INFORMATION FOR PATIENTS

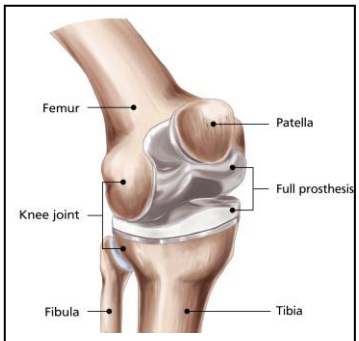
Total Knee Replacement (TKR)

This leaflet is for patients who are undergoing or thinking about having total knee replacement (TKR) surgery. The aim of the leaflet is to provide information surrounding knee replacements, an explanation of the surgery and recovery.

The knee is a complex joint formed by the femur (thigh bone), the tibia (shin bone) and the patella (kneecap). The knee has three compartments, the medial (inner) compartment, the lateral (outer) compartment and the anterior compartment (kneecap). Arthritis can affect one or more of the compartments.

What is a knee replacement?

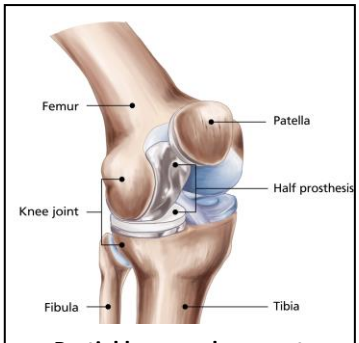
A knee replacement is where all or part of your knee joint is replaced due to arthritis, pain, decreased mobility or quality of life. You may have tried other treatments to manage your knee such as physiotherapy, pain relief or steroid injections before considering a knee replacement.



Total knee replacement

Total knee replacement

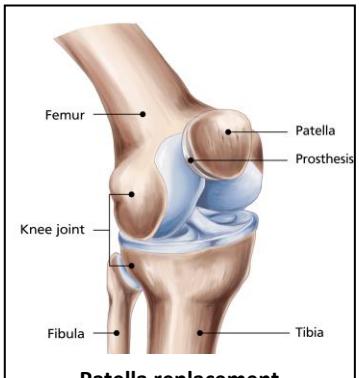
This is the most common type of knee replacement which involves replacing both surfaces of the knee joint. The end of the femur (thigh bone) and the top of the tibia (shin bone) are replaced with artificial components, which are usually cemented in place. Most total knee replacement surgeries will result in you still having your own patellofemoral joint (kneecap), but the surgeon may choose to resurface this underneath if required.



Partial knee replacement

Uni-compartmental knee replacement

When arthritis only affects one compartment and the other compartments are completely normal, the surgeon may advise a uni-compartmental replacement. Only the affected compartment is replaced.



Patella replacement

TKR with patellofemoral arthroplasty

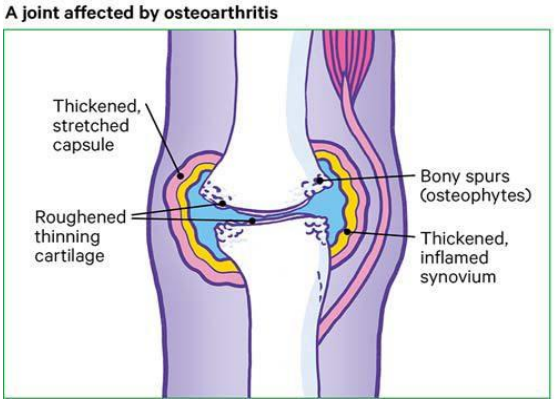
It is possible to resurface and replace the patellofemoral joint, this is where the kneecap glides over the thigh bone. This is much less common than other types of knee replacement and is only required if there is wear on the back of the kneecap. If required, this can be done at the time of a full knee replacement.

Complex or revision knee replacement
If you have had your knee replacement for a long time or you are having issues with it, the surgeon may decide to revise the joint. The existing components will be replaced with a new second joint. If the knee replacement is classed as complex, then it may be that a slightly different type of replacement is used with a longer component into the bone to keep it securely in place.

Why may I need a knee replacement?

The main reason for needing a knee replacement is arthritis of the joint. This is a condition that can develop over time as people get older. Arthritis is a degeneration of cartilage in the knee joint which can result in pain, stiffness, decreased function and mobility. Many people may have arthritic changes but not know about it, but as symptoms develop a knee replacement may be considered.

