The Hillingdon Hospital NHS
NHS Foundation Trust

Total Knee Replacement

A Guide for Patients

ZIMMER BIOMET
Your progress. Our promise.™

Index

Introduction

This booklet has been produced by the Orthopaedic Unit in partnership with patients. It is designed to provide information about total knee replacement and what to expect before and after the operation.

This advice is provided to help you prepare for surgery and to help your recovery and rehabilitation. It is recommended that you read this booklet before your surgery and write down any questions you may have in the back of this booklet. You should bring it with you whenever you come to the hospital.

Osteoarthritis - What is it?

This a common disease affecting the joints in the body, most commonly the knee and hip. The joint surfaces, which are covered in smooth cartilage, become damaged and gradually thin and roughen - this produces pain. Eventually, there may be no cartilage left in some areas of the joint. There are other diseases which cause joints to be replaced because of pain, such as rheumatoid arthritis.

A healthy knee

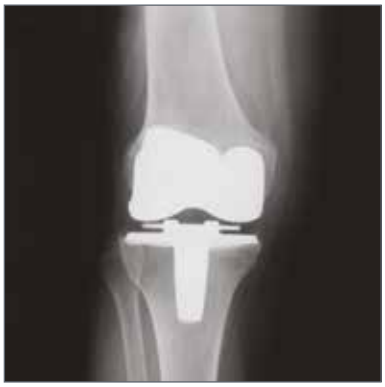
Knee with Osteoarthritis

Total Knee Replacement - What is it? - Is it for you?

The knee is made up of the lower end of the thigh bone (femur) which rotates on the upper end of the shin bone (tibia) and the kneecap (patella), which slides in a groove on the end of the femur. Large ligaments are attached to the femur and the tibia and provide stability. The long thigh muscles give the knee strength.

Total knee replacement is an operation to replace the damaged or worn part of the knee with artificial parts (the prosthesis). Your new knee will consist of a metal shell on the end of your thigh bone, a metal and plastic spacer on the upper end of the shin bone and if needed, a plastic button on the kneecap.

Total Knee Replacement Prosthesis



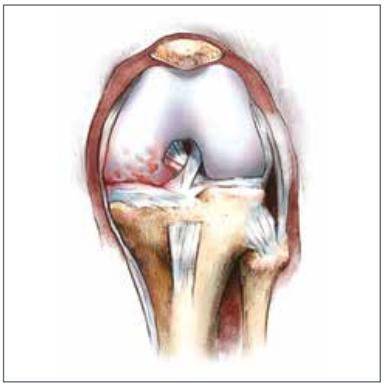
X-Ray of Total Knee Replacement Prosthesis

Total knee replacement is a planned operation which means it is not a matter of life or death. There are alternatives. The decision to have the operation is made by you, following discussion with your doctor. You must weigh up the potential benefits against the possible complications. You will not be offered the operation unless the benefits outweigh the risks.

The decision to have surgery should be made following discussions with your family, General Practitioner and Orthopaedic Consultant. The real success of your knee replacement, however, depends partly on you, especially your motivation, exercises and knowing your limitations for a specified period of time after the surgery.

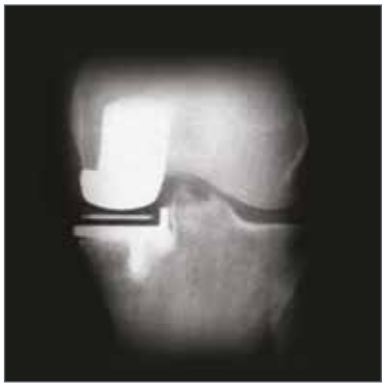
Partial (unicompartmental/unicondylar) Knee Replacement

A partial knee replacement, as the name suggests, only replaces the worn part of the knee. You must fulfil certain criteria to have this operation.



Knee joint with Osteoarthritis affecting only one compartment

Partial Knee Replacement Prosthesis



X-Ray of Partial Knee Replacement Prosthesis

You May Benefit From A Knee Replacement If:

- *Severe knee pain limits your everyday activities including walking, going up or down stairs and getting in and out of chairs*
- *You find it hard to walk any distance without significant pain and you may use a walking aid*
- *You have moderate or severe knee pain when resting either day or night*
- *You have long term knee inflammation or swelling that does not improve with rest or medication*
- *Your knee is deformed*
- *There is knee stiffness and an inability to bend and straighten your knee*

Alternatives to Surgery

Prior to offering you surgery to replace your knee your GP and Surgeon will discuss with you other ways to help to control the pain and restrictions you may have with an arthritic joint, and these may include :-

- *Use of painkillers*
- *Use of anti-inflammatory non-steroidal tablets*
- *Trying to reduce your weight, if you are overweight*
- *Physiotherapy*
- *Other surgery e.g. arthroscopy (a 'key hole' operation to look into your knee, using a small camera and washing out any debris from inside the knee)*

In summary, total knee replacement is recommended by the Consultant Orthopaedic Surgeon when the knee pain becomes unbearable and is not responding to any other form of treatment and your lifestyle is greatly restricted.

What Can Be Expected From a Total Knee Replacement?

More than 90% of individuals who undergo total knee replacement experience a dramatic reduction of knee pain and significant improvement in the ability to perform common activities of daily living. However, an artificial knee is not a normal knee nor should it be expected to be as good as a normal knee. Therefore activities that overload the artificial knee must be avoided.

Expected Activities After Surgery

The aim of surgery is for you to be able to resume your normal everyday activities without pain, including climbing stairs and walking. It will also be possible to participate in recreational walking, swimming, golf, driving, light hiking, cycling and ballroom dancing.

