

A Patient's guide to

Total Knee Replacement (TKR)

This leaflet provides information, which may help you prepare for your surgery, admission to hospital and during your in-patient stay. Treatment is always planned on an individual basis, so your experience may differ slightly from the information given. If you are having a partial knee replacement, for example, uni-compartmental knee replacement or patello-femoral knee replacement, the information in this booklet is still relevant for you but reference is made throughout to total knee replacement (TKR).

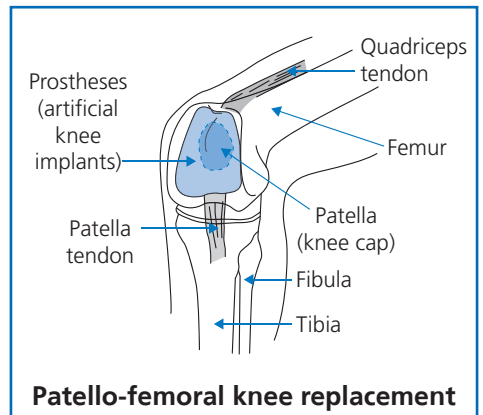
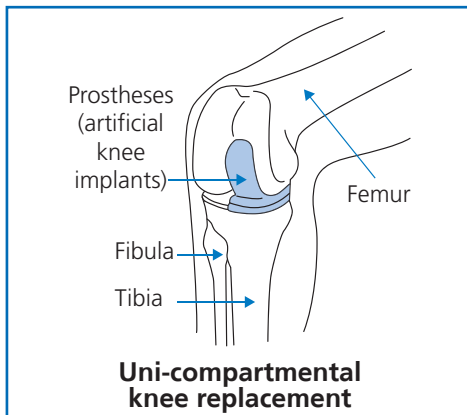
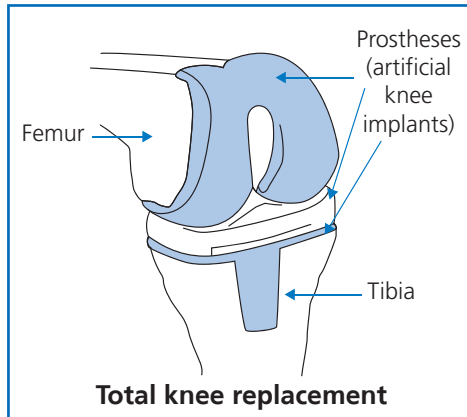
Our staff are here to help and answer any questions you may have, therefore please do not hesitate to ask at any time.

Why do I need a TKR?

There are many conditions which require a knee replacement. The most common is osteoarthritis. This means that the cartilage of the knee has worn out, resulting in the top of the shinbone (tibia) and the bottom of the thigh bone (femur) rubbing together. This is very painful and stops you being able to move your knee as you once did.

What is a TKR?

A TKR involves removing the end of the thigh bone, and the top of the shinbone, and replacing them with prostheses (artificial knee implants). The artificial knee is usually made of metal alloy and high density plastic.



How will a TKR help?

After your operation and recovery, you should experience some pain relief, which should improve your ability to walk.

What are the alternatives to TKR?

Before suggesting surgery your doctor may have offered alternative treatments including anti-inflammatory medication, physiotherapy, weight loss and/or walking aids. Only when these treatments no longer control your pain will your doctor suggest a TKR.

RISKS of a Knee Replacement

- All operations have risks
- A knee replacement is a major operation and will place the body under stress
- Any underlying illnesses may worsen due to the operation

Common risks (2-5 people in every one hundred knee replacements)

Pain. The knee will be sore after the operation but will usually improve after the first few months. However a degree of ongoing pain or discomfort can occur and, in some cases, be permanent.

Bleeding. There will be blood loss and a drain from the knee may be used to collect this after the operation. A blood transfusion is occasionally required.

DVT (deep vein thrombosis) is a blood clot in a vein due to the surgery. It can cause leg swelling and pain. Stockings and blood thinning medication will reduce your risk. Starting to move your legs early is one of the best ways to prevent blood clots from forming.

Knee stiffness can occur after the operation, especially if the knee was stiff before the surgery. Further manipulation of the joint is occasionally necessary. Working hard with the physiotherapists to push the range of motion in your new knee is the best way to prevent stiffness.