Over time arthritic changes can cause tightness at the back of the knee and weakness in the thigh muscle, these may result in overuse of the other leg. A knee replacement can correct changes that have occurred at the joint due to arthritis, but the weakness and tightness may still be present after the operation. This will be one of the reasons you will need to follow your physiotherapy exercise program and advice.



Versus Arthritis UK, 2024

Initially you will have some post-operative pain while your body gets used to the new joint, but this will reduce over time.

Other treatment options

Physiotherapy
Before having a knee replacement, you may have undergone physiotherapy treatment. Pain in the knee can lead to decreased movement and strength. Physiotherapy can help you to stretch and strengthen muscles. You may also be given advice on how to manage your activities and pain. In some cases, physiotherapy can reduce symptoms enough to delay the need for an operation.

Steroid injections
A steroid injection may be offered if you are experiencing pain in the knee. This is given at an outpatient appointment, and it **may** increase your pain for the first 48 hours. The injection is usually a combination of local anaesthetic and steroid, which aims to reduce inflammation and pain. Steroid injections can take up to six weeks to work but can have long lasting effects. The benefits of these injections vary from person to person.

Pain relief
Medication, such as pain relief and non-steroidal anti-inflammatories (NSAIDs), can help you to manage your pain and therefore continue with your activities of daily living. Consult your GP or pharmacist for advice on the most appropriate pain relief for you.

Benefits of a knee replacement

The surgery will involve replacing some or the whole knee joint. This should decrease pain levels, improve mobility, and improve quality of life. Modern knee replacements can last for at least 20 years in eight out of ten patients. There is an 80-85% success rate of total knee replacement surgery, however, 20% of people may not be totally satisfied with the results. It is beneficial to be as fit as you can with appropriate weight management and exercises before and after your operation to improve the outcome following your knee replacement. It is important before your surgery that you stop smoking and reduce alcohol consumption as this can affect the rate that your knee heals.

Health advice before surgery

To reduce the risk of post-operative complications and to optimise your recovery it is important to be leading a healthy lifestyle before your operation.

Diet
The National Institute for Healthcare and Excellence (NICE) guidelines suggest following a dietary pattern which includes eating **vegetables, fruit, beans and pulses, wholegrains, and fish**. It may also be beneficial to reduce the number of processed foods that are eaten such as fried foods, biscuits, confectionery and fizzy drinks, and substitute these for fruit, vegetables, or water. Use food and drink labels to assist in making choices lower in fat and sugar and reduce portion sizes and avoid additional servings.

Alcohol
Alcohol can add additional daily calorie consumption, which can increase weight gain and adds to an unhealthy lifestyle. It is advised not to regularly drink more than 14 units of alcohol a week (equivalent to 6 pints of average strength beer or 10 small glasses of low strength wine). To reduce alcohol consumption, try replacing alcoholic drinks with non-alcoholic drinks that do not contain added sugar, and increase the number of alcohol-free days that you have.

Smoking
Smoking can influence your overall health, slowing down the body's natural healing process which can affect recovery after your operation. There are many resources to help with quitting smoking such as the NHS website and stop smoking mobile apps. You can ask any healthcare professional for a referral to the Tobacco Dependency Team at Sherwood Forest Hospitals on 01623 622515, extension 6066, or via your GP for help to quit.

Physical activity
Physical activity can help to lose or maintain a healthy weight, boost mood, and assist in leading a healthy lifestyle. Find an activity that you enjoy as this will help you to stick to it and increase the amount of activity that you do. Take regular breaks from sitting activities and reduce time spent watching TV or being sedentary.

After your operation, you may be in some discomfort and less mobile for the first four to six weeks. It is therefore important to think about extra help that you may need at home with washing, dressing, shopping, cooking, and cleaning. If you are a carer for somebody else, it is also advisable to try and organise someone to cover or help with this.

If you are normally a carer for somebody you may need to organise additional help for after your operation. If you do not have help from immediate friends or family, you can contact the social services for help and support:

Nottinghamshire Golden Number: 0300 500 80 80

Derbyshire Social Services: 01629 533190

Lincolnshire Social Services: 01522 782155

Preoperative assessment

You will have an assessment before your operation to highlight any risks and to take steps minimise these, to check your general health and ensure you are fit for surgery. During your assessment your height, weight, blood pressure, heart rate, oxygen levels will be measured. You may also be asked to complete a urine sample, have a blood test, or have swabs completed. If you are prescribed strong opioid analgesia for pain, you will be given an appointment to see a pain nurse specialist before your operation.

You will also be asked for your consent to the operation. Your consultant or a nurse will explain the procedure and the risks and benefits that will come from having the operation. If in agreement, you will be asked to sign a consent form.