Activities not suitable include jogging or running, contact sports, jumping sports and high impact aerobics. The reasons for this are that the knee replacement will wear out more quickly or an injury involving the replacement may be difficult to treat.

What Complications Can Occur?

This section is not meant to frighten you but to help you to make an informed decision on whether to have a knee replacement and help you to cope better with any complications that may occur. It is important that you understand the possible risk linked with any major operation and total knee replacement is no exception. Total knee replacement is 90% successful but 10% of patients can develop complications.

Illness, smoking and obesity may increase the potential for complication. Though uncommon, when these complications occur, they may delay or limit your full recovery.

Infection

The wound on your knee can become inflamed, painful and weep fluid, which may be caused by infection. The majority of wound infections can be treated by a course of antibiotics and often settle down following treatment. Deep wound infection where the new knee is infected may require the new knee to be removed and your knee replacement re-done at a later date.

You can help prevent infections by keeping your wound clean and dry. The wound dressing should normally not be disturbed, and should only be redressed by your Nurse. You should also inform your doctor if you have a skin or urine infection, as you may need antibiotics. Serious infection occurs in less than 2% of patients.

Deep Vein Thrombosis (DVT)

This is the term used when a blood clot develops in the deep veins in the back of your lower leg. When detected the treatment may involve blood thinning injections followed by a course of blood thinning tablets. There is about a 1.4% risk of developing a DVT following surgery.

To help prevent DVT, you will be given foot and ankle exercises, to do immediately after your operation. Walking and wearing thrombo-embolic deterrent stockings (TEDS) below your knee for **six weeks** following surgery also significantly reduces the risk of DVT. Nursing staff will also give you medications to reduce the risk of DVT.

Pulmonary Embolism (PE)

This can happen when a part of a blood clot formed in your leg vein breaks off and travels to your lung. The risk of developing a life threatening pulmonary embolism is low. Treatment is the same as DVT but requires a longer hospital stay.

Loosening of the Prosthesis

Although prosthesis design and materials, as well as surgical technique, have improved, wear of the weight-bearing surface or loosening of the components may occur between 10-15 years after surgery. Excessive activity or being over-weight may accelerate this wear process. Loose, painful artificial joints can usually, but not always be replaced. Results of a second operation are not always as good as the first, and the risks of complications are higher.

Pre-Admission Assessment

It is important that you are assessed prior to your surgery to reduce the risks as much as possible. Most people will have their first assessment for their fitness for surgery with the pre-operative nurse in a specialist pre-admission clinic. This will occur on the same day, or as soon as possible after you have seen the orthopaedic Surgeon. If you are assessed as fit for surgery you will also receive a date for your operation at this time.

During your assessment, the pre-operative nurse will ask you about your general health, medical history, previous anaesthetics and if there were any problems. A record will be made of any family history of anaesthetic problems, medicines, pills, inhalers or homeopathic remedies that you use, allergies, smoking, alcohol and whether you have any loose, capped or crowned teeth.

You will have investigations, such as blood tests, a heart trace (ECG) and x-rays. This helps your anaesthetist consider any medical problems, which may either effect the risks to yourself or the likelihood of complications from the anaesthetic or surgery.

The pre-operative nurse will give you time to ask questions about the possible complications and give advice and education on your activities following surgery. They will also give you questionnaires to complete, including one for the occupational therapist to identify the need for any equipment or help at home.

Your Coach

During pre-admission assessment we will ask if you can choose a coach – a friend or family member who will support you throughout your time leading up to surgery, during your time in hospital and once you get home after your operation. Please identify someone who can fulfil this role. It is important to have this support as it will help your rehabilitation.

Joint Replacement School

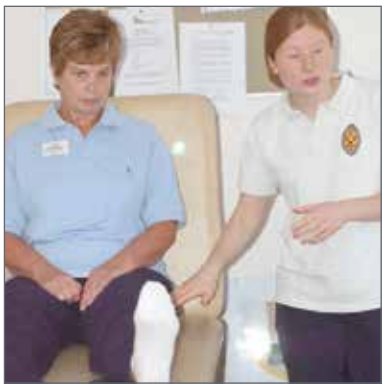
Approximately 4 weeks before your operation, you and your coach will attend the Joint Replacement School at the hospital. This is a unique and exciting day where you will have the opportunity to learn about your surgery. You will meet other people who will be having their knee replaced at similar times to you. Hillingdon Hospital NHS Trust is one of the few centres in the country to offer this patient focused education. You are encouraged to ask any questions you have, however simple you may feel they are. The joint replacement school normally lasts between 2 - 2½ hours.

PLEASE NOTE: The Joint replacement School is an essential part of your treatment and you may be refused surgery if you do not attend.

The Health Professionals you may meet at the Joint Replacement School

Physiotherapist

The physiotherapist will show you exercises you will need to commence before your operation and teach you how to use the walking aids you will need after your operation.



Occupational Therapist (OT)

The Occupational Therapist (OT) will discuss with you how you will manage your daily activities following your operation.

The OT will speak to you individually during Joint Replacement School to discuss any equipment you may need to obtain to assist you during your recovery.

Please make sure you complete the OT questionnaire and bring it with you to Joint School.

Anaesthetist

Anaesthetists are doctors who are responsible for giving your anaesthetic, controlling your pain and for your wellbeing and safety throughout your surgery. You will meet an Anaesthetist at the Joint Replacement School, where you will learn about the different anaesthetics you can have.

