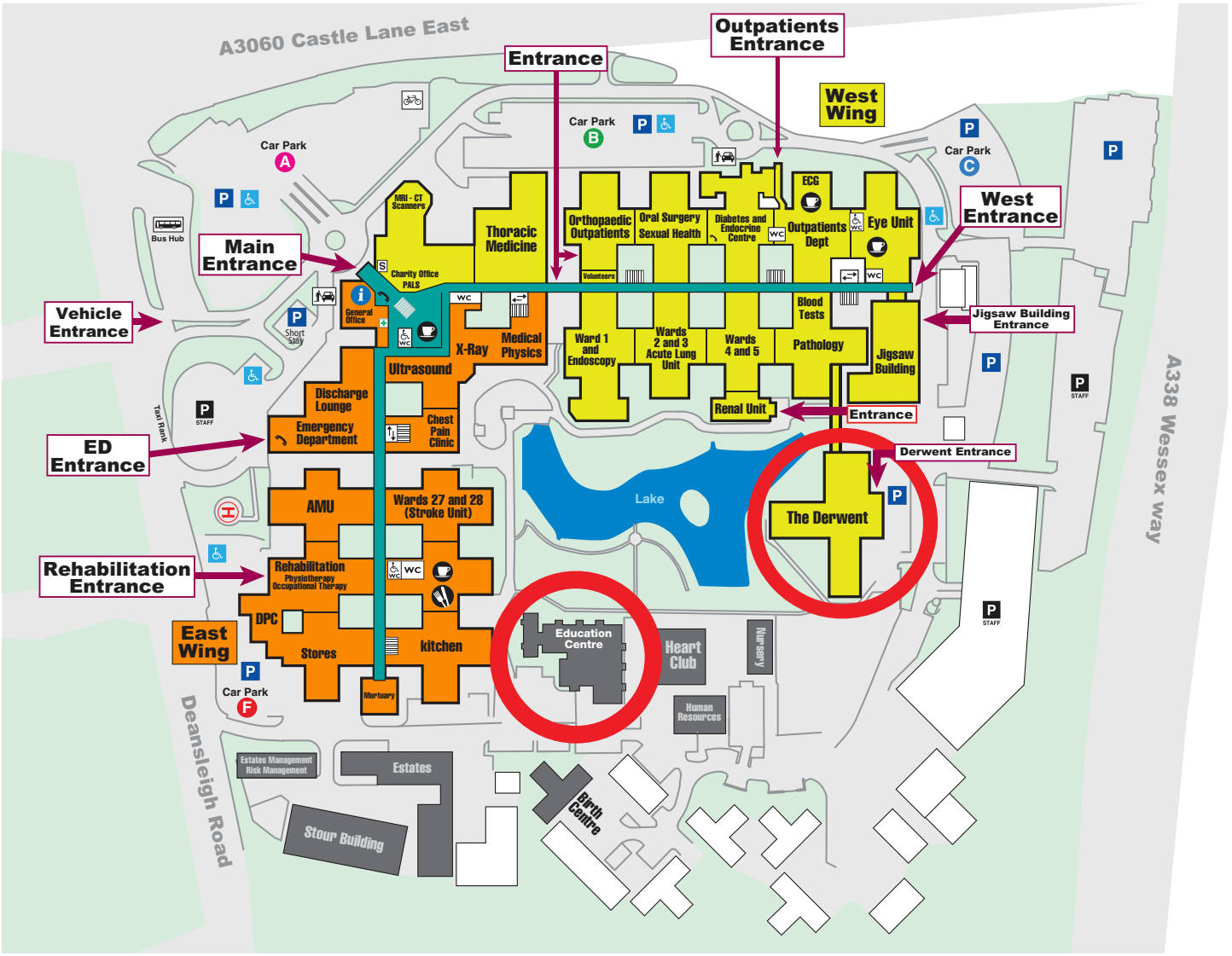
Seven to 14 days after operation	Start outpatient physiotherapy
10-14 days after operation	Stitches and staples will be taken out
28 days after operation	Follow up call from ward
Six weeks after operation	Follow up appointment with orthopaedic physiotherapist Stop wearing stockings
Five months after operation	Follow up with consultant team
One year after operation	Follow up with consultant team