You will be required to attend an education group in the Therapy Services department either at King's Mill Hospital or at Newark Hospital. The therapist will discuss your exercises and mobility, and what to expect from your admission and the operation through to discharge. You will be assessed and issued with a pair of elbow crutches to enable you to practice your walking and stairs prior to your operation. Your outcomes from the operation will be improved if you have started your exercises before the surgery. Patients who attend the preoperative class feel more prepared for surgery, and attending this group will also help to reduce your length of stay in hospital after your operation.

Please bring your elbow crutches and this booklet into hospital with you on the day of your surgery.

Exercises for before your operation (preoperative) and after your operation (postoperative)

Exercises are an important factor in your recovery. They help to increase your range of movement and strengthen your leg muscles. Exercises also help to improve your circulation and avoid complications such as deep vein thrombosis.
These exercises should be completed **before** and **after** your operation. They need to be included in your daily activity with a few hours rest between sessions.

Exercise wording:

- Sets

A set of exercises is how many sessions in the day. For example, completing exercises at mealtimes (breakfast, lunch, and dinner time) would be three sets.

- Reps (short for repetitions)

This is the number of times you complete the exercise in a set. For example, you might complete a straight leg raise 5 times (5 reps) in your morning session of exercises (set).

All exercises must be paced carefully, starting with a lower number, and gradually building up. If your pain is severe during the exercises or does not settle an hour after completing them, you may need to miss the next set of exercises and reduce repetitions of that exercise.

If a particular exercise aggravates your symptoms, reduce the number you do and build up more slowly. If a smaller number still aggravates symptoms, **stop** the exercise, and discuss this with your physiotherapist or consultant.

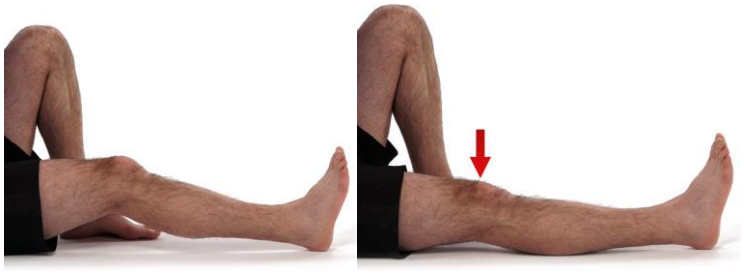
Repeat all exercises starting with small numbers of repetitions, for instance 3-5 reps, and build up to ten as comfort allows. Repeat 3-4 times daily. Your aim is to eventually build up to doing each exercise 10 repetitions, 4 times per day.

The exercises provided are the same before and after your operation and include bed and chair exercises. Choose which type most convenient for you at the time. For example, your morning set of exercises could be done on the bed and a later set could be done in the chair.

Bed exercises

Ankle pumps

Gently move your ankle up and down in a slow motion, approximately every 1-2 seconds. Repeat for 1-2 minutes.



Static quads (knee extension)

Lying on the bed or a settee, with your foot and knee pointing up to the ceiling, push your knee straight into the bed or settee using your quadriceps (thigh) muscle.

Inner-range quads

Place a rolled-up towels or 2 litre bottle of pop under your knee to allow your knee to rest in a flexed (bent) position. From here, use your quads muscle to straighten your knee fully. Hold for 5 seconds and slowly control the leg down.

Straight leg raise

Push your knee straight into the bed using your quad (thigh) muscle and gently lift the leg off the bed. Keep the knee straight and hold. Pain may not allow you to lift or hold. Lift off as much as able or as pain allows you to.

GAPS extension (stretch)

Place a rolled-up towel or 2 litre bottle of pop under your ankle. Allow the leg to relax and stretch straight. You will feel an uncomfortable stretch around the knee joint. Hold for 1- 3 minutes. Slowly build up to 20 minutes over time, as comfort allows.

Chair exercises


Ankle pumps
Gently move your foot and ankle up and down in a smooth and controlled motion approximately every 1-2 seconds. Repeat for 1-2 minutes.


Seated knee extension
Gently straighten your operated leg until it is as straight as possible. Hold for 5 seconds and slowly lower down. You may not be able to straighten the leg fully at the beginning, so gradually build up how high and straight you are able to lift it.


GAPS extension (Gravity Assisted Passive Stretch)
Place your foot and ankle on a chair or stool and allow your knee to relax and stretch out straight. The weight of your leg may feel uncomfortable at first. Hold for 1-3 minutes initially and build up to 20 minutes, as comfort allows.