As there are a number of anaesthetic choices available for your surgery. It is important you read the information about your anaesthetic in this booklet, so you have an idea of the preferred anaesthetic used at Hillingdon. (See 'Your Anaesthetic'). You will meet your anaesthetist on the day of surgery and finalise the type of anaesthetic most appropriate for you and discuss any issues you would like to raise.

Ward Nurse

The nurse will explain what to expect on your arrival at the hospital, things you need to bring with you for your stay and explain how you will go to theatre and return to the ward. The nurse will talk to you about drips and drains you may have in place and x-rays taken after surgery. You will be told about MRSA and the importance of personal cleanliness prior to surgery.

During your hospital stay, a nurse will escort you to theatre for your planned operation and care for you following your surgery. The Nurse will monitor your progress, check your wounds and care for you until discharge home. On discharge they will ensure that you have all necessary paperwork, dates for further appointments and all medications.

Your Anaesthetic

As there are a number of anaesthetic choices available for your surgery. Both our experience and that of others has shown that a spinal anaesthetic is an excellent mode of anaesthesia to support your speedy recovery, rehabilitation and journey home. This is a type of 'regional anaesthetic'.

Regional Anaesthesia

This means you will be numb from the waist down (the 'region' anaesthetised) and feel no pain during the operation and you can also be asleep if you wish. It is different from a 'general' anaesthetic where you are unconscious with a breathing tube in your throat. There are two types of regional anaesthesia:

1. Spinal Anaesthetic

Local anaesthetic is injected near to the nerves in your lower back.

- You are numb from the waist downwards.
- You feel no pain, but you remain conscious.
- You can also have sedation, which makes you feel sleepy and relaxed or even completely asleep.
- It will take 4-6 hours before normal movement in your legs returns.

Advantages – compared to a General Anaesthetic

- *You should have less sickness and drowsiness after the operation and may be able to eat and drink sooner.*
- *You will be able to sit out of bed and take some supervised steps on the same day as your operation.*
- *It helps to avoid blood clots in the legs and lungs.*
- *There may be less bleeding during surgery and you will be less likely to need a blood transfusion.*
- *You remain in full control of your breathing and you will breathe better in the first few hours after the operation, reducing the risk of chest infection.*
- *You do not need such strong pain relieving medicine in the first few hours after the operation.*

Because of the advantages spinal anaesthetic gives you, we recommend this type of anaesthesia for your operation.

2. Epidural Anaesthetic

A small plastic tube (an epidural catheter) is passed through a needle into a place near to the nerves in your back. You receive local anaesthetics and pain relief drugs through this tube, relieving pain and reducing all feeling in your lower body.

Although operations can be done with an epidural alone, it is more commonly used for:

- *Operations expected to be very long, for example, more than 3 hours.*
- *Operations expected to be particularly painful afterwards.*

For these operations, it is often combined with a spinal or a general anaesthetic.

Advantages

- *It can be topped up with more local anaesthetic, and therefore its effects can be made to last longer than a spinal anaesthetic.*
- *It can be used to make you comfortable for several days after the operation.*
- *It also has all the advantages of the spinal anaesthetic shown above.*

During a Regional Anaesthetic:

- *Your Anaesthetist will ask you to keep quite still while the injections are given.*
- *You may notice a warm tingling feeling as the anaesthetic begins to take effect.*
- *Your operation will only go ahead when you and your Anaesthetist are sure that the area is numb.*
- *If you are not having sedation you will remain alert and aware of your surroundings. A screen shields the operating site, so you will not see the operation unless you want to.*
- *Your Anaesthetist is always near to you and you can speak to him or her whenever you want to.*
- *Sedation will allow you to sleep throughout the procedure.*

General Anaesthetic

Drugs produce a state of controlled unconsciousness during which you feel nothing.

You will receive:

- *Anaesthetic drugs (an injection or a gas to breathe).*
- *Strong pain relief drugs (morphine or something similar).*
- *Oxygen to breathe.*
- *Sometimes a drug to relax your muscles.*

You will need a breathing tube in your throat to make sure that oxygen and anaesthetic gases can move easily into your lungs. If you have been given drugs that relax your muscles, you will not be able to breathe for yourself and a breathing machine (ventilator) will be used. When the operation is finished the anaesthetic is stopped and you regain consciousness.

Advantages

- *You will be unconscious during the operation.*

Disadvantages

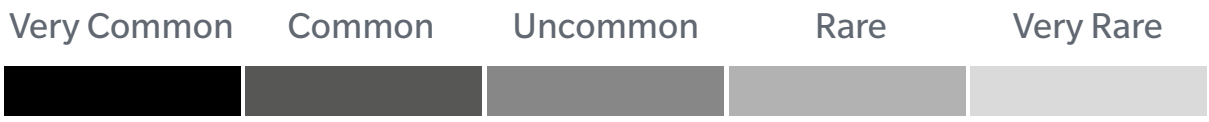
- *A general anaesthetic alone does not provide pain relief after the operation. You will need strong pain relieving medicines afterwards, which make some people feel quite unwell and sick.*
- *Some patients may feel sick, nauseous, light headed or drowsy after their operation.*
- *This may prevent you from sitting out of bed soon after surgery and delay your mobilisation.*

Side Effects, Complications and Risks of Anaesthesia

Serious problems are uncommon but risk cannot be removed completely. Modern equipment, training and drugs have made anaesthesia a much safer procedure in recent years. Anaesthetists take a lot of care to avoid all the risks described in this booklet. Your Anaesthetist will be happy to give you more information about any of these risks and the precautions taken to avoid them.