Useful contacts/information

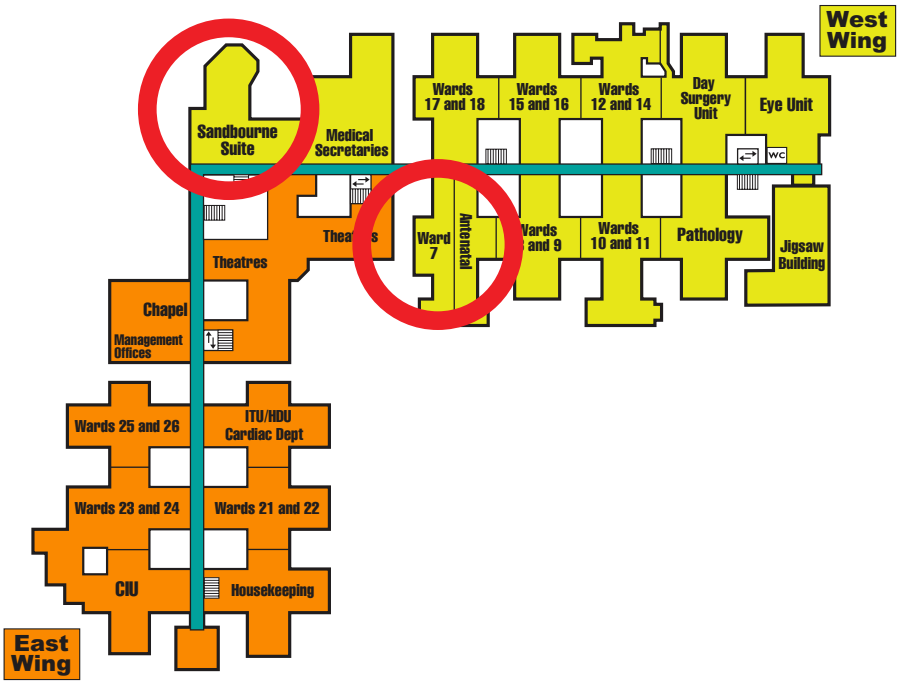
The Royal Bournemouth Hospital switchboard	**01202 303626**
Ward 7	**0300 019 6276**
Derwent Ward	**0300 019 6223**
Pre-assessment	**0300 019 4102**

Hospital Maps

Ground Floor Royal Bournemouth Hospital



First Floor Royal Bournemouth Hospital



Daily diary

Some patients find it helpful to keep a diary of their activities, exercises and pain control. It is also useful to write down any problems or questions you may have. This isn't essential but use this if you feel it will help with your recovery.

Day	What have you done today: • Activities • Exercises	How do you feel: • Pain • Pain relief needed	Any problems:	Questions:
Day of operation				
Post-operative day one				
Post-operative day two				
Post-operative day three				

Continue to wrap ice in a tea towel and place over knee for 20 minutes every two hours.

Day	What have you done today: • Activities • Exercises	How do you feel: • Pain • Pain relief needed	Any problems:	Questions:
Post-operative day four				
Post-operative day five				
Post-operative day six				
Post-operative day seven				
Post-operative day eight				