Active assisted knee flexion
Gently bend your knee as far as you are able using the muscles in your leg. Then use your non-operated leg, gently push your operated leg back to stretch the front of your knee. It is fine to work into an uncomfortable stretch but not severe pain. Hold for 10-15 seconds initially. Try to build up to 30 seconds.

Occupational therapy

The occupational therapy team will contact you to talk through any concerns you may have about managing at home after your surgery. Following the telephone consultation, you may be provided with some equipment that will aid your recovery. Advice can also be offered about bathing and strip washing.

Please consider how you think you will manage after your operation:

- **Can you ask family and friends to support you in the short term?**
- **Will you need to prepare meals or have help preparing meals?**
- **Can you prepare meals in advance to keep in the freezer for after your operation?**
- **You will not be able to carry anything whilst using your walking aids so consider alternatives and how you are going to manage. You can discuss any concerns with the occupational therapy team during your telephone consultation or on the ward.**

Before your operation

You may be asked in your pre-operative assessment to book an appointment at your GP surgery with a practice nurse to have your clips removed. **This will need to be booked for 14 days after the day of your operation.**

If you feel that you are suffering from any kind of infection (for example urine, dental or stomach infection) please make the orthopaedic team aware before the operation.

Hospital stay

After your operation you will be admitted to an orthopaedic ward at Kings' Mill Hospital (Ward 14b) and Newark Hospital (Minster Ward). It is likely that you will need to stay in hospital for an average of one day after your operation, but this will vary depending on your progress and when you are safe to go home. It may be that you are able to go home on the day of your surgery, but this will depend on several factors, including what time you go for your surgery or your own circumstances as to whether this is appropriate for you.

What to bring

You will want to pack an overnight bag to bring into hospital with you. This should include spare clothes and pyjamas, a wash bag and suitable supportive footwear (flat shoe or slippers with heel support).

You may want to bring a book to read or an electronic device to pass the time whilst waiting for surgery. Towels can be provided on the ward for washing, if needed.

You do not need to bring bedding with you as this will be provided on the ward.

Please bring your usual medications with you.

Admission day

On the day of your operation, you will arrive on the ward. You will have to stop eating six hours before your operation to prepare for the anaesthetic and procedure. You may be able to sip clear fluids before the operation, but this will be guided by the ward staff at the time.

When you are admitted to the ward you will be seen by the anaesthetist and medical professionals who will discuss your anaesthetic, postoperative pain relief and your overall plan for surgery. The leg requiring surgery will be marked.

Members of the team involved in your care will include:

- Doctors
- Anaesthetists
- Nurses
- Healthcare assistants
- Physiotherapists
- Occupational therapists
- Pharmacists.

Anaesthetic

You will be fitted with a compression stocking on your un-operated leg before you go for your operation. Another stocking will be fitted onto your operated leg after your operation. These are called TED stockings and information regarding these can be found later in the booklet. Your anaesthetic procedure will be discussed with you before your operation. The anaesthetic type that you have will depend on many factors such as previous experiences, health conditions and the anaesthetist's recommendations.

Spinal anaesthetic

You will usually be offered a spinal aesthetic, which could be with or without sedation. The procedure involves a dose of local anaesthetic injected into your lower back near the nerves in your spine. This is considered highly effective and will temporarily numb your body from the waist down. You will not feel anything during the operation other than some occasional movement or pressure, but you will still be conscious.

The advantages of a spinal anaesthetic compared to a general anaesthetic are that you are likely to feel less sick or drowsy after the operation and you can usually eat and drink sooner. Therefore, you may feel up to mobilising on your new joint sooner. Another advantage of a spinal anaesthetic is that it is likely you will not need a lot of strong pain relief after the operation as you will still have the benefits of the analgesia. You will also be in control of your own breathing after the operation, making you feel better quicker.

Sedation

Sedation can be used at the same time as a spinal anaesthetic, which can make you feel more relaxed. It may be given as light or deep sedation. If required, this will be adjusted to your personal needs which will be discussed with your anaesthetist.

General anaesthetic
Having a general anaesthetic will make you unconscious for the surgery so you will not feel anything, but this is completed in a controlled way, and you will be constantly observed. You will usually receive anaesthetic drugs, oxygen to breathe and you may need medication to help relax your muscles. You will need a breathing tube in your throat for the operation. The advantages are that you will be unconscious throughout the procedure. The disadvantages include drowsiness, nausea, and difficulty trying to control postoperative pain on return to the ward.