Loosening and wear of the knee replacement. The implants are designed to last 10-20 years, but in some cases they fail earlier and require revision surgery.

Less common risks (Less than one in every one hundred knee replacements)

Infection. The operation is performed under sterile conditions and you will be given antibiotics at the time of the operation. Despite this infection may still occur. This requires a course of antibiotics. Rarely, surgery to washout the knee replacement or revise the replacement is required.

Rare risks (Much less than one in every one hundred knee replacements)

A Pulmonary Embolism (PE) is when a blood clot moves to the lungs and affects your breathing. This can be fatal.

Major nerve damage. It is normal to have a numb area around the scar. Larger nerves can also be damaged leading to temporary or permanent weakness (foot drop) or altered sensation in the lower leg.

Bone damage. If a bone is broken or weakened during the insertion of the knee replacement further metalwork may be required to stabilise it, either at the time of surgery, or at a later operation.

Blood vessel damage. The vessels at the back of the knee may be damaged which would require vascular surgery. In exceedingly rare cases the leg itself is at risk and amputation is a possibility.

Death a rare outcome and can occur as a result of a PE or other pre existing medical conditions not related to the knee.

Before coming into hospital

Please read this leaflet in conjunction with “A Patient’s Guide to Admission” leaflet (ref 17-38) or visit: www.rnoh.nhs.uk/patients-visitors/information-guides.

Pre-operative Assessment

Shortly before your operation you will be asked to attend a pre-operative assessment screening. This is a medical examination to make sure you are well enough for surgery and to consent to an operation. If you are on any regular medication, please ask the pre-operative assessment staff what medication you can take on the day of surgery. You may also be seen by a member of the Therapy Team who will discuss practical considerations to ensure a smooth and timely discharge from hospital.

Contraceptive Pill or Hormone Replacement Therapy (HRT)

Depending on what treatment you are having, women may need to stop taking the contraceptive pill, or HRT six weeks before treatment.

Illness before surgery

If you are unwell in the days prior to surgery or if there are any changes in your medical condition, such as dental or urinary infection, or infected cuts or ulcers on your skin please let us know as soon as possible. Your operation may need to be rescheduled, however this is in your best interests to reduce the risk of developing post-operative infection in the new joint.

Smoking

- People who smoke are at higher risk of developing complications with their lungs and circulation
- Stopping smoking before surgery, even for a short time, can reduce your risks associated with surgery and improve your surgical success.
- The RNOH has a no smoking policy. Patients and visitors are not permitted to smoke (including e-cigarettes) in the hospital buildings or in the grounds around the hospital

Transport

It is unwise to drive yourself to hospital as you will not be fit to drive home again. Your operation may invalidate your insurance so you should notify your insurance provider of your forthcoming operation. Please ensure that suitable arrangements are made for your transport home on discharge before you come into hospital. Remember you should be aiming to go home by the third or fourth day after the operation.

Prehabilitation

- It is helpful to maintain yourself in as good a shape as possible during your time on the waiting list as this will improve your recovery after surgery. This is termed prehabilitation.
- Exercise can help decrease pain and help maintain leg strength.
- Keep walking as much as you are able this will then help keep your heart in good condition before surgery.
- If you are overweight, you should try and lose weight to minimise complications after surgery. Your GP will be able to help you with a weight loss programme.

What will happen when you arrive at hospital?

You will be admitted to hospital on the day you have your surgery. Occasionally, it is necessary for patients to have further tests before surgery. If this is the case, you may be asked to come in the day before.

On admission, you will see several members of the treating team who will complete final checks to make sure you are fit for surgery. If you have any questions, please ask a member of staff.

Your operation

Before the operation one of the surgical team will discuss the procedure with you and answer any questions you may have. You will be asked to sign a form giving consent to the operation.

The anaesthetist will visit you before your operation to discuss your anaesthetic options. Further information on the different types of anaesthetic that can be used for your knee replacement operation can be found in A Patient's Guide to Anaesthetic Options for Hip and Knee Surgery leaflet (ref 16-165). Please go to www.rnoh.nhs.uk/patients-visitors/information-guides

You will be told not to eat for approximately six hours and not to drink for two hours prior to your operation, depending on the anaesthetist's instructions. Failure to follow these instructions will result in your operation being delayed or even cancelled.

