

Physiotherapy advice prior to your

Total Knee Replacement



IMPORTANT NOTICE

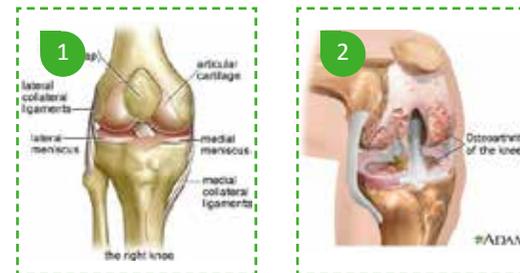
Please read this booklet prior to your surgery.

Please bring it onto hospital with you.

About your knee

Your knee has 3 parts; your thigh bone (femur), the shin bone (tibia) and the knee cap (patella). A smooth substance called articular cartilage covers the ends of the bones where they meet up. This helps them slide over each other more easily. Ligaments hold the joint together and it is lubricated by a special fluid.

Osteoarthritis is a process in which the articular cartilage is broken down. Once this cartilage has been damaged it is unable to repair itself. Osteoarthritis can develop over many years or may happen quite rapidly.

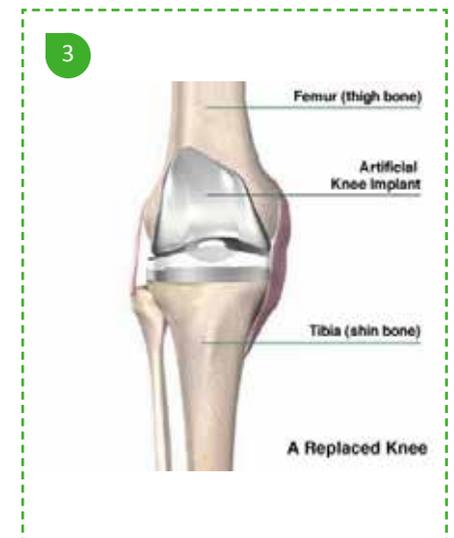


What is a Total Knee Replacement (TKR)?

The knee joint may become stiff and painful as a result of osteoarthritis or injury. A knee replacement refers to the removal of the damaged surfaces and replacing them with a metal and plastic joint. To hold the joint in place a special bone cement which sets quickly is sometimes used.

The consultant may recommend and perform this surgery, however it is your choice to have the procedure and the outcome is reliant on the amount of work **YOU** do.

A TKR is a big commitment and you must be motivated and prepared to spend the time making the process a success.



Benefits of surgery

Reduced pain - A majority of patients will experience pain relief from the surgery. However, it is normal for your knee to be painful for at least the first 6 weeks after your surgery. It may take several months to fully settle and a background ache may persist for longer.

Reduced stiffness - The new joint surfaces will eventually move more freely but again this can take several months.

Increased mobility - A combination of reduced pain and stiffness will mean that your overall mobility is likely to be improved. This should help you to return to a fitter and more active lifestyle.

Risk of surgery

Knee replacement surgery is generally a very successful procedure and approximately 80% of patients do gain an improved lifestyle. There is however a risk of complications and some of these are listed below:

Leg swelling - It is common for your legs to be swollen after an operation and this normally resolves without any problems. It can occasionally be due to a deep vein thrombosis (DVT) - a blood clot in the leg.

Deep Vein Thrombosis and PE (pulmonary embolism/blood clot in the lung) - These can occur after any operation but it is more likely in lower limb surgery. DVT occurs when blood in the large veins of the leg forms clots, causing the leg to swell and become warm to touch and painful. If blood clots in the leg break apart they can travel to the lungs where they can lodge. This is called a pulmonary embolism. In rare cases, perhaps 1 in every 1000, this can cause death. The most important symptom of a PE is breathlessness which can occur suddenly, and is often associated with a sharp pain in your chest.

There are several ways that we use to reduce the risk of DVT and PE:

- Mobilise as soon as possible
- You will wear elastic stockings (anti-embolism stockings) for 6 weeks after surgery.

Risk of surgery continued

- We assess patient for their risk of DVT and most patients will be given blood thinning agents after surgery.

Joint infection - You will be screened for bacteria before you come in for your procedure to reduce the chance of infection. It is important you do not have any cuts or grazes on your knees or legs when you come in for surgery. Wound infection can occur in hospital or after you go home. Deep infection is a very serious complication and occurs in 1 % of patients. It is more common to have a superficial infection on the surface of the wound.

