Manchester Royal Infirmary

Total Knee Replacement

Department of Orthopaedic Surgery
What is a Total Knee Replacement?

Total knee replacement is one of the most commonly performed orthopaedic operations achieving discharge home within 3 days of surgery.

Knee replacement is most often performed when arthritis has severely damaged the joint.

The gristle (articular cartilage) is worn away, and the underlying bone becomes exposed. This can occur in both rheumatoid arthritis and osteoarthritis.

When the damage is extensive, the patient will experience pain and restriction in movement. A limp will often develop, and the knee may appear deformed (i.e. bowed legs or knock knees).

The knee-replacement operation involves removing the diseased parts of the joint surfaces and any remaining cartilage in the central part of the joint.

The ends of the bone are then replaced by metal components, and the cartilage replaced by plastic. In most cases, the metal components are secured in place with a special bone cement.

The majority of patients who undergo knee replacement report remarkable relief of pain, and improvement in mobility.
Before you come into hospital

You will need to prepare for coming home.

1. Organise your home to ensure you are able to move around with your crutches.

2. If possible try to ensure you have assistance/support for heavier activities e.g. shopping, cleaning etc.

3. If your social circumstances change prior to your operation please phone 0161 701 0267 to let us know.

4. Importantly - you must inform us if you suffer any scratches, abrasions, bites, develop colds, chest infections, any infection or feel generally unwell, as you may not be suitable for surgery and your operation will be re-scheduled for the next available date.

5. Ensure you bring your house keys to hospital with you as we may need access to it, prior to your discharge, to ascertain suitability or provide equipment.

6. Please arrange for transport home on your discharge - low seated sports cars are not suitable. If this is a problem please advise your nurse on admission. Discharge home is expected on your third day post-op.

What to bring

- Wash bag/toiletries, for a shower day 2 post operation.
- Nightwear including light dressing gown.
- ‘Day’ clothes including loose fitting shorts for men/skirts for ladies. (You will be expected to get dressed in your daytime clothes from day 1.)
- Well fitting slippers (not mules)/comfortable shoes/trainers ensure footwear has rubber sole for grip).
- Underwear and socks.
• Medication, in original boxes with labels.

• Reading book/literature/magazines.

• Cordial Juice to keep hydrated and High Fibre snacks eg prunes and dried apricots, to aid bowel movement.

On the day of your operation

Your Anaesthetist will see you to ensure that you are still medically fit for surgery and to discuss what the most appropriate type of anaesthetic is for you and to discuss your pain management operatively.

If your anaesthetist feels it appropriate, you may have some tablets to make you feel a little more relaxed before you go into the operating theatre, this is referred to as a ‘pre med’.

When it is time for your surgery, a nurse will take you into the operating theatres, a member of staff will check your details again, and you will then go into the anaesthetic room. The surgery usually takes between one and two hours.

Recovery

When you come out of the operating theatre, you will be taken to a recovery area, where you will be taken care of until you are properly awake. You will be given a drink and snack and then you will be taken back to the ward.

Once you are awake after your operation, you may find:

• A mask for oxygen: This assists in the waking up process, and your anaesthetist will determine the length of time you keep this on for.

• A drip: This may have either clear fluid or blood, and replaces any fluids which have been lost during the operation.
• Drains: There can be up to 3 tubes from your wound, which drain away excess blood from your knee into plastic bottles. This helps the wound heal more quickly, reduces bruising, and can assist in the prevention of infection. The drains are usually removed within 48 hours.

• Patient Controlled Analgesia PCA: This is an intravenous painkiller, usually morphine. It should be used for the first 24-48 hours to allow you to control your own pain relief by the push of the button. As a painkiller goes directly into your bloodstream, it takes effect almost immediately. Tablets can supplement it if necessary. Adequate pain control will allow you to mobilise the same day as your operation. Please be aware that immobility can put you more at risk of certain complications, such as constipation, chest infections, increased pain and more seriously, deep vein thrombosis (blood clot). Preventative measures, eg injections and/or tablets will be given to avoid these also.