People vary in how they interpret words and numbers

This scale is provided to help



1 in 10 | 1 in 100 | 1 in 1000 | 1 in 10,000 | 1 in 100,000

Common and very common side effects

Pain around injection sites and general aches and pains. You may not be able to pass urine or you may wet the bed. This is because you are lying down, you may have pain and you may have received strong pain relieving drugs. A soft plastic tube may be put in your bladder (a catheter) to drain away the urine for a day or two. This is more common after spinal or epidural anaesthetics.

Spinal or epidural anaesthetics

You will not be able to move your legs properly for a while. If pain relieving drugs are given in your spinal or epidural, as well as local anaesthetic, you may feel itchy.

General anaesthetics

Sickness and sore throat – treated with anti sickness drugs and painkillers. Drowsiness, headache, shivering, blurred vision – may be treated with fluids or drugs. Difficulty breathing at first – this usually improves rapidly. Confusion and memory loss are common in older people, but are usually temporary.

Uncommon side effects and complications

All anaesthetics

Heart attack or stroke.

General anaesthetics

Damage to teeth, lips and gums, chest infection, awareness (becoming conscious during a general anaesthetic).

Rare or very rare complications

All anaesthetics

Serious allergic reactions to drugs, damage to nerves (more common with spinals or epidurals), death.

General anaesthetics

Damage to eyes, vomit getting into your lungs.

Needles

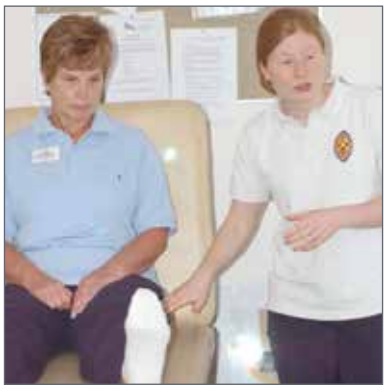
A needle may be used to start your anaesthetic. If this worries you, you can ask to have a local anaesthetic cream put on your arm to numb the skin before you leave the ward. The ward Nurses should be able to do this.

Things To Do Before Your Operation

Your Coach

Involve your coach as much as possible during your time leading up to your operation. He / she can be invaluable to you in organising your home and helping you with your exercises before your operation.

Exercises



It is important to do the recommended exercises leading up to your planned surgery as this will strengthen your muscles and help in the recovery period. These exercises will be shown to you at the Joint Replacement School. Having strong and fit muscles speeds your recovery and ultimately improve the outcome of your operation.

Diet

You will recover more quickly from surgery if you are healthy beforehand. Try to eat a healthy diet in the time leading up to your operation. It is quite common to experience constipation following your surgery. A healthy diet will reduce this risk. If you have any concerns about your diet, discuss them with your GP. You can be referred to a dietician if necessary. If you are overweight, it is very important to reduce your weight in preparation for your surgery. This will help to reduce any risks associated with anaesthetic and your new joint will last longer.

Smoking

Smoking cigarettes will compromise healing after any surgery and make you more prone to infection. Smoking also contributes to lung, heart and other medical problems. All of these make recovery much harder. This is because smoking reduces the amount of oxygen being delivered to the tissues which is vital for the healing process. It is best to try and stop smoking, at least 2 weeks before surgery and 6 weeks after, to give time for the wound and tissues around the knee to heal.

Preparing Your Home

Remember, when you first go home after your operation you will not be fully mobile and may have some restrictions on what you are able to do. Think about the things you normally do and make some adaptations. For instance, if you keep your mugs, plates, etc. in a low cupboard, consider moving them to a more accessible place for a short while after your operation. If you have to cook for yourself, consider making or buying some ready meals that are easy to prepare when you come home. It is also wise to be up to date with household chores like cleaning and laundry. You won't be able to do these in the first few weeks after your operation. It is important to ensure your home is safe for your return. You can avoid accidents by taking up any rugs and moving any wires and cables out of the way. Involve your coach in making the necessary preparations.

What To Bring To Hospital

You will need your toiletries, nightclothes and some loose fitting, comfortable day clothes. You will get dressed in normal 'day' clothes when you are in hospital. T-shirts and shorts are practical when doing exercises. Bring flat supportive shoes that are adjustable as your feet may swell after your operation, trainers are ideal. Shoes without a back or with heels are not suitable for safety. If you wish, you can listen to music via your own headphones and music player during your operation.

When you come to the ward it is important that you bring all of your usual medications (in their original containers with their labels) with you and a copy of your prescription. You may bring a small amount of money but leave valuables, jewelry etc. at home. You may want to bring a few books or magazines. You may also want to bring packs of antiseptic hand wipes which you can use every time you go to the toilet and also before and after meals.

Check List

Start your checklist to prepare for your hospital visit

REMEMBER...	COMPLETED
• *Toiletries - including hand wipes*	☐
• *T-Shirts and shorts or comfortable day clothes*	☐
• *Headphones or music - optional*	☐
• *Small change*	☐
• *Nightclothes*	☐
• *Flat supportive shoes with backs, velcro fastening trainers are ideal*	☐
• *Books, puzzles, magazines*	☐
• *Pack all medication in original containers*	☐
• *Ensure you have enough medication and will not run out*	☐
• *Remove loose rugs*	☐
• *Move furniture or other hazards*	☐
• *Move items regularly used to be easily accessible*	☐
• *Pack suitable clothing and toiletries*	☐
• *Arrange care for pets and family*	☐
• *Arrange discharge plans ie lift home*	☐
• *Prepare food and meals for your convenience once home*	☐
• *Freeze milk and bread for the first few days once home*	☐
• _____	☐
• _____	☐
• _____	☐

Medication

You must bring all your medication to hospital in sufficient supplies to last for your entire hospital stay. We expect this to be 4 days including your day of surgery but please bring an extra few days supply. Bring them in their original boxes and not in dosette boxes. You should make sure before you come into hospital that you have enough supplies for when you return home, remembering that you may have limited mobility to visit your GP or pharmacy. We will supply any painkillers or antibiotics that you may need in relation to your surgery.