Loosening of the joint - TKR's do have a limited life span and the younger you are the more likely you are to need revision surgery at some stage. Around 75% of TKR's do not cause problems 15 years post surgery.

Stiffness - Some patients can end up with less movement than they had prior to surgery.

Fracture - There are occasions when a bone may break during this procedure. Normally these are seen at the time of surgery, however they may be found on x-ray after your surgery is complete. Further surgery may be necessary to fix the fracture.

Persistent pain - TKR's are very good for treating arthritis. However there are some patients who are left with pain and discomfort around the wound.

Expected length of stay in hospital

This is usually 2-3 days after the day of your operation.

Prior to admission

- Remove any loose rugs or carpet that may be a trip hazard
- Ensure you have enough room to walk around your home with elbow crutches
- Arrange for someone to help you with your anti-embolism stockings, shopping, cleaning, washing etc.
- Plan your environment to help reduce the risk of tripping and falling.

Exercises to be performed before you come into hospital and after your surgery

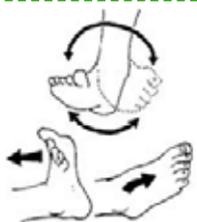
You should do these exercises **before** you come into hospital. This will help you to know what exercises you will need to do after the procedure. They will also help maintain the movement in your knee and improve/maintain muscle strength. The stronger the muscles and the greater the range of movement, the more you will benefit from the surgery.

Exercises

Deep breathing - Take a deep breath in through your nose, expanding the whole of your rib cage. Hold for a count of 3, then exhale through your mouth. Repeat 4-5 times, then cough. This will help maintain a clear chest and help remove any secretions.

Repeat regularly throughout the day and evening.

1



1) Foot and ankle - Move your feet up and down as far as you can in each direction and rotate your ankle. This will assist your circulation and reduce the risk of DVT.

Repeat regularly throughout the day and evening.

2



2) Static quadriceps - Press the backs of your knees onto the bed as firmly as possible to tense up the thigh muscle. Hold for 5 seconds or longer if able and relax. Remember to breathe throughout the hold.

Repeat regularly throughout the day and evening.

3



3) Static Glutes - Squeeze your buttocks together as tightly as you can. Hold for 5 seconds or longer if able and relax. Remember to breathe throughout the hold.

Repeat regularly throughout the day and evening.

Exercises continued

4



4) Knee flexion in lying - Lying on your bed, bend your knee sliding your heel up the bed then back down again. Repeat 5-10 times.

Repeat regularly when laid down.

5



5) Assisted knee flexion - Sitting in a chair or on the bed, bend your affected knee as far as you can. Cross your other leg in front and gently push your operated leg back further. Keeping your feet still, gently shuffle your body forward to gain more bend. Hold for 5 seconds.

Repeat regularly throughout the day and evening.

6



6) Knee flexion and extension in sitting - Sit on a chair, bend and straighten your affected leg as much as you can.

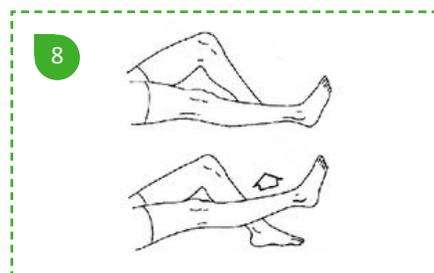
Repeat 5-10 times, 3 times daily.

7



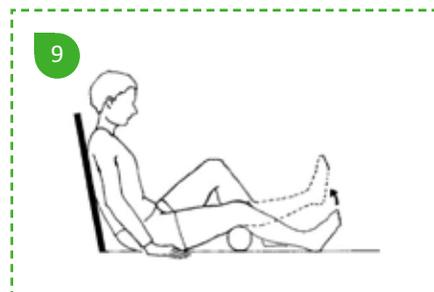
7) Passive knee extension - Lying on your bed, place a rolled up towel under your ankle. Allow your knee to 'hang' unsupported. If sitting in a chair, rest the heel (can be made easier by resting your calf instead of the heel) of your affected leg on a stool or coffee table, allowing your knee to 'hang' unsupported. You should feel your knee being pulled straight.