If you experience any calf or chest pain after your operation please let your nurse know immediately. Calf or foot pumps may be applied to reduce the risk of blood clots.

• Epidural: This is another form of pain relief, which goes into your back and numbs you from the waist down. This is continuous, and not controlled by you, but it is very effective. Again this will be discontinued within 24-48 hours.

The nurse looking after you will be checking on you quite frequently to check your blood pressure and pulse. It is quite normal for this to be as frequent as every 20 minutes, and does not mean that there is anything wrong.

You will be encouraged to eat and in particular to drink plenty of fluids - post-op nausea is a side effect of anaesthetic but preventative measures will be taken to reduce these affects. If you have an epidural anaesthetic you will be eating and drinking normally almost as soon as you return to the ward.
Personal Care

In the early stages of your rehab, you will require assistance with a wash, but you are encouraged to remain as independent as you can. You will be expected to sit out for a strip wash.

You will also need to use a commode if you do not have a catheter in. Nursing staff are aware of how embarrassed and uncomfortable you may feel with this, and will be as discreet as possible. As soon as you are able, you will be assisted to go into the bathroom. You may already be aware, that many painkillers can cause constipation, if you are struggling with this, please let your nurse know.

It is important that you are able to practice getting dressed after your knee replacement so that we know you will be able to manage at home. If you have a shower cubicle at home you should be able to use this when you are discharged home. If you have a shower over the bath you will be unable to use this until approx 6 weeks after your operation. This is because you will not be able to bend your knee enough to clear the edge of the bath. You may need assistance from a family member when you do this the first time.

Exercises Following Your Operation

The same day as your operation the physiotherapist and rehab assistant will encourage you start your exercises and to sit out as able. We appreciate that this is hard work and will work with the nursing staff and doctors to control your pain, but unfortunately a certain level of discomfort must be expected. In order for you to get the best out of your new joint it is imperative that you comply with therapy - mobilising and exercising. Reduced compliance with therapy can increase your chance of complications and may result in further procedures and surgery on your knee joint in hospital.
The following exercises should be practiced pre-operatively to make it easier during your acute phase of recovery, they should be started the same day as surgery and your therapy staff will go through them with you making any adaptations as needed. You should continue with your exercises on discharge and come back to the knee class for further progression of your exercises.

**EXERCISES TO DO WHEN SITTING UP IN BED OR LYING FLAT ON YOUR BED**

1. **Ankle pump**
   Lying on a firm mattress move feet up and down. Repeat 10 times hourly.

2. **Quad sets**
   Lying on your back on firm mattress. Tighten knee muscles of operated leg. (This can be done by straightening your knee as much as possible and then pushing the back of your knee into the bed).

   Hold for six seconds – relax. Repeat 10 times, three times a day.
3. Gluteal sets

Lying on your back on a firm mattress. Squeeze your buttocks firmly together. Hold for six seconds and relax.

Repeat 10 times, three times daily.

4. Straight leg raise

Lying or half-lying as shown on a firm mattress. Keep your non-operated leg, hip and knee bent with your foot flat on the bed. Tighten your thigh muscles (as you do for the quads set exercise) and then lift the leg up keeping you knee straight, about 12”-15” off the mattress. Hold for the count of six and then slowly lower the leg to the bed. Repeat 10 times, three times daily.
5. Inner range quads

Place a rolled towel under your knee. Straighten your knee by lifting your heel off the bed, keeping your thigh on the towel. Hold for a count of five seconds then relax. Repeat 10 times, three times daily.

6. Heel slide – in bed

Slide heel towards bottom bending your knee through as full a range as possible and then straighten it. Repeat 10 times or more frequently if you can.

7. Knee Hangs

It is very important that your knee fully extends. To help achieve this, place a rolled up towel underneath the ankle of your operated leg and allow the knee to fully straighten. Let your leg rest in this position for a few minutes to give the knee a good stretch, repeat frequently.
EXERCISES TO DO WHILST SAT IN THE CHAIR

8. Heel slides
With your foot resting on the floor, slide your foot towards you, bending the knee, aim to get to 90 degrees. Hold for 10 seconds and then relax your leg and slide it forwards.

