



Total Knee Replacement

Patient Information and Advice Booklet

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WELCOME

TO THE ULSTER INDEPENDENT CLINIC

If you are reading this information booklet then you are waiting for, or are considering having, a total or partial knee replacement. This booklet will help you to understand what to expect, from the time that you are placed on your consultant's operation list through to your rehabilitation and follow-up reviews. Having an operation can be a worrying experience, but learning more about what to expect often helps to overcome the fear of the unknown.

It is extremely important that *you and the person* who will be helping to look after you following your discharge read this booklet.

THE PATIENT JOURNEY

Consultation with surgeon & added to theatre operation list - provisional date for surgery given

Phone call from UIC with date for pre-operative assessment

Written confirmation of date & time of admission and special instructions

Attendance at Pre-operative Assessment Clinic
Invitation to Pre-op physiotherapy knee class

Preparation at Home

Admission for Operation

Knee Replacement

Discharge from Hospital

Follow-up Review at Outpatient Clinic

Total Knee Replacement _____

Attendance at Pre-operative Assessment Clinic

Before coming in for your operation, you will be seen at a pre-operative assessment clinic to decide on your fitness for surgery. Blood tests and other investigations such as an ECG (heart tracing) may be required in order to make the surgery as safe as possible. There will also be standard infectious diseases screening tests if you have attended another hospital within the past year.

It is important to bring a repeat prescription list or medications in original packaging to both pre-op assessment and on admission. If you are taking any medication(s) which need to be stopped (eg warfarin, clopidogrel or blood pressure medication) before the operation, then your anaesthetist will give you this instruction in writing during your appointment.

Please bring details of your medical/surgical history to this appointment.

During admission you will also be asked if you are happy to have your details included on the **National Joint Registry**. The National Joint Registry collects information on total hip and knee replacement operations from hospitals in England, Wales and Northern Ireland.

If you would like additional information on the National Joint Registry, please visit the website on www.njrcentre.org.uk.

Preparation at Home

There are lots of things that you and the person helping you can do to prepare in the days leading up to your operation. A useful check-list is provided below:

1. Read ALL of the information provided to you (including this booklet).
2. Adhere to any instructions you have been given about STOPPING CERTAIN MEDICATIONS.
3. Adhere to any instructions you have been given about FASTING before your admission.
4. Arrange with a family member/friend to support you at home for the first two weeks after discharge. Further guidance is available by contacting our Hospital Liaison Sister and in discussion at pre-operative assessment clinic.
5. Prepare your house for your recovery (food shopping, freezing meals etc to use upon your discharge).
6. Organise your own transport to and from the hospital.

Prepare what you need for your hospital stay:

7. Your regular medication and repeat prescription list or a print out from your GP.
8. Personal toiletries, pyjamas/nightdress, preferably light shorts & T-shirt, dressing gown, slippers (not new and neat fit) and loose comfortable clothes for discharge.

If you have been told by the anaesthetist or at pre-operative assessment about **stopping certain tablets**, make sure you do this, otherwise **your surgery will not go ahead**. Likewise, should your GP **change any of your medications** between the time of your pre-operative assessment clinic and your surgery, it is important that **either you or your doctor let us know** (contact your consultant's secretary).

Similarly, **if you have become unwell or develop an infection** of any description (e.g. a chest infection) **or need antibiotics for any reason before your admission please contact us as your surgery may need to be postponed until the infection has cleared**.

Please bring your medication and an up to date medication list into hospital with you. If you usually take warfarin, please bring in any records or booklets you have which give details of usual doses. These will be returned to you on your discharge from hospital.

You should also inform us if you have any leg ulcers, wounds, open sores or discharging spots as this may prevent your operation from proceeding.

Fasting

You should fast as **indicated on your admission letter**. This means no food, no sweets, no chewing gum, no fruit juices should be eaten or drunk. **Only** water may be taken **up to 2 hours before surgery**.

If you eat or drink after these times your surgery will be cancelled. It is very important that you tell us if you have eaten or drunk anything after the cut-off time.

Adopting a healthy lifestyle

It is important that you make good lifestyle choices both before and after your operation. If you smoke cigarettes, cigars or a pipe, you should stop smoking for as long as possible before your operation and for 6 weeks after your operation to reduce the risk of complications, particularly infections.

Body Mass Index (BMI) is the most commonly used method to classify adult weight. It is defined as weight in kilograms divided by the square of height in metres (kg/m²). A BMI of greater than 25 is overweight. A BMI of greater than 30 is classed as obese. A high BMI can be associated with increased risks around the time of the operation. If you are over-weight, try to develop healthier eating habits. Maintaining a healthy weight will have long term health benefits to you.