These drugs may all increase the risk of unpleasant constipation which can be avoided through a healthy diet as discussed earlier. You should inform your team if you feel you are getting constipated and they can prescribe appropriate medication.

The Day Before Surgery

The night before your admission, take a long hot soapy bath or shower, without using heavily scented brands and have an all-over scrub with a soft gentle brush or loofah. Clip your toe and finger nails (removing all nail polish) and wash your hair. Put on freshly laundered underwear. All this helps prevent unwanted bacteria coming into hospital with you and complicating your care.

On The Morning of Your Operation

Have Nothing To Eat Or Drink (Nil By Mouth / Fasting)

You will receive clear instructions about fasting. It is important to follow these or your surgery will be cancelled. Food and liquid in your stomach can be regurgitated and could damage your lungs. This includes chewing gum. Even if you are not having a general anaesthetic, you will still be asked to follow these instructions. But it is important do eat and drink normally the day before your surgery.

Take Your Normal Medication

If you are taking medicines, you should continue to take them as usual, unless a health professional has asked you not to. For example, if you take blood thinning drugs, drugs that reduce the risk of blood clots or drugs for diabetes or herbal remedies, you will receive specific instructions.

Arriving In Hospital

You will be given instructions on where to present yourself on the morning of surgery. You will be allocated a bed and a nurse will do some final paperwork. Once this is completed, you may have a long wait depending upon where you are on the theatre list and it would be advisable to bring something to read with you. A member of the orthopaedic and anaesthetic team will also see you, your operation site marked with a marker pen and a 'TED' stocking placed on your un-operated leg.

Anaesthetic Review

Your anaesthetist will visit you before your operation. The doctor will ask you again about your health and discuss the anaesthetic suitable for you along with the advantages and risks of all options. This is a good time to ask questions and tell the anaesthetist about any worries that you have.

The Day Of Surgery

The majority of patients are admitted to hospital on the morning of their surgery. However it may be necessary to admit you on the day prior to surgery. The anaesthetist will make this decision and inform you.

Having A ‘Pre-med’ (Pre-Medication)

This is the name for drugs which are sometimes given before an anaesthetic. Some pre-meds prepare your body for the anaesthetic, for example, drugs to prevent sickness or to reduce the acid in your stomach. You can also ask for a drug which makes you feel drowsy and helps you relax. If you think that this kind of pre-med will help you, please ask your anaesthetist. A pre-med is not usually necessary.

Glasses, Jewellery, Dentures

You can wear your glasses, hearing aids and dentures until you are in the anaesthetic room. If you are having a local or regional anaesthetic, you may keep them on. Jewellery and decorative piercing should be removed. If you cannot remove your jewellery, it can be covered with tape to prevent damage to it or to your skin.

The Operation

In The Anaesthetic Room

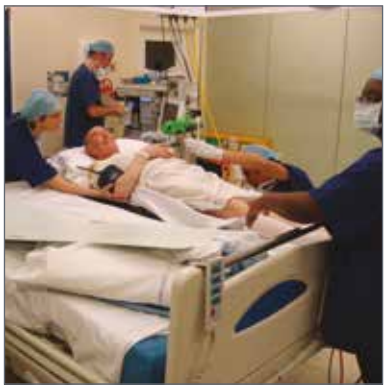
When it is the right time for your surgery, you will be taken on a bed to the anaesthetic room.

The anaesthetic room is next to the operating theatre. Several people will be there, including your Anaesthetist and an Anaesthetic Assistant. Equipment will measure your:

- *Heart rate - 3 sticky patches on your chest (electrocardiogram or ECG)*
- *Blood pressure – a cuff on your arm*
- *Oxygen level in your blood – a clip on your finger (pulse oximeter)*
- *A needle is used to put a thin soft plastic tube (a cannula) into a vein in the back of your hand or arm. Drugs and fluids can be given through this cannula.*
- *If needles worry you, please tell your Anaesthetist. A needle cannot usually be avoided, but there are things he or she can do to help. Finally, the type of anaesthetic chosen will be given.*

During The Operation

You will then be wheeled into the operating room (theatre) and transferred onto the operating table and positioned. A number of people will be in the theatre to ensure your operation runs smoothly. All anaesthetics may cause changes in your heart rate, blood pressure and breathing. Your anaesthetist may intentionally adjust these to control your response to surgery. Anaesthetic drugs are given continuously throughout surgery and are stopped when the operation ends. An anaesthetist will stay with you for the whole operation and watch your condition very closely, adjusting the anaesthetic as required. You may hear people talking, machines bleeping and surgical instruments making loud noises. These are all normal parts of your operation.