Our porters will take you to the operating theatre and a nurse will accompany you and hand you over to the care of the theatre team. The operation usually takes between one and one and a half hours. You may be away from the ward longer than this as you will be taken to the recovery area and cared for there until you are well enough to return to the ward.

A patient information film about Total Knee Replacement at the Royal National Orthopaedic Hospital can be found via our website at www.rnoh.nhs.uk. This short film will explain what will happen to you when you are admitted to the RNOH for Total Knee Replacement surgery.

The direct link to the video is <http://bit.ly/2ig2hKm>

After Surgery

After the operation you will feel some pain and discomfort, which will be helped by medication.

You will be offered pain relief every few hours which may include a combination of regular pain relief such as paracetamol as well as stronger opioid based painkillers. We advise that you take these regularly in the first 48-72 hours. After this you may be able to reduce the dose or frequency of some of these medicines.

You may have the following:

- A bulky bandage on your knee
- Small drainage tubes coming from your wound
- A drip to replace lost fluids
- An oxygen mask

All will be removed as soon as possible after surgery.

Unless you have been told otherwise by a doctor or a physiotherapist, you can move as you feel comfortable after your total knee replacement. Prolonged convalescence increases the risk of blood clots and increases the risk of infection. Your goal will be to return to normal activities as soon as possible and the best place to do this is in the comfort of your own home. Please remember that you are not unwell: you will recover quicker from surgery by following the advice in our patient information guide "On The MEND". Please go to www.rnoh.nhs.uk/patients-visitors/information-guides

Day 0

Today you will have your surgery. Once you have returned to the ward and the anaesthetic has worn off, a member of the physiotherapy team or nursing staff will help you get out of bed and into a chair. Some patients may only get as far as sitting on the edge of the bed while others may progress further and walk a short distance. It all depends on how you feel.

With help from staff you can begin to move your knee today. Please remember that the sooner you move, the easier it is to prevent complications after surgery.

We advise that you take regular pain killers as offered as well as additional medication such as laxatives to prevent constipation which is a common side effect of the strong painkillers. The nurse will give these to you.

TRACK YOUR PROGRESS

Day 0 of your operation	Yes	No
I have taken all medication as prescribed		
I completed my exercises		
I sat on the edge of the bed		
I stood / walked with a frame		
I drank water / tea / coffee etc.		
I had some food		

Day 1

You should try to be as independent as possible during the day. This includes getting dressed, sitting in the bedside chair for meals and walking on the ward. **You should wear some comfortable and loose clothes during the day. Pyjamas are for night time only!**

You will be offered regular pain medication as prescribed. It is advisable to take these when offered even if you are not in pain while resting. As you will be walking around the ward today, you might experience some discomfort when you begin to move, this is to be expected.

A member of the physiotherapy team will show you some exercises to help regain the movement in your new knee and to begin to strengthen the muscles in your thigh. It is important to work on both the bending and straightening of your knee. You should aim to complete the exercises as instructed at regular intervals throughout the day. Ice packs are available to assist with pain relief and to reduce swelling if required.

A member of the physiotherapy team will teach you to walk using a walking aid. You can turn around in either direction but you must prevent twisting or pivoting on your new knee. You should therefore lift your feet with each step and step around with small steps.

Once you can walk on your own, it is essential that you get up and walk regularly, even if this is only a short distance to begin with. **All walking is part of your rehabilitation. This includes any activities carried out with the physiotherapy and nursing staff.**

Preparing for discharge

The team will discuss with you the date that you are likely be discharged from hospital and your likely discharge destination. The majority of patients are discharged directly home after 4 nights in hospital.

TRACK YOUR PROGRESS

Day 1 after your operation	Yes	No
I have taken all medication as prescribed		
I sat on the edge of the bed		
I got washed		
I got dressed		
I drank at least 7 cups of water / tea / coffee etc.		
I sat out of bed for meals		
I walked on the ward _____ metres		
I completed my exercises		
I had my x-ray		
My discharge date and travel arrangements were discussed		

Day 2

Today you should be able to take a shower and get dressed. If you are having any doubts about how you will manage at home with personal care you should let a member of the ward staff know and you will be referred to an Occupational Therapist.