The operation

The operation is likely to take about 1½ hours. Once your operation is complete you will be taken through to the recovery ward.

Recovery

In the recovery ward a nurse will monitor you as you begin to come round from the anaesthetic. You may feel slightly confused or drowsy as you come round but this is normal as the anaesthetic wears off. Your nurse will be monitoring your vital signs (pulse, oxygen, checking the wound and assessing your pain) and ensuring you are comfortable.

Once you are stable and the doctors and nurses are happy with how you are then you will be taken back to the orthopaedic ward to continue your care. On the way back to the ward you may have an x-ray. The staff on the ward will make sure that your pain is well controlled and will assist with your care as needed. They will continue monitoring your temperature, pulse rate, blood pressure, bladder and bowel function and the feeling in your legs after the anaesthetic.

After your operation (postoperative)

Day of surgery
You will be encouraged to sit up in bed, eat and drink, move your feet, and gently begin your physiotherapy exercises. You may be mobilised on this day by either the nursing team or therapy team if it is safe and appropriate to do so. It may be possible that you go home later on the day of surgery (day 0), but this will depend on several factors, including the time you go for your surgery, how well you feel, and whether it is appropriate to do so.

Day 1
You will be encouraged to be as independent as possible. We advise that you try to get dressed in your own clothes (loose and easy fitting along with supportive slippers). The staff will be able to assist you where needed but you will be encouraged to do as much by yourself as possible. You will be expected to mobilise with a walking aid if you haven't already. It is likely that a member of the therapy team will discuss any equipment needs you may have.

Depending on how you are managing and how well you feel, the therapy team at this stage may complete stairs or step assessments, depending on your home environment. Your exercises will be practised with you.

Depending on how you are feeling and moving, you may go home on day 1 if you are safe to do so.

If more time is needed, you will be informed and updated on why you are staying longer.

Postoperative complications

There is the possibility of developing postoperative complications as mentioned previously. Signs and symptoms to look out for include:

- Severe pain when touching an area of skin, especially the calf area.
- Extreme swelling of the whole leg, not just the knee, especially in the calf.
- Skin that is hot to touch, very red and looks tight or stretched.
- Wounds leaking discharge that may look dirty, yellow in colour or pus filled.
- Chest pain or shortness of breath.

If you experience any of these symptoms or are concerned, then you should **seek medical advice as soon as possible** to ensure the right treatment is started and to avoid any further complications.

To reduce the risk of post-operative complications, staff will help you to mobilise as soon as your condition allows, you may be advised to wear stockings and possibly be given blood thinning medication.

Wound

It is important to monitor your wound to check for signs of infection such as weeping or excessive bleeding after your operation. To close the wound, clips are used to hold the skin together. These are usually taken out two weeks after the operation by your GP practice nurse. **You will be informed if you need to organise this appointment after your surgery.**

You will be made aware whether clips or glue has been used. An appointment two weeks after remains the same for a wound check or clips removal, if you have any.

There are dissolvable stitches under the skin to help to repair the wound, which should dissolve within 6-8 weeks after your operation. You may notice a small piece of thread protruding through the wound, which can be normal. Do not pull at it, it should dissolve and come away. At times, the area at either end of the wound can become pink in colour which can be normal. If it becomes very pink or you notice any pus coming from this area you will need to contact your GP and you may require antibiotics.

Bruising

This is normal and should fade within 6-12 weeks after your operation. Bruising can be extensive and go up towards your hip and down to your foot. You may also have a bruised feeling in your thigh where the tourniquet was applied during surgery.

Pain

Some pain after a knee replacement is considered normal; you have had major surgery and your body will be responding to the invasive trauma to your knee that needs to heal. Many patients are concerned about an ongoing pain/ache weeks and months after the operation. Only occasionally do we have patients that feel the benefit of the new joint immediately. Most pain killers will help your pain levels be at a manageable level and will not necessarily abolish it.

In the first few weeks after surgery, we are very keen that you have adequate pain control to allow you to complete the exercises we have given you. You will be prescribed medication on the ward. To be able to do your exercises and begin your rehabilitation, you will need to manage your pain levels appropriately. If your pain is not under control then you will have difficulty moving the knee and mobilising, which can slow down your recovery process.

After the operation, the ligaments of the knee may be more on stretch than they were before the surgery and will need time to adjust. Certain movements that involve a twist of the knee can pull on these already stretched fibres. Until this settles you may find certain movements such as rolling over in bed or getting in and out of a car uncomfortable. To minimise this discomfort, brace your muscles to support the joint and move cautiously, avoiding the twisting movement.