Blood Transfusion

You will lose blood during and briefly after your operation. Your body can normally cope with this and produces more blood over time to replace the lost amount. Occasionally, if you have lost more than your doctor wishes, it may be replaced using a blood transfusion. Usually this is blood from a volunteer who has given blood to help others (a blood donor). A transfusion will not be recommended unless you have a significantly low blood count. Please ask your surgeon or anaesthetist if you would like to know more about blood transfusion and any alternatives there may be. It is now more common to collect your own blood that is lost during and after the operation via a drain the surgeon places in your knee. This blood can be given back to you through your drip.

After The Operation

You will be taken to the recovery room, near the operating theatre and a recovery nurse will look after you. You will not be left alone and there will be other patients in the same room. You may need to breathe oxygen through a mask and you will have a drip (a bag of fluid attached to your cannula which drips slowly into a vein). Your blood pressure, heart rate and oxygen level will be measured. If you have pain or sickness, the recovery nurse will treat it promptly. If you have any pain at this stage, you must let the recovery nurse know, as this is the best way your pain can be assessed and controlled.

You can start the exercises you will have been shown by the physiotherapists on your non-operated leg straight away (you may not have any power or feeling in your operated leg). A recovery nurse will help you bend your operated leg. When the recovery room staff are satisfied that you have recovered safely from your anaesthetic and your pain is controlled you will be taken back to the ward.

Pain and Pain Relief

Good pain relief is important and some people need more pain relief medicines than others. On returning to the ward the nurses will reassess the degree of pain you may have. You must be honest with your answers. An assessment scale is used to measure your pain regularly. The nurses will ask you to rate your pain at rest and on movement on a scale of 0 – 10, 0 meaning no pain and 10 being severe pain. You may also choose the word that best describes your pain: No Pain, Mild, Moderate, Severe, Worst Pain Ever.

A joint replacement is a big operation and everyone feels pain differently. The operation is designed to help manage your long term pain but it is normal for there to be pain after your operation for at least 3-6months, this will normally gradually reduce over this period but can last up to 1 year after the procedure.

WHAT YOU MAY RECEIVE

Tablets or Liquids to Swallow

These may be used alone or with other methods of pain relief, such as patient controlled analgesia (PCA), epidural or a nerve block, to boost its effect. Tablets take at least half an hour to work and you need to be able to eat and drink and not feel sick for these drugs to work.

Suppositories

Certain painkillers are effective when given as a suppository. These are placed in your back passage (rectum). They are useful if you cannot swallow or might vomit.

Injections

These are given into a vein for immediate effect, or into your leg or buttock muscle. Strong pain relieving drugs such as morphine or tramadol may be given by injection.

Patient Controlled Analgesia (PCA)

You may have a machine (pump) which allows you to control your own pain relief. This pump contains a syringe with a pain-killing drug, usually morphine. The syringe is connected to a drip in your forearm. You will be given a handset with a button on it. This handset is attached to the PCA pump. Pressing the button on the handset will activate the PCA pump. We programme the pump to allow you a small dose of painkiller every five minutes when the button is pressed.

If you are comfortable, do not press the button; it will increase the sickness and sleepiness. By this method we may not totally take your pain away, but we can certainly keep you comfortable.

Nerve Blocks and Epidurals

These can give effective pain relief for hours or days after the operation. When the sensation begins to return and numbness wears off, you must inform the nurse who will give you suitable painkillers.

Occasionally, despite regular painkillers, you may experience stronger pain. This may occur during physiotherapy exercises or walking. You will have additional painkillers prescribed to help relieve this pain but you will need to ask your nurse for these. It is important that you are comfortable enough to be able to comply with physiotherapy to prevent any delay in rehabilitation.

Side Effects

Pain relieving medicines can cause side effects. The most common are nausea, vomiting and constipation however there are medicines that can be given to alleviate these side effects.

It is important that you let the staff know if you have a tendency to constipation.

Good pain control helps you recover more quickly after your operation. It is important to let the Doctors or

Nurses know if you are in pain. Do not wait to be asked and do not feel afraid of being a nuisance. If your pain is effectively controlled, post-operative complications are reduced. Good pain control will allow you to sleep better, helps your body heal more quickly and enables you to leave hospital sooner.

You can get more information about pain relief from:

- *The nurses on the ward*
- *Your anaesthetist*
- *The pain-relief team at the Hospital: a team of nurses and doctors who specialise in the relief of pain after surgery*
- *Manufacturers' information leaflets for patients about any drug you are offered (your nurses should be able to give you these leaflets).*

After Your Operation

Back On The Ward

Following your operation and recovery, you will be taken in your bed to the ward where nursing staff will look after you for the rest of your time in hospital.

It is perfectly normal, in the initial stages of your recovery, to be connected to various pieces of equipment. These machines help the nurses monitor your blood pressure and pulse, as well as giving you fluids and possibly painkilling medicines through a tube into your vein. You may have oxygen via a mask or small tubes into your nostrils.

Bandages over the wound on your knee will be looked at regularly and you may have a wound drain in your operated leg. This drain is normally removed within 24 hours of your surgery.

If you have had a spinal anaesthetic you may not be aware when you are passing urine - this is normal, the sensation will come back once the anaesthetic wears off. (4 – 6 hours). Occasionally a urinary catheter is inserted on the ward to help you pass urine. The catheter will be removed the following day.

There is a risk that you may feel nauseated following your surgery, especially if you have a general anaesthetic. It is important that you mention this to the nursing staff as soon as possible so that they can give you something to help reduce this. The nurses are there to reassure you, do not be afraid to ask them things you are not sure of.

Depending on the time of your operation the staff will encourage you to start gentle exercises and may assist you to move from the bed to the armchair. Most patients will be able to walk on the same day of surgery. This early movement promotes good circulation and movement of your knee. Being in a more upright position will help reduce the risk of chest complications.