The physiotherapy team will continue to work with you to get the movement back in your knee. Most people are able to achieve a bend close to 90 degrees today but for others this may take a little longer and depends on how much movement you had in your knee before surgery. Remember do not let your knee stay in one position for too long, gently move it every hour in addition to doing more focussed exercises. If the knee swells too much it is time to rest with your legs up. You can ask the staff for an ice pack to help reduce the swelling. You need to reduce the swelling before you exercise. If the knee is too tight, exercising will be difficult.

You will also make progress with your walking. If you have been walking with a zimmer frame, aim to move onto crutches. Walking with the physiotherapy team is not enough. You should also use the times when you have nothing to do to get up and walk. 'Little and often' is the best way forwards. The distance one walks varies from person to person. You will not injure your knee by walking but you need to monitor any swelling.

If you need to be able to go up and down the stairs when you go home, you might practise this with the physiotherapy team today.

If you did not have an x-ray yesterday this should happen today.

TRACK YOUR PROGRESS

Day 2 after your operation	Yes	No
I have taken all medication as prescribed		
I had my wash / shower in the bathroom		
I got dressed		
I drank at least 7 cups of water / tea / coffee etc.		
I sat out of bed for meals		
I walked on the ward _____ metres		
I have managed the stairs safely with the physiotherapy team		
I understand all the information given to me		
I have made plans to be taken home		

Day 3

Preparing for discharge

You will notice how quickly you are recovering from surgery. Some patients might be getting ready to go home today but everyone is individual. Today is about continuing to improve your range of knee movement, improving your confidence walking and ensuring you are functionally able to manage at home.

Getting ready for home

Continue to exercise your knee – remember you are aiming for at least a 90 degree bend and to be able to fully straighten the knee.

Continue to walk 'Little and often'.

If you need to be able to walk up and down stairs you will practise these with the physiotherapy team.

The Doctor should have written up medication in readiness for you to take home.

TRACK YOUR PROGRESS

Day 3 after your operation	Yes	No
I have taken all medication as prescribed		
I had my wash / shower in the bathroom		
I got dressed		
I completed my exercises		
I walked on the ward _____ metres		
Knee range of movement: _____		
I have managed the stairs safely with the physiotherapy team if I have stairs at home		
I understand all the information given to me		
I have made plans to be taken home		

Day 4

Your hospital stay should end today. You need to keep this booklet as it has important information for you at home.

Continue to exercise your knee regularly at home to regain as much range of movement as possible.

Continue to walk 'Little and often'.

If you need to be able to walk up and down stairs you will practise these with a member of the physiotherapy team.

The Doctor will have written up medication in readiness for you to take home

Everyone's focus today will be on getting you ready to go home – we aim to discharge you by 11am.

TRACK YOUR PROGRESS

Day 4 after your operation	Yes	No
I have taken all medication as prescribed		
I had my wash / shower in the bathroom		
I got dressed		
I completed my exercises		
I walked on the ward _____ metres		
Knee range of movement: _____		
I have managed the stairs safely with the physiotherapy team if I have stairs at home		
I understand all the information given to me		
I have made plans to be taken home		

Return to activity

Daily tasks

Unless you have been told otherwise, you can move as you feel comfortable after your surgery. You should avoid sudden or awkward movements. A few minutes spent planning will make it easier for you to manage most tasks independently once home.

Sitting

Choose a firm, upright chair, preferably with arms that you find easy to stand up from. The ideal height of your chair depends on your height. If you do not have a suitable chair, see if you can borrow one, or use firm cushions to raise the height of the seat. Avoid low, soft sofas and armchairs since this might make it difficult for you to stand up.

To get out of a chair in the early stages when your knee is painful push yourself up on the arms of the chair, taking most of your weight on your un-operated leg. Regain your balance and then get your crutches or sticks. Reverse the procedure to sit down.

Use the same method to get on and off the toilet.

Washing

A waterproof dressing will be organised by nursing staff after your surgery. You may want to make sure someone is in the house the first time you take a bath/shower in case you need assistance.

Dressing

Dress sitting on a chair or bed. Remember to dress your operative leg first, undress it last and wear good supportive shoes with low heels.

Domestic tasks

Stock up on food and ready-made meals before admission or use online shopping to get goods delivered to you at home. You can resume household activities as soon as you feel able to do so. You might need to enlist help from friends and family with tasks such as changing the bedding and vacuuming, as it will might be difficult to complete these tasks.