Exercises continued



8) Straight leg raise - Lying on your bed, straighten the knee and tense the thigh. Lift the leg off the bed, approx. 20cm. Hold for 3 seconds then lower.

**Repeat 5-10 times,
3 times every other day.**



9) Inner range quads - Lying or sitting on your bed, put 1-2 rolled up towels under your affected knee. Tense your thigh muscle and lift the heel off the bed. Hold for 3 seconds then lower slowly.

**Repeat 5-10 times,
3 times every other day.**

Gaining full knee extension (straightening), 90 degrees knee flexion (bend) and the ability to straight leg raise prior to discharge are very important. This can only be achieved if you work hard at your exercises and manage your pain well with the nursing staff.

What to bring in with you

- **This booklet (so you can continue with your exercises)**
- All your usual medications/ tablets
- Glasses or hearing aids (with spare batteries)
- Your usual toiletries
- Loose fitting nightwear and day clothes. You will be encouraged to wear your own clothes during the day
- Well fitting flat footwear with a back
- Reading material etc. if you wish
- If possible **DO NOT** bring valuables with you.

Day of surgery

You will be admitted onto the ward by a member of the nursing staff. Your surgeon will visit you and will ask you to sign a consent form and will mark you for your surgery. The anaesthetist will also visit you prior to going down to surgery. Depending on where you are on the theatre list you may have a long wait. Please be patient.

After the operation

The operation may take 1-2 hours followed by a period of time in the recovery room. You will have your blood pressure and other observations recorded regularly. You will be asked about your pain levels and offered extra pain relief if required.

On your return to the ward you may have a fluid drip. This will be removed once you are eating and drinking independently and your observations are stable. If you feel nauseous, anti-sickness medication can be given to you.

You will experience some pain after your surgery so please make sure you take your pain killers when they are being offered. If you require extra pain relief please inform the nursing staff.

You may be encouraged to stand in the afternoon/evening using a Zimmer frame. This will be with the help of the ward nurses or physiotherapists. This will improve your circulation and enhance your recovery.

You can begin your exercises as soon as you feel comfortable.

In the days following your surgery you will be encouraged to be as independent as possible. You will be expected to sit out of bed for most of the day if you are well enough.

You will be responsible for carrying out your exercises on and off the bed.

Day 1 - After your operation

- If you still have a drip this should be removed
- Continue with regular pain relief
- Your dressing may be reduced and your drain removed (if you have one)
- You will be assessed by a member of the physiotherapy team and will be able to walk a short distance with a Zimmer frame or elbow crutches (ZF or E/C)

Day 1 - After your operation continued

- You will be expected to have started your exercises but the Physio staff will check these with you
- You may be reviewed again in the afternoon by the Physio team and asked to mobilise again
- If you are safe to do so the Physio team will tell you to mobilise independently with your walking aids to the bathroom. Please ask for assistance if you do not feel well enough to do so on your own.

Day 2

- You will be expected to mobilise yourself to the bathroom to wash and dress if you are well enough
- Physio staff will progress the distance you are able to mobilise
- If you are mobilising safely you will be encouraged to mobilise independently with your walking aids as necessary
- You should continue with all your exercises
- Therapy staff may review you again in the afternoon and take you to practice stairs
- If you have met all the goals, you may not need to be seen by the Physio staff again.

Day 3 onwards

- If you did not complete the stair assessment on day 2, you may do so today
- Once discharged by the Physio staff, you are expected to continue your exercises and mobilise along the corridor as comfortable at least 3-4 times daily.

Day of discharge from hospital

- You will be discharged home once you have been deemed safe by the Physio staff and your wound, x-ray and blood tests are all ok
- Your normal medication along with added pain killers will be given to you
- Please ask for a sick note if you need one
- You will also be supplied with 2 pairs of anti-embolism stockings, one pair to wear and one pair to wash
- You should arrange for a friend or relative to collect you from hospital.

Stairs

Your **good leg** leads going **up** the stairs (**Good > Operated > Crutch**).

Your **operated leg** leads coming **down** the stairs (**Crutch > Operated > Good**).

If you have a handrail/bannister, one arm will be using this for assistance while the other is using the crutch. The principle above still applies.

Getting in and out of a car

Sit in the passenger seat with the seat as far back as possible and the back slightly reclined.