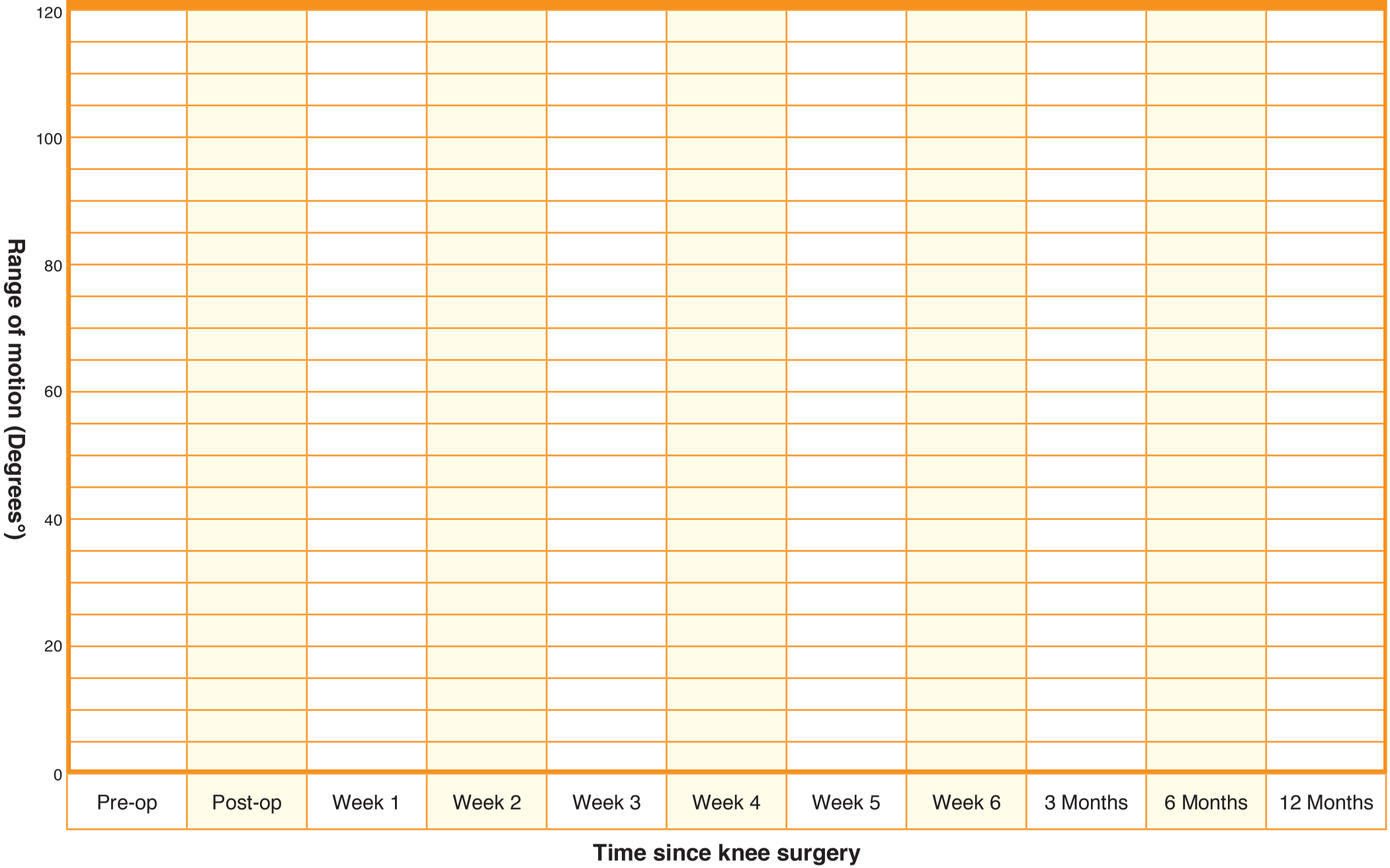
Continue to wrap ice in a tea towel and place over knee for 20 minutes every two hours.

Day	What have you done today: • Activities • Exercises	How do you feel: • Pain • Pain relief needed	Any problems:	Questions:
Post-operative day 10				
Post-operative day 11				
Post-operative day 12				
Post-operative day 13				
Post-operative day 14				

Continue to wrap ice in a tea towel and place over knee for 20 minutes every two hours.

Please bring this booklet to your outpatient physiotherapy session where your knee movement progress can also be recorded.

Your total knee replacement progress chart



Additional Notes

Additional Notes

Exercise images courtesy of RG PhysioTools

The Royal Bournemouth Hospital, Castle Lane East, Bournemouth, Dorset, BH7 7DW

Author: **Ross Darch and Aaron Bailie** Date: **November 2021** Version: **Four** Review date: **November 2024** Ref: **453/21**

t: 01202 303626 w: www.uhd.nhs.uk : @UHD_NHS : @UHDTrust : @uhd_nhs