Repeat 10 times, three times daily.

9. Knee extension
Pull your toes up. Tighten the thigh muscle and straighten your knee. Aim to get the knee fully straight. Hold for approximately five seconds and slowly relax your leg.

Repeat 10 times, three times daily.
10. Knee flexion/extension
Standing, holding on to support. Bend your operated knees as far back as you can.

Hold out for a count of six and relax.

11. Hamstring isometrics
Lying on your back, bend the operated knee slightly. Push your heel into the bed.

Hold for a count of six and relax.

You are the person who will make the difference to the speed and success of your new joint - it is your responsibility to continue your exercises in between therapy sessions.
Precautions

- DO NOT twist your leg as you turn around, but take small steps.
- DO NOT sit with your feet hanging unsupported over the edge of the bed until your knee is bending well. Always make sure your foot is supported by the floor.
- DO NOT sit or lie with a pillow under your knee, as this may encourage a permanently bent knee.

Deep Vein Thrombosis

Compared with other surgical procedures, joint replacement is associated with a high risk of deep venous thrombosis (DVT). DVT happens when a blood clot forms in a deep vein. DVT is most common in the deep veins of your lower leg (calf), and can spread up to the veins in your thigh. Many blood clots that cause DVT are small and don’t produce any symptoms. Your body will usually be able to gradually break them down with no long-term effects. Larger clots can partly or completely block the blood flow in your vein and cause symptoms such as:

- swelling of the affected leg
- pain and tenderness in the affected leg – you may also find it difficult to stand properly with your full weight on the affected leg
- a change in the colour of your skin, for example, redness
- skin that feels warm or hot to the touch.

To avoid such complications, the physios will assist you to sit out day O, mobilise from day 1 post op and provide you with a home exercise programme. You should continue the exercises in
bed to maintain the blood flow in your legs and to keep your heart and muscles strong. Pump your feet up and down 20 times each hour while awake. Do not put a pillow under your knee. You are at increased risk for DVT for up to 6 weeks following your surgery. If you notice any of the signs or symptoms above after your discharge home, notify your GP or District Nurse immediately.

We expect to rehabilitate you to a level where you can go home on Day 3 after your surgery

Everyday Activities
You will be taught the correct way of walking with appropriate aids, your range of movement exercises are important in ensuring you do not develop an abnormal walking pattern. You will probably start walking with a walking frame and then progress onto elbow crutches or sticks. You will practice with the therapy team initially and they will say when you are safe to mobilise alone. Once you are independently mobile you should try to have a short walk every hour or two, this will help to speed up your recovery.

The walking aids you require will be provided for you to take home, you will use these for as long as you feel you need to, usually around 6 weeks. Extra adaptations are only provided when necessary as recovery is usually quicker without such equipment.

Remember, when walking, always step around – DO NOT TWIST!
**Stairs/Step Technique**

**Going Up**
1. Step up close to the step.
2. Step up with your **GOOD** leg **FIRST**.
3. Follow with your **BAD** leg **NEXT**.
4. Your **CRUTCHES/STICKS** come up **LAST**.

**Going Down**
1. Step to the edge of the step.
2. Put your **CRUTCHES/STICKS** down **FIRST**.
3. **NEXT** step down with your **BAD** leg.
4. Follow with your **GOOD** leg **LAST**.

**Driving**

You may only drive when your knee can bend sufficiently to use the pedals, and you can safely perform an emergency stop. This is usually about 6 weeks after your operation.

We recommend you check with your insurance company that they are happy to cover you after your surgery.

**Getting in and out of the car**

On discharge you are expected to arrange your own transport home - if this is not possible please advise your nurse and they will arrange an ambulance transfer as able. The therapy team will work with you on car transfers to ensure you are safe to go. The car should be a regular salon-type car – no low sports cars, no black cab. You must always use the front passenger seat.
1. Ensure car is not parked too near kerb and on a level. Get in from the drive or road, not from the pavement.