Getting in - Open the door, walk backwards until the edge of the door sill is against the back of your legs. Hold the edge of the door and the seat and slowly lower yourself in. Slide backwards towards the drivers seat, gently turning your body towards the windscreen. Bring each leg in separately. Your knee can be bent normally and this does encourage normal function, however keep your self comfortable for the journey home.

Getting out - Do the reverse of the above. Use the door frame to help you stand.

Do's

- ✓ Continue with all your exercises as prescribed, increase the amount as comfortable
- ✓ Use ice regularly (10-15 minutes every hour), wrapped in a damp towel
- ✓ Mobilise regularly using your elbow crutches
- ✓ Take your painkillers regularly
- ✓ Keep your wound clean and dry until it has healed and there are no scabs
- ✓ Wear your anti-embolism stockings for 6 weeks
- ✓ Elevate leg when resting, ensuring the leg is straight.

Dont's

- ✗ Rest with a pillow underneath your knee
- ✗ Sit for too long. Moving regularly will stop your knee stiffening up
- ✗ Walk with a stiff knee.

Please be aware that...

- Your knee will be painful for **at least the first 6 weeks** and can take several months to improve. Even then a background ache may persist for longer
- It will take at least 12 weeks for your knee to feel like a knee and it will go on improving for approximately 18 months
- It is essential to start bending your knee as soon as possible. Less than 100 degrees of movement can lead to functional problems. If you have not achieved this by 3 months after your surgery you may need further surgery know as a manipulation under anaesthetic (MUA).



FAQ's

Should I stop smoking?

If you do you are more likely to have a straight forward recovery.

Why have I got swelling?

It is normal for healing tissues to be swollen. Swelling may last several months. When you take a step the calf muscle works to help pump the blood back to your heart. If you are not using the leg normally the pump does not work as well.

What can I do about the swelling?

Keep doing your ankle pumps, thigh tightening and bottom squeezes every hour. If necessary lay on your bed for an hour each afternoon.

Why is my scar warm?

When tissues are healing they produce heat. This can be felt for several months.

Why do I get pain lower down my leg?

Referred pain into the thigh, shin or behind the knee is normal as the tissues start to heal and settle.

Why does my knee stiffen?

This is normal and is often due to your swelling. You need to take several steps before your knee loosens and you feel mobile again.

How often and for how long should I do my exercises?

You should do these as you have been instructed by your physio. Continue with them and increase your functional activities until you have reached a normal level for you. This could take up to 12 weeks.

Is it normal to have disturbed nights?

Yes. Your sleep pattern may be disturbed if you are not used to sleeping on your back. As your knee stiffens up the discomfort may wake you. You can sleep on your side when it feels comfortable. **DO NOT** try and ease the discomfort by putting a pillow under you knee.

Is it normal to have numbness around my scar?

Yes. Several nerves are disrupted during surgery which can cause numbness around the incision. This should resolve but there may be a small area of permanent numbness.

FAQ's

Why does my joint click?

The new knee works in a different way to your own. If your joint clicks it should improve as healing continues.

When can I walk with 1 E/C or unaided?

You will routinely be discharged with 2 E/C or sticks. As your strength and confidence improves you will be able to progress onto one walking aid. Always use this in the hand on your un-operated side. Do not discard your walking aids completely unless you are able to walk without a limp.

How far should I walk?

This varies depending on your fitness. Set yourself realistic targets, building up the distance you walk gradually. Overall your exercise tolerance and distance will improve over several weeks.

When can I drive?

You should usually wait for 6 weeks, or until you are reviewed by your consultant. You need to be confident that you have sufficient movement and strength to do an emergency stop. You should also inform your insurance company that you have had this surgery before you drive again.

When can I go swimming?

You should not swim for the first 6 weeks and you should ensure your wound is fully healed. Start off gently and avoid breast stroke.

When can I return to the gym?

Low impact activities such as cycling and treadmill walking are recommended in the earlier stages of your recovery, however you should check with your physio first. High impact activities such as sports and running should be avoided until after your consultant review.

Will I set off the security scanner at the airport?

Your joint may set off the alarm depending on the type of metal used. It is not normally advisable to fly within 6 weeks of surgery as flying increases the risk of DVT. Flights over 6 hours should be avoided for 3 months after surgery.

Your follow up physiotherapy appointment:

Date:

Time:

Physiotherapist:

If you have been referred elsewhere please contact them directly on the number provided if you require further information on your appointment.



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