Getting in and out of a vehicle

Below you will see a good technique of how to get **in a car** without putting too much of a strain on your new knee. Try to keep your kneecap facing upwards throughout. You can get out of the car in the same way but in reverse.

		
• Have your passenger seat as far back as possible. • Sit into the car sideways.	Technique for getting into the car if your operated leg is the **right:** • Gently lift operated leg into the footwell with support of your hands, if required.	Technique for getting into the car if your operated leg is the **left:** • Place your non-operated leg into the car and lift your operated leg into the footwell using your hands to support, if required.

The joint may click, which is normal. It is usually a sign that swollen tissues are moving over each other differently than before. Again, this should improve as healing continues.

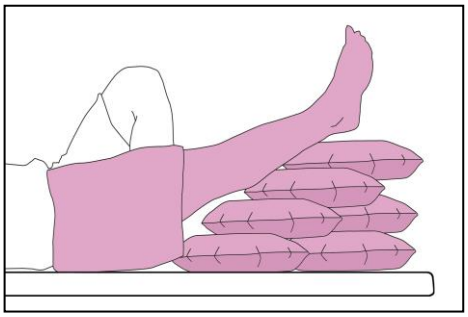
Swelling control

An effect of the operation will be inflammation of the joint causing large amounts of swelling, which is normal after knee replacement surgery. Swelling can last from one year to 18 months.

It is vital to manage the swelling as best as possible, as it takes up space within the joint causing pain and restricting available movement.

Moving little and often (every hour) is important to avoid circulation problems. However, overdoing the amount of time you are on your feet will increase your pain and swelling, particularly over that evening or during the following night.

If your knee is swollen, aim to regularly raise the foot above heart level. This can be achieved by lying on your bed with a stack of pillows or rolled up duvet under your heel (do not place pillows under your knee so it rests in a bent position). Rest in this position for a minimum of 20 minutes as pain allows.



Cold therapy
Cooling the knee can also be helpful in easing symptoms of pain and swelling.

All patient having a knee replacement will be given a **cryocuff** on the ward after their surgery to help with reducing pain and swelling.

How do I use it?
Each cuff is filled with iced water and fits around your knee using the Velcro straps. Ensure the hole in the middle of the cuff fits over your knee cap. For best results, elevate your leg once the cyrocuff has been put on (as detailed above).

How long do I need to use the Cryocuff for?
Your Cryo-cuff should be used for no longer than 20 minutes at a time. After each use, ensure you have a one hour break before using again. If you suffer with diabetes or any other health conditions that alters the sensation in your skin, please inform your physiotherapist so they can best advice when/how to use it.

How do I refill the cuff?
Whilst you are on the ward, the therapy team or nursing staff will continue to top up the cuff with fresh iced water. Once home, you will not need to change the water. Instead, keep the cuff in the fridge when you are not using it to ensure it stays cold, and apply regularly throughout the day.

Temperature

Your knee will feel warm after the operation - blood flows to the area for healing which causes the warmth. If your knee becomes **extremely hot,** then you may need to consider what has caused this. Extra warmth can be a sign of infection, but it more commonly occurs if you have been on your feet too long, tried to walk too far or you have been stood in one position for a period. This may have aggravated and inflamed your knee; swelling and an increase in ache or pain is the response. If this is the case, try to balance activity on your feet with rest.

Numbness

Numbness around the knee is due to small superficial nerves being disrupted during surgery. The patch usually gets smaller but there may be a permanent small area of numbness.

Total knee replacement class

You will be invited to attend the total knee replacement class or individual appointment at your local hospital following surgery. It is especially important that you attend this appointment. At this time, you will be assessed, and your exercises will be reviewed and personalised to your needs. This will be a good opportunity to ask any questions or address any concerns you may have.

Mobility

Your doctor or physiotherapist will let you know how much weight you will be allowed to put through the knee. It is likely that you were provided with crutches in the education group, but otherwise you will be given a walking aid on the ward, which is usually a pair of crutches or a frame. You will be shown how to use these on the ward and the staff will ensure you are safe before going home.

Stairs or steps

If you have stairs at home, then you will need to complete a stairs assessment with a therapist before you go home. They will teach you the safest way to complete the stairs to enable you to manage at home. When going up the stairs you should use your handrail and a crutch in the other hand.