2. Slide the entire seat back as far as possible.

3. Recline the back of the seat as possible.

4. Open the passenger door as wide as possible and roll down the window.

5. Place your right hand on the bottom of the window frame.

6. Gently lower yourself into the seat, bottom first.

7. Place your hands behind you and slide yourself back toward the driver's side door, keeping operated leg straight.

8. Turn carefully and slide legs into well of the car.

9. To get out, reverse procedure and make sure both legs are out of the car and in front of you before rising.

**Discharge**

You are expected to be discharged home on day 3 post-operation. If you require additional rehabilitation we will arrange for you to be transferred to your nearest ‘Intermediate Care Centre’. These are specialists Rehab centres outside of the hospital setting where your progress will continue with O.T., Physio and the Nursing/Care team. This will be discussed in more detail if the need arises.

If you are able to go home but require additional therapy input and you are within Central Manchester area we can offer you our Orthopaedic Outreach Service. Our O.O. Team will continue your rehab with you at your home for a maximum of two weeks post-discharge. All patients will be given an
appointment for the total knee class to attend as an out-patient and continue your progress with the therapy staff.

Wound Care

Medical issues such as medication will be organised by Doctors and Ward Pharmacy and wound care will be organised by the nursing staff. Clips/stitches will be removed 12-14 days after your operation. This will be done by either a district nurse or nurse attached to your GP. The ward Nurse will arrange this for you.

The Orthopaedic team would like to wish you a safe and happy recovery from your knee replacement.

If you have any queries regarding your knee replacement please do not hesitate to contact the:

Orthopaedic Therapy Team
Tel: 0161 701 0267 or
The Orthopaedic Ward
Tel: 0161 276 8688

Zero Tolerance Policy

We are committed to the wellbeing and safety of our patients and of our staff. Please treat other patients and staff with the courtesy and respect that you expect to receive. Verbal abuse, harassment and physical violence are unacceptable and will lead to prosecutions.
No Smoking Policy

The NHS has a responsibility for the nation’s health.

Protect yourself, patients, visitors and staff by adhering to our no smoking policy. Smoking is not permitted within any of our hospital buildings or grounds.

The Manchester Stop Smoking Service can be contacted on Tel: (0161) 205 5998 (www.stopsmokingmanchester.co.uk)

Suggestions, Concerns and Complaints

If you would like to provide feedback you can:
• Ask to speak to the ward or department manager.
• Write to us: Patient Advice and Liaison Services, 1st Floor, Cobbett House, Manchester Royal Infirmary, Oxford Road, Manchester M13 9WL
• Log onto the NHS Choices website www.nhs.uk - click on ‘Comments’.

If you would like to discuss a concern or make a complaint:
• Ask to speak to the ward or department manager – they may be able to help straight away.
• Contact our Patient Advice and Liaison Service (PALS) – Tel: 0161 276 8686 e-mail: pals@cmft.nhs.uk. Ask for our information leaflet.

We welcome your feedback so we can continue to improve our services.
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Translation and Interpretation Service

These translations say "If you require an interpreter, or translation, please ask a member of our staff to arrange it for you." The languages translated, in order, are: Arabic, Urdu, Bengali, Polish, Somali and simplified Chinese.

اذا كنت بحاجة الى مترجم، او ترجمة، من فضلك اطلب من احد موظفينا ترتيب ذلك لك
اذا كنت بحاجة الى مترجم، يا ترجم، كي ضروريت بك، تو برائتك كرم بسار عمل يكي كسي زيكن سيم بيك كه، ولايا
اذا كنت بحاجة الى مترجم، يا ترجم، كي ضروريت بك، تو برائتك كرم بسار عمل يكي كسي زيكن سيم بيك كه، ولايا
وأني
和你们的工作人员联系

Jeśli Pan/Pani potrzebuje tłumacza lub tłumaczenie prosimy w tym celu zwrócić się do członka personelu.

如果需要翻译或翻译员,请要求我们的员工为你安排