Keep as active as possible before your operation and try to achieve the recommended minimum of 20 minutes of exercise on a daily basis.

For more information on these subjects and helpful hints and tips please visit the websites below.

- nidirect.gov.uk/information-and-services/health-and-wellbeing
- nichs.org.uk/your-health/how-to-keep-healthy/
- belfasttrust.hscni.net/HealthyLiving.htm

Admission for your Operation

You will either be admitted on the morning of your operation or on the afternoon of the day before. If you have not previously signed a consent for surgery form, then your surgeon will discuss the operation beforehand with you and you will both sign the consent form together. If you have already signed your consent form before being admitted, then your surgeon will check it with you before you go for your operation.

Following this, a mark will then be drawn on your leg. This is an arrow that points to the knee that you are going to have replaced. This is an important part of the process that we use to make sure that you have the correct operation on the correct side.

You will be admitted by the nurse on the ward and you will also be seen by a consultant surgeon and the anaesthetist who will talk you through the anaesthetic process and the management of pain following your operation. The anaesthetist may prescribe a 'pre-med' (pre-medication) prior to your operation. This is the name for drugs that can be given before an anaesthetic. These may include drugs to prevent sickness, to reduce acid in the stomach, to help you relax or to reduce pain.

Your Knee Replacement

You will be in theatre and the recovery ward for approximately 5 hours in total:

- Half an hour is spent in the anaesthetic room
- One to one and a half hours is for the operation itself
- Two to three hours is spent in the recovery ward after your surgery

Your anaesthetic

In most cases a spinal anaesthetic is used. This makes you numb from the waist down so that you feel nothing during your operation and for a few hours afterwards. The anaesthetist will also give you sedation to make you relaxed and sleepy during the operation. You will usually hear nothing during the operation but if you do, you will be relaxed and this should not upset you. Also, a screen is used so that you will not see any of the operation taking place.

In certain circumstances, it may be necessary to do the operation under general anaesthetic. This is rare and will be decided by the anaesthetist and discussed with you prior to surgery.

Some surgeons and anaesthetists also use nerve blocks - local anaesthetic injected into some of the major nerves in the operative leg. This will be discussed with you prior to the operation.

On the rare occasion a tube will be inserted into your bladder (urinary catheter). This is necessary to allow medical staff to monitor your kidney function. This is normally removed the day after your surgery or when you start to walk.

Type of knee replacement

A total knee replacement consists of three parts. Two metal parts cover the bottom end of your femur (thigh bone) and the top part of your tibia (shin bone); both of these are made of cobalt chrome, a form of steel. The third part of the knee replacement is made of a special type of hard wearing plastic and fits between the femoral and tibial parts.

The knee replacement may or may not require cement to be used; the choice is based on surgeon preference and patient factors. Your knee cap is not usually replaced, again depending on surgeon preference and patient factors.

All of the implants we use are tried and trusted with good medium to long-term results as proven by the National Joint Registry (NJR - see page 5).

If you are getting a partial knee replacement then, as with the total knee, it comes in three parts. The difference being only the inner or outer side of the knee is replaced.

After your surgery

After your surgery you will be transferred to the recovery ward in theatre for a short period of monitoring, as detailed below, before you return to the main ward.

- Blood pressure monitored every 15-30 minutes
- Oxygen may be administered with a facemask
- IV fluids will be given
- Flotrons (diagram to the right) will be attached to your lower legs to promote circulation
- Pressure dressing will be on your knee



If you have had a spinal anaesthetic your legs will be checked for movement and sensation which usually return to normal within a few hours.

In the unlikely event you have a urinary catheter inserted, this will be removed as soon as possible after your surgery.

The day after your operation you will have routine blood tests performed and an X-ray of your new knee will be taken.

It is extremely important that you begin to mobilise as soon as possible and you will be seen by the physiotherapy team who will help you start walking with crutches or a frame and give you exercises to practise.

Post-operative pain

After surgery, you may feel discomfort or pain as the anaesthetic wears off. You will be offered pain relief if and when you need it. Our nursing staff will evaluate your pain levels throughout your admission and can help you understand how best to manage your pain before you go home. Our pharmacist or a nurse will also meet with you and discuss your medications for discharge. Ice packs are used in the wards to cool and reduce swelling. You should continue to use ice packs at home after discharge.

Discharge from Hospital

Normally you will be able to go home as early as 1-2 days after your surgery. The best place for you to recover is at home with support from your family or the person helping you.

It is vital that you have a post-operative X-ray of your new knee replacement while in hospital.

Pain relief at discharge

You will be given a short supply of pain relief and laxatives to take home with you which should last 4-5 days. You will receive a discharge letter for your GP which you should leave into the surgery as soon as possible after discharge. Your GP may decide to prescribe further pain relief.