Going up stairs:

1. Push through your crutch and step up with your non-operated leg.
2. Now step up with your operated leg **to the same step.**
3. Bring your crutch onto the same step.

Going downstairs:

1. Put your crutch one step below.
2. Step down with the operated leg.
3. Now step down with your non-operated leg.

The technique for steps is the same as stairs. If you are unable to complete the stairs assessment, then it may be necessary to consider living downstairs at home when you are discharged from hospital. This will be discussed with you and may only be temporary until you are able to use the stairs again.

A useful acronym to remember the stairs/step technique with crutches:

- Up – **ABC** (able leg, bad leg, crutch)
- Down – **CBA** (crutch, bad leg, able leg).

Discharge home

Before being discharged home you must be fully stable with your medical checks and have gained full sensation back in your legs. Staff will be monitoring you throughout your stay in hospital to ensure that your pain is under control, you can walk safely and there are no signs of infection before you go home.

Stockings may be provided to reduce the risk of deep vein thrombosis (DVT), which is the formation of one or more blood clots.

Medical staff will inform you if and for how long you may need to wear these for. In some cases, you will only need to wear them while in hospital, in others you may be expected to wear the stockings for six weeks and only take them off for washing. If you feel that your stockings are digging into your leg or are too small, please contact the orthopaedic ward for advice.

When you have been discharged from hospital it is important to follow the advice given, monitor your pain levels and be sensible with the amount of walking you are doing. In the first six weeks we advise you do not stand still for periods longer than two minutes. We advise that you potter around the house, little and often, gradually building up the distance you walk, but we do not expect you to be going for long walks.

If you have been stood for too long or have walked too far, you may get an increase in heat and swelling at the knee, not necessarily at the time, but more commonly that evening or overnight. Some patients experience an increase in their ache and a restless, unsettled feeling. This is an indication that you are on your feet too much. However, when resting, you must try to do circulatory exercises (ankle pumps) to compensate for not walking as normal.

Follow up

As previously mentioned, once you know your operation date you may be asked to book an appointment with your GP surgery to see a practice nurse. This should be for 14 days after your surgery to have your wound checked and your clips removed.

In addition to this you can expect to see a physiotherapist within two weeks of your operation. Your consultant should review you six to eight weeks after your operation unless otherwise stated.

Home advice

If you have any specific needs or require extra help at home, this should be organised prior to your operation. On the ward the staff will help to show you how best to get yourself washed, dressed and in and out of bed. If necessary, equipment will have been organised by occupational therapy to help you manage at home. Your new artificial knee will feel quite different to your knee before the surgery. You may have a sensation of heaviness, stiffness or clicking noises, which are likely to settle as you recover.

Movement:

Your surgeon has put in a type of hinge which is designed to bend and fully straighten. The aim of physiotherapy is to get your knee as straight as possible and achieve a good bend so that you have a useful knee. Most types of implants will bend up to 125°of flexion. We find a minimum of 95° is required to have a functional knee.

We are very keen that you achieve a knee that fully straightens as this allows the locking mechanism of the knee to work more effectively. If you do not achieve this, and if you have weak muscles of the thigh, you may find that the leg buckles under your weight. This will increase your risk of falling. Straightening the knee and strengthening the thigh muscle helps avoid this. Another reason we want the knee to be straight is so that it is the same length as the other leg to help your walk look normal.

Stiffness

After being seated for some time, the knee can feel stiff when you stand up and it may take three or four steps before the knee moves more freely. This is because the healing tissues are still swollen and are slower to respond than normal tissue.

Walking

Initially you will be provided with two elbow crutches. We will advise how to wean onto one crutch and eventually to no crutches at your physiotherapy sessions.

When you progress onto one elbow crutch or stick, you should hold the crutch in the **opposite hand** to your operated leg. You should be able to stop using the crutch or stick when you can walk as well without it, as with it. It will be better to use a walking aid if you still have a limp so that you do not develop an abnormal walking pattern long-term. There is no set time to wean off the crutches, it is done on an individual basis, dependent on your strength and previous ability.

Driving

You cannot drive until six weeks after the operation. This is due to insurance companies' policies. You may need to inform your insurance company when having the operation and re-inform them when you intend to restart driving.

We advise you to practice an emergency stop and moving your foot between the pedals in a static non-moving car. If this does not cause any problems, you may then resume driving after the six weeks with the permission of your consultant. Begin driving with somebody else in the car in case it is uncomfortable, or you cannot manage; then gradually build up the amount of driving you are able to do.

Returning to work and resuming activities

You can return to work when you feel confident with your knee and the pain is under control.