Sit for as many jobs as possible. A high stool is useful so that you can still reach the worktops. Place items that you use frequently at a height which is easy to reach. If you are unable to carry items, a kitchen trolley or a back pack may be helpful.

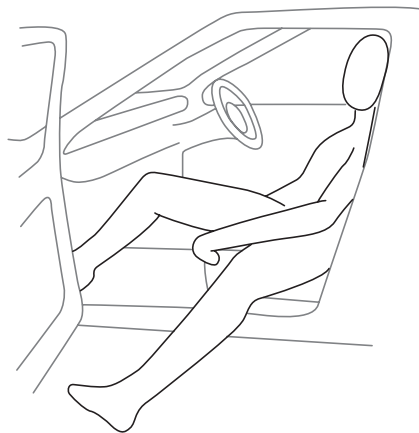
Make your home a suitable environment – clear clutter and remove loose rugs.



Lift your bottom back towards the driver's seat to give you plenty of room to swing your legs in. To get out of the car, reverse the above procedure.

Getting in and out of a car

If possible, get into the car from a driveway or road, rather than up on a kerb. The passenger seat should be as far back as possible and slightly reclined. With the passenger door open, back up to the car until you feel the seat at the back of your knees and gently lower yourself down.



Driving

You should inform your insurance company about your operation. Some Insurance companies will not insure drivers for a period of time after knee surgery, so it's important to check what your policy states and if in doubt, speak to your insurer.

Before resuming driving you should be free from pain or any effects of pain relief medication you are taking. You should be comfortable in your driving position and be able to safely control your car, including freely performing an **'Emergency Stop'**.

Ultimately, it is your responsibility to ensure that you are in control of your vehicle at all times and to feel confident that you would be able to demonstrate this if asked.

Kneeling

Kneeling is not advisable for several months following your operation, after which you may kneel down as you feel able. You may find it more comfortable to kneel on a pad or cushion.

Many patients find they cannot kneel after their operation because it is too uncomfortable or because they are experiencing a strange sensation. You must take this into consideration if you kneel a lot due to work or hobbies.

Advice on exercise

When you get home, it is very important that you continue to do all the exercises taught to you while in hospital. This will ensure that your knee does not become stiff. You should continue to ensure that you are able to fully straighten the knee and bend it to at least 90 degrees. During the first 6 weeks you will feel stronger and the exercises will become easier to do. Continue to take pain relief medication as needed to help you exercise.

Advice on managing knee swelling

It is normal to experience pain, bruising and swelling at the surgical site. Over the next 6 weeks you should notice these symptoms improve. Swelling can continue for up to 12 months after surgery. Swelling can be relieved by resting with your feet up, using ice packs and exercising.

Advice on walking

Stay active and try to walk a little more each day. While your knee remains sore it is better to continue to use your walking aids as directed by the physiotherapy team. It is better to walk normally with an aid than develop a poor walking pattern and limp by getting rid of your walking aid too early. Over time you will be able to progress and aim to walk unaided if you were doing this before surgery.

Advice on stairs

During your hospital stay, your physiotherapy team will show you how to climb the stairs (if applicable).

Always use walking aids and if present a rail(s) or banister(s) to support and assist you while going up or down stairs.

Going up

- Go up one step with your non-operated leg
- Take your operated leg up one step to join the other leg
- Bring your stick(s)/crutch(es) up to the step

Going down

- Take your stick(s)/crutch(es) down one step
- Place your operated leg down one step beside your walking aid(s)
- Bring your non-operated leg down one step to meet the other

Outpatient/follow up appointments

Before leaving the hospital you will be given an outpatient appointment for approximately six to eight weeks time for your follow up as directed by your Consultant.

Clinical Nurse Specialist Service

The clinical nurse specialists are specialist orthopaedic clinicians who work alongside the Surgical Consultants. One of the clinical nurse specialists will see you on day that you are admitted for your surgery and review you in the outpatients department following your surgery. The CNS's are primarily involved in your post-operative clinic review in out-patients but can also be contacted for general advice in relation to your knee replacement surgery on Tel: 0208 909 5279 (Monday to Friday 8am-4pm) or email rnoh.jru.cns@nhs.net

Frequently asked questions

How long will I be in hospital for?