If you were taking anti-inflammatory pain relief (such as naproxen or ibuprofen) you should discuss with the surgeon or a doctor in the hospital whether to restart it.

Removal of skin clips

Some surgeons use skin clips to close your knee replacement wound. If these items have been used in your care, arrangements will be made for their removal. Typically, this procedure occurs approximately ten days following your operation, either by a district nurse, at your GP surgery, or alternatively, at the UIC Outpatients Treatment Room.

Prevention of clot formation

You may need to wear compression stockings during and after the operation. This will help to prevent blood clots forming in the veins in your legs (deep vein thrombosis). You may need to have an injection of an anti-clotting medicine (or tablets) as well as or instead of wearing compression stockings.

If a daily injection is required you will be taught how to inject this yourself. The Clinic Pharmacy will supply you with the necessary injections and guidance on discharge.

It is also important to **mobilise regularly** with short walks throughout the day and adapt a healthy diet and fluid intake. Rotating your ankle and wriggling your toes to encourage blood circulation when resting also helps reduce the risk of clot formations.

Return to driving: You *cannot drive* until you are no longer using crutches or a frame, which could be up to **6 weeks** or longer. You may need to contact your insurers to make sure you are covered to drive following surgery.

Return to hobbies/sports: Most people can return to active hobbies such as swimming, gardening or golf 3 months after their operation.

Air travel: Each airline has its own regulations about flying after surgery. Check with your airline before you fly. Although no fixed guidelines exist, *we do not advise travelling on a long-haul flight (more than 3 hours) for the first 3 months after your surgery.*

Follow-up Review at Outpatient Clinic

You will usually be seen by your surgeon around 6 - 12 weeks following your surgery. This is to check on your progress and ensure there are no problems with your new knee.

It is extremely important that you have been practising the exercises given to you by the physiotherapists while you were in hospital. The result is much improved by these exercises.

Once your surgeon is satisfied with your progress you will normally then be reviewed one year after your operation, at which time an up-to-date X-ray will be taken to ensure the knee is functioning as it should be.

Risks and Potential Problems Following Knee Replacement Surgery

This section describes the potential risks of having a knee replacement and other problems you may have as a result of having the surgery.

It is important that you read and understand this section before proceeding with the operation.

Pain

All patients undergoing knee replacement will have pain in their knee immediately following surgery. This usually improves in the following days and weeks. A very small number of patients experience more pain than they had beforehand, while some patients experience no change in their pain levels. This is often because they develop one of the complications mentioned later in this section. Occasionally, however, patients have pain afterwards, for which we can find no cause.

Stiffness

The movement in your knee will be recorded before your operation. Most patients will end up with the same movement in their knee as they did before surgery. Approximately 1 in every 100 patients will have significant stiffness in their knee which may require further intervention.

Usually this requires readmission to hospital and the knee is bent (manipulated) under anaesthetic. Some patients after their operation describe a different type of stiffness, a sensation that their knee feels stiff, particularly after sitting for a period of time or first thing in the morning. This feeling does go away with walking a few steps, but it may not fully resolve and is not serious.

Infection

After having a knee replacement, serious infections are rare (less than 1 out of 100 patients). However, if you smoke, are obese or have diabetes, your risk of getting an infection is increased.

Reducing your risk of infection

Smoking increases the risk of infection and you should stop smoking from the time of pre-operative assessment until at least 6 weeks after your operation. You will not be allowed to smoke whilst in hospital. Also, if you are morbidly obese, which is a BMI of over 40, your risk of getting an infection is increased. If you are diabetic it is important that your blood sugar is well controlled as poor control can increase the chance of wound infection and other complications.

Alcohol or other drug abuse can also increase the risk of wound problems. Other risk factors include having skin conditions, for example psoriasis.

Always follow wound care advice given by staff before discharge.

When to suspect a possible wound infection

It is normal to have a degree of bruising and swelling in the leg after the operation. This can sometimes persist for a number of days and occasionally weeks following surgery.

The following, however, are signs of potential infection:

1. If your wound starts to leak fluid having been dry or continues to leak fluid beyond 7 days after your operation.
2. If part or the entire wound becomes swollen, red, sore to touch or starts to open.
3. If you get a sudden increase in pain around your knee and feel shivery and/or unwell.
4. An increase in body temperature.
5. Occasionally pain that fails to settle following surgery or pain that develops some time later can be caused by infection and in these cases the wound can remain normal. This is one cause of pain that can occur up to one year after surgery.

If you suspect you have an infection, especially in the first few weeks after surgery, you should contact The Ulster Independent Clinic for advice; alternatively, contact your GP urgently or attend Accident and Emergency.