The Day After Your Operation - Day 1

You will have a blood sample taken to assess your blood loss. A nurse will help you with washing and dressing and you will sit out of bed for your breakfast. You will have an x-ray but you can still mobilise and do your exercises prior to this being done. You may not feel like eating much on this first day, but it is important that you drink, little and often. You can sit in a chair and can walk to the toilet.

The Physiotherapist will visit and practice the exercises you where shown in Joint School with you and begin walking with appropriate aid and guidance. Your bandages will be reduced and if you have any drains they may also be removed. Knee bending and strengthening exercises should be started as soon as possible.

Exercises After Surgery

A physiotherapist will show you how to walk, at first with a walking frame. You will also be helped with deep breathing and exercises for your circulation.

Exercises You Should Do

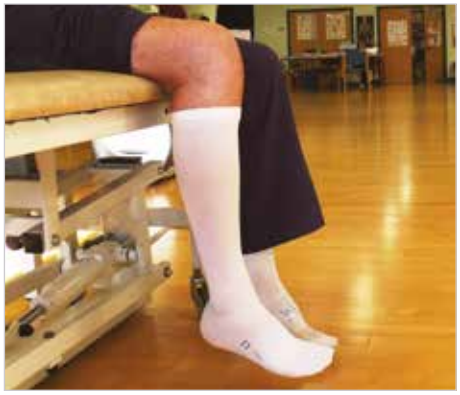
1. Take several deep breaths every hour.
2. When lying or sitting, rotate both ankles in a clockwise and anti-clockwise direction.
   Repeat 10 times each hour at least 3 times a day.

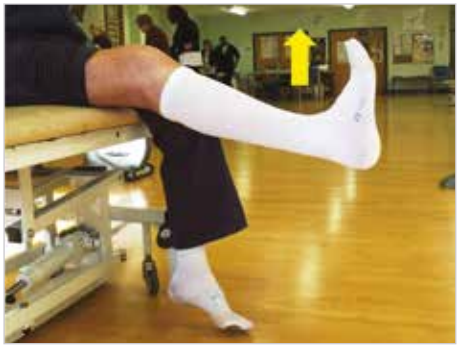
3. When lying, bend and straighten your ankles briskly. Keep your knee straight during the exercise so that you will also stretch your calf muscles.
   Repeat 10 times each hour at least 3 times a day.

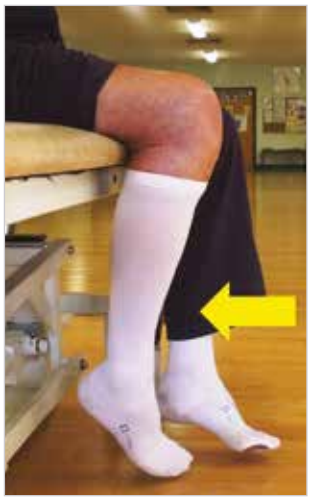
4. Exercise your thigh muscles regularly to prevent them becoming weak. You can do this by pulling your ankle towards you and pushing your knees against the bed, tensing your thigh muscle. Hold the muscle tense for 5 seconds before relaxing. You should also try and lift your leg off the bed in the same way.
   Repeat 10 times each hour at least 3 times a day.

5. Lying on your back, bend the operated leg as far as possible.
   Repeat 10 times each hour at least 3 times a day.

6. Sit in a chair, pull your toes up towards you and tighten your thigh muscles and straighten your knee slowly. Hold for 5 seconds and relax.
   Repeat 10 times each hour at least 3 times a day.







7. Sit on the bed or in a chair with your thigh supported. Slowly bend your knee as far as you can.
   Hold your knee in this position for 5-10 seconds.
   Repeat 10 times each hour at least 3 times a day.
   If this is too uncomfortable you can control the bend with your other foot.

You will stand with the physiotherapist and go for a walk using walking sticks.

You will usually be able to put your foot on the ground and take weight through your new knee. Your Physiotherapist will give you walking aids and teach you how to use them. You will probably start walking using a walking frame and progress to crutches or stick before you go home.

The walking sequence should be:

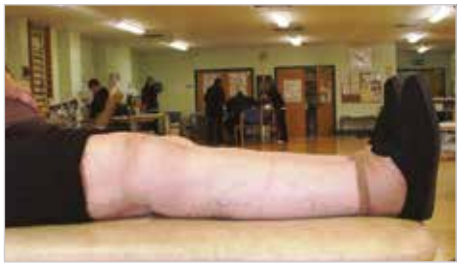
- *Move your walking aid*
- *Step forwards with your operated leg*
- *Step forwards with your un-operated leg*

From Day 2 Onwards (Continued Up To 6 Weeks After Surgery)

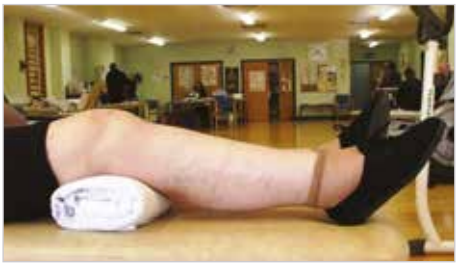
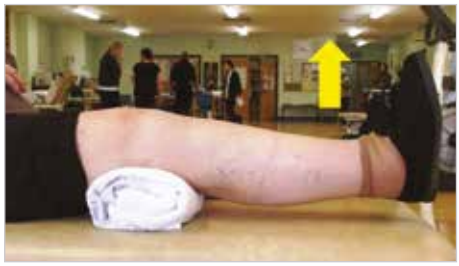
You will stand with the staff and go for a walk using a walking frame, elbow crutches or sticks depending on your progress. You should continue with your exercises as taught to you on day one. Your mobility will be progressed daily.