Usually you will be in hospital for 3 to 4 days after a total knee replacement.

I live alone. Do I need to arrange for someone to stay with me when I go home?

It is not essential to have somebody at home with you after discharge. Many elderly and frail patients have knee replacements and cope on their own without problems. The physiotherapists and nurses will make sure that you are safe to look after yourself before you leave hospital. However, if you have an offer from a friend or relative it may be desirable to have them stay for a few days.

How long do I have to take blood thinning medication for?

To reduce the risk of blood clots you will need to have a small injection once a day for up to 14 days after the operation. You can learn to do this yourself or have a family member help. If this is not possible the district nurses can assist.

If I am worried about my wound what should I do?

During the normal healing process the wound may be slightly red and warm to touch. However, if you feel unwell or the wound begins to discharge fluid then contact the clinical nurse specialists, your GP or go to Accident and Emergency.

Who will take out my stitches/clips?

The ward nurses will talk to you about arrangements for removal of your clips/stitches and a wound review. Some GP practice nurses will remove the clips and/or sutures for you 14 days following your operation. In some circumstances you may be advised to attend your local walk in centre. If you are unsure please contact your GP surgery who will advise you of local arrangements.

When can I return to work?

You should be able to return to work between six and twelve weeks after the operation, but this depends upon the nature of your work and how you usually get there. It may take longer to get back to a heavy manual job.

When can I fly?

It is sensible to wait 6 weeks before flying short haul or 12 weeks for long haul as there is an increased risk of blood clots during this time.

Will I be able to swim after my knee replacement?

Yes, as soon as your wound is dry and you are safe to get in/out of the pool. You can do all strokes.

Will I be able to participate in sports after my knee replacement?

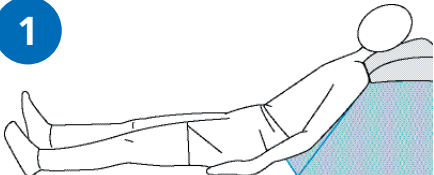
There are no strict rules. Hill walking, cycling and horse riding usually present no problem, although you should wait 3 months before returning to more strenuous activity. Some patients play tennis, football, cricket or badminton. Skiing is a little more risky as there is a danger that you can break the bone around your knee replacement if you fall badly. Nevertheless, some patients return to skiing with no problems.

Exercises following knee surgery

The ward physiotherapy team will visit you after your operation to teach you the following exercises. It is very important to start moving your knee joint and strengthen the surrounding muscles. This will aid your recovery. Try to do your exercises as instructed. Please do not attempt any of these exercises until you have been advised to do so.

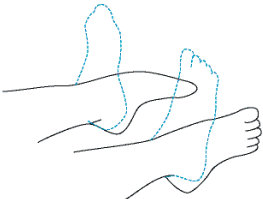
Immediate post operative period

1



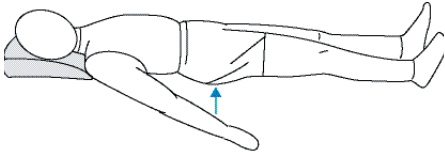
Lie on your back or sit upright. Take 3-4 deep breaths in through your nose and out through your mouth.
Repeat hourly.

2



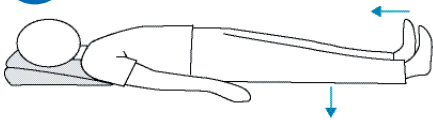
Lie on your back or in a sitting position. Bend and straighten your ankles briskly. If you feel your heels are getting sore, please stop the exercise and notify your physiotherapist.
Repeat 20 times. Repeat hourly.

3



Lie on your back. Squeeze your buttocks firmly together. Hold for 5 slow counts.
Repeat 20 times. Repeat hourly.

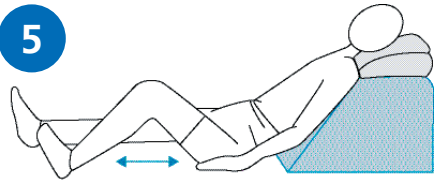
4



Lie on your back with your legs out straight. Bend your ankles and push your knees down firmly against the bed by tightening your thigh muscles. Hold for 5 slow counts.

Repeat 20 times. Repeat 3 times a day.