Physiotherapy is about getting your knee to bend and straighten as far as it can without inflaming it. It is important to balance activity with rest. This balancing act will need to be continued over the next few months. As you can do more, you will be able to anticipate how much is too much. While doing an activity you should be aware of how long you are on your feet.

Aim to rest before the knee starts aching and in time you may be able to anticipate this too. You may find that your knee becomes warm and inflamed in the evening or overnight as a reaction to what you have done earlier that day.

Discuss your job with your consultant, GP or physiotherapist and your work manager. You may return to an office-based job earlier, but if your job involves standing for long periods, walking or heavy lifting, a minimum of three months off work may be recommended. A phased return is often the best option and will need to be discussed with your employer.

A static bike is incredibly good for gaining more movement and strength once you have a 90-degree bend. You may need to start with the seat high to allow for a full turn of the pedals and without resistance. If you are unable to do so, you may pedal in half circles forwards and backwards. We recommend you can start this as soon as the pain is under control, and we can assess you within your physiotherapy sessions. Take care getting on and off the bike - avoid twisting the knee. Seated home pedals are good too.

Movement in water is good exercise but we recommend waiting until you have had your staples out and dressing removed. Only once your wound is clean and healed and not open you can start swimming. **There is a high risk of developing an infection if your wound is even slightly open, so avoid swimming until you are certain the wound is fully healed and closed.** We advise front crawl legs - avoid breaststroke legs as this increases the strain on the ligament on the inside of the knee.

Low impact sports such as bowling and dancing can be resumed gradually. The twist of a full swing in golf can pull on the inside of the knee, so waiting three months will be more comfortable. If you are doing well on a static bike, then you can progress to road cycling. Always take care when getting on and off the bike not to twist your knee. High impact sports such as running are to be avoided.

Kneeling

Kneeling on your operated knee may cause discomfort but does not need to be avoided. The sensation may feel abnormal and 50% of people will not get back to kneeling. The wound may be too sensitive to attempt kneeling in the first few months, but in time you may attempt gently kneeling on a sofa or bed. When you do attempt to kneel on the floor do so on a mat or pillow and make sure you either have a chair or a second person there in case you cannot get up.

Squatting

Even if you have achieved an incredibly good bend after surgery, your knee will not go quite as far as a knee without a knee replacement, therefore you will only manage so far. Your new knee is not designed to go to a full squat.

Stairs - alternate legs

Your physiotherapist will help you practice this when they feel you are ready to progress from going one step at a time to alternate legs. It is very normal to find going up stairs alternate legs much easier than coming down alternate legs.

Bathing

You will usually be able to sit on the bottom of the bath after 12 weeks. However, it may be longer than this until you feel that you are ready.

Public transport:

On a plane, coach or bus try to make sure you have legroom for comfort.

No long-haul flights (over four hours) should be planned in the first three months. Most knee replacement joints will be made with stainless steel or cobalt chrome and therefore may set alarms off in security. If this is the case, you will need to explain the situation to the security staff.

Personal exercise diary

Use this diary to keep track of your exercises throughout the day.

Sessions completed during the day						
3-4 times daily minimum:	**1**	**2**	**3**	**4**	**5**	**6**
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

Sessions completed during the day						
3-4 times daily minimum:	**1**	**2**	**3**	**4**	**5**	**6**
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

Contact details

King's Mill Hospital	Telephone 01623 622515
Newark Hospital	Telephone 01636 681681

King's Mill orthopaedic ward:	Extension 2414 (Monday to Sunday, 24 hours)
Newark Hospital Minster Ward:	Extension 5850 (Monday to Friday, 24 hours)
King's Mill physiotherapy outpatients:	Extension 3221 (Monday to Friday, 8am-5pm)
Newark physiotherapy outpatients:	Extension 5885 (Monday to Friday, 8am-5pm)

Further sources of information

NHS Choices: www.nhs.uk/conditions
Our website: www.sfh-tr.nhs.uk
Arthritis Research UK: www.arthritisresearchuk.org

Patient Experience Team (PET)
PET is available to help with any of your compliments, concerns, or complaints, and will ensure a prompt and efficient service.

King's Mill Hospital: 01623 672222
Newark Hospital: 01636 685692
Email: sfh-tr.PET@nhs.net

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team on 01623 672222 or email sfh-tr.PET@nhs.net.

To be completed by the Communications office
Leaflet code: PIL202407-04-TKR
Created: February 2020 / Revised: July 2024 / Review Date: July 2026