In the event of an infection

Most infections occur in the first 7-10 days after the operation. Your surgeon will see you and may prescribe oral antibiotics with follow up wound checks and treatment at UIC or G.P Surgery. On the rare occasion that a serious infection is suspected during this first 6 weeks, you will be readmitted to hospital and go back to theatre to have the wound opened and washed out.

After the operation (washout) you will need to take antibiotics for approximately 3 months and may have to stay in hospital for up to 6 weeks. This is so that the antibiotics can be given through a drip into your veins. After this 6-week period, antibiotics can be taken by mouth at home for a further 6 weeks.

In the long term, if we are unable to clear the infection the new knee will have to be removed. This means having a "2 stage" revision operation. In the first operation your new knee joint is removed and then, after a number of weeks or months, during the second operation a new knee joint is put in again. This finally clears the infection in 9 out of 10 cases.

Blood Loss

A minority of patients will require a blood transfusion because of blood loss caused by the operation.

Fractures

Fractures (breakage of the femur/tibia) very rarely happen during the operation (less than 1% of surgeries). It can happen putting the femoral or tibial components in place and may require a different type of implant in order to fix it.

Reducing your risk of getting a clot

Getting out of bed as soon as possible after your operation is now considered very important. At the moment there are no drugs that have been proven to reduce the small risk of death from a clot in the lung (pulmonary embolus). A balance has to be struck between thinning the blood to avoid a blood clot and avoiding too much bleeding from the operation.

You should also:

1. Take frequent deep breaths to make sure you fill your lungs properly.
2. Move both arms and legs. You are allowed to move both knees up and down in the bed. This will not harm your new knee and will help to ease the pain.
3. Carry out foot and ankle exercises every hour.
4. Take short walks regularly as able.

You may be given blood thinning medication to help prevent clots from forming after the operation.

When to suspect a clot in your leg (Deep Vein Thrombosis)

It is quite common to get small clots in the calf of either leg following surgery. The majority DO NOT require any treatment. Clots above the knee are considered to be more serious but are much rarer. If you have a sudden increase in pain and swelling in your leg then a scan of your leg may be required. Treatment may be necessary in the form of medication to thin your blood. This is to help prevent the clot travelling to your lung. Advice regarding warning signs of DVT is given below:

Contact UIC Hospital Liaison Sister* if you have:

- Pain or tenderness in your leg
- Swelling or warmth in your leg
- Red or discoloured skin on your leg
- Veins that stick out

*Tel: 028 9066 1212 Ext. 2400

When to suspect a clot in your lung (pulmonary embolus)

In a small number of patients, clots can travel to the lung (PE - pulmonary emboli) and can cause death. The risk of dying from a clot in the lung nowadays is very small and is fewer than 1 per 1000 cases.

Following discharge from hospital, if you have any of the following symptoms, call 999 or go to A&E immediately:

- Shortness of breath
- Coughing up blood
- Sudden chest pain
- Painful breathing

Dislocation

Your new knee can become dislocated (come out of joint) but this happens in fewer than 1 in 600 patients.

If a dislocation does happen, it can usually be reduced without an operation and you will likely require a cast for approximately 8 weeks, after which it is very rare for the knee to dislocate again.

If your knee has become dislocated you will typically:

1. Experience severe pain
2. Have difficulty walking
3. Notice a change in the shape of your leg

If you think that your knee has dislocated, then it is best to go to your nearest Accident and Emergency Department. This means going by emergency ambulance because if your knee was dislocated it would be too painful to travel by car.

Nerve Damage

There are small nerves that supply the front of your knee and these are always cut. This means that most patients experience numbness on the outer side of the wound and this usually gets better on its own.

Delirium

Delirium means confusion and can affect up to 11% of patients following surgery. It usually resolves completely over several days but for some patients it can persist long-term and result in a loss of independent living.

Other Potential Problems

Nausea or feeling sick	Atrial fibrillation / irregular heartbeat
Loss of appetite	Low mood / depression
Constipation	Tiredness
Hiccoughs (hiccups)	Knee bursitis and discomfort when kneeling
Chest infection	
Kidney or bladder infection	

How serious is this operation?

Having your knee replaced is a major operation. Your consultant will discuss with you pre-operatively common and rare complications which may arise.

However, with any surgery in the Ulster Independent Clinic, all the staff involved in your care aim to provide as positive an experience as possible for you and your family.

We hope that this information booklet has been useful in providing insight into the knee replacement process. You will, of course, have the opportunity to discuss any aspect of the surgery with your surgeon and anaesthetist before proceeding.

If you would like any additional information about The Ulster Independent Clinic, please visit our website or call us:

Visit: www.ulsterindependentclinic.com

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