5



Bend and straighten your knee as far as you can. Hold it in the bent position for 5 slow counts then straighten it so your knee is flat on the bed.

Repeat 10 times.

Repeat 3 times a day.

6



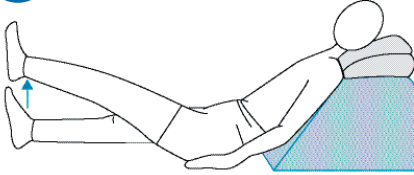
Place a rolled up towel under your knee. Lift your heel and straighten your knee. Hold for 5 slow counts.

Repeat 10 times.

Repeat 3 times a day.

Advanced Exercises

7



Pull your toes towards you. Push the back of your knee down on to the bed. Lift your leg straight up about 6 inches off the bed. Hold for 5 slow counts.

Repeat 3 times a day.

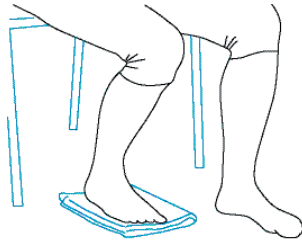
8



Sitting on a chair with the operated leg supported on a stool as shown on the picture. Let the knee straighten in this position.

Repeat 3 times a day.

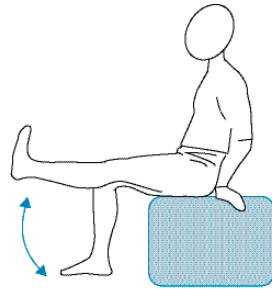
9



Sitting on a chair, slide the foot of your operated leg under the chair as far as you can. Then slide the knee straight. A plastic bag can be used underneath the foot to make this easier.

Repeat 3 times a day.

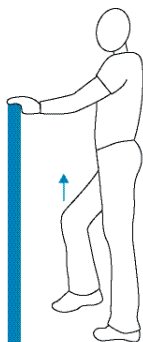
10



Sitting on a chair or side of the bed. Tighten the thigh and try to lift the leg up until your knee is straight. Hold for 5 slow counts and slowly lower.

Repeat 3 times a day.

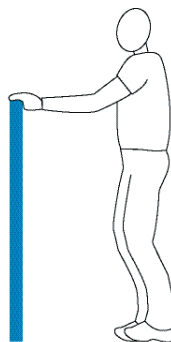
11



In a standing position holding on to a solid support, bend your operated leg up in front of you. Hold for 5 slow counts and slowly lower.

Repeat 3 times a day.

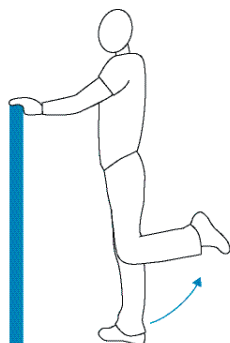
12



In a standing position holding on to a solid support, squeeze your buttocks tightly together and gently bend both knees then straighten.

Repeat 3 times a day.

13



In a standing position holding on to a solid support, keeping your knees together, bend your operated knee bringing your heel up behind you then lower.

Repeat 3 times a day.

At home, do:

- Rest and elevate your leg
- Continue to exercise regularly
- Follow the exercises the physiotherapy team gave you. These will strengthen the muscles around your new knee joint and increase your mobility.
- Continue to increase walking. If you progress on to one crutch or stick you should hold it in the opposite hand to your operated leg. Once you can walk without a limp you may stop using your walking aid unless you are told otherwise.

We suggest you bring this leaflet with you when you come to hospital and use it as a guide.

If you have any further questions or concerns please contact the relevant department on the numbers given below:

**Clinical Nurse Specialists,
Hip & Knee Unit**

020 8909 5279

Pre-assessment clinic

020 8909 5630

Physiotherapy

020 8909 5519

Occupational therapy

020 8909 5480

Patient Advice and Liaison Service (PALS)

020 8909 5439/5741

If you would like this leaflet translated into another language/large print, please contact the Quality Team on 020 8909 5439.

Royal National Orthopaedic Hospital NHS Trust
Brockley Hill
Stanmore
Middlesex
HA7 4LP

Switchboard: 020 3947 0100

www.rnoh.nhs.uk

Twitter: @RNOHnhs

19-217 © RNOH

Date of publication: December 2019

Date of next review: April 2022

Authors: Joint Reconstruction Unit