Each day, with encouragement from the nurses and physiotherapists, you will become more independent. The physiotherapist will show you how to negotiate stairs safely. You should continue with your exercises and working on fully straightening the knee and bending it as much as possible, preferably to 90 degrees prior to discharge.

1. Straighten your operated leg and pull your toes towards you and lift your leg to about 2" above the bed, hold for a second then relax.
   Repeat 10 times each hour at least 3 times a day.




2. Lying on your back, place a firm cushion or rolled up towel under your operated leg. Pull your toes towards you, push down onto the towel and lift the lower part of your leg so that your heel lifts off the bed. Hold for 5 seconds and then relax.
   Repeat 10 times each hour at least 3 times a day or as much as your pain allows.

If necessary you will be reviewed by the Occupational Therapist to make sure you can manage with your daily activities at home.

Stairs

Going UP stairs

First take a step up with your un-operated leg. Then take a step up with your operated leg. Then bring your crutch or stick up onto the step. Always go one step at a time. If there is a rail hold onto this with one hand and you will be shown how to hold your other crutch or stick.

Going DOWN stairs

First put your crutch or stick one step down. Then take a step with your operated leg followed by your un-operated leg. Always go one step at a time. Do not discard your walking aid until told to do so.

Discharge

Most patients go home three days following their operation.This will happen only if you and the team looking after you think you are safe. Before you go home you will be given advice on any new tablets, such as painkillers and when to start any tablets that were stopped. If you are able to attend your GP practice, your practice nurse can remove any clips and check your wound 14 days after your discharge. You will need to make an appointment. If you cannot do this, we can arrange a district nurse to come to your home and do this. You will be given a spare pair of TED stockings to take home.

After your discharge, you will be telephoned at home by a Nurse, to assess your progress and answer any queries you might have.

You should continue to do your exercises at home. The usual advice is twice a day. In general, it is better to do them little and often rather than in one long session.

Follow Up

You will be referred to the Physiotherapy Outpatient Department 7-10 days after going home.

You will be seen by your Consultant in outpatients at around 6 weeks following your surgery and followed up in the joint replacement clinic for review by a Nurse or Physiotherapist. If they have any concerns about your progress they will organise another consultation with your Consultant.

Exercises and Precautions Once You are At Home

Precautions

If after discharge your knee or leg becomes excessively swollen, red, weeping fluid or unduly painful, please contact the ward sister, on one of the numbers listed at the end of this booklet.

Exercises

To ensure the best possible outcome from your surgery it is vital that you continue to practise your exercises regularly. You do not have to wait for the physiotherapist to complete these. Patients who work hard on getting a fully straight leg and good muscle strength will generally do far better in their recovery.

Anti-Embolic (TED) Stockings

On the ward you will be supplied with, and taught the correct way to put on your anti-embolism stockings, you must wear these stockings 24 hours a day **for 6 weeks**. Remove the stockings daily to check your skin to ensure there is no soreness or abrasions. You may remove them to bathe, and to have them washed, but it is important not to leave them off for any longer than 30 minutes in 24 hours. Please keep them wrinkle free as wrinkles may cause problems. You may wash your stockings either by hand or washing machine at 40 ºC and allow them to dry naturally. Please note Social Services will not provide help to put stockings on and off. You will need to arrange help before you come into hospital.

Driving

Driving is permissible when you can sit comfortably in the car and when your muscle control provides adequate reaction time for braking and acceleration. Most individuals resume driving about 4-6 weeks after surgery. It is your responsibility to be absolutely sure you are safe to drive and can perform an emergency stop.

Swelling

Your knee will swell for a couple of weeks or even longer after your operation it can be normal to still have swelling 6 months after the procedure. When this happens you must sit with your leg up and well supported and ease off any strenuous activities until your swelling has reduced. You must however ensure that you bend your knee at regular intervals and continue with your exercises.

Placing a cold compress on your knee can help reduce the swelling. You can use a bag of frozen peas wrapped in a clean, damp tea towel and mould this around your knee for a maximum of 15 minutes. This can be done 2-3 times a day. You may have numbness around the knee due to the operation. As a result, it is important that you do not keep the ice pack on for long periods as it could result in an ice burn.

Kneeling

Avoid kneeling until your wound has healed and you have an adequate bend. You may find kneeling on the scar of your knee replacement uncomfortable for many months after the operation.

Gardening

This can be resumed after 2 months, however you must minimise kneeling and avoid damaging the skin around the knee as this may be painful. You must also take great care with heavier gardening work such as digging.

Sport

After six weeks you can return to certain sports. Walking and swimming are excellent but sports that require jogging and jumping are not, e.g. football, squash, tennis, athletics. Please speak to your Physiotherapist or Consultant for further advice.

Flying

Please check with your consultant when you will be able to fly - following your procedure.

Reminders

- Loss of appetite is common for several weeks after surgery. A balanced diet is important to promote proper tissue healing and restore muscle strength.
- When walking do not twist your knee as you turn around, but take small steps instead.
- Do not stand for prolonged periods as this may cause your leg to swell. If you are not walking keep your leg elevated when sitting or lying down and continue with exercising the foot and ankle.
- Contact your GP at once if you develop an infection anywhere in or on your body as it is essential to have it treated. Inform staff that you have had a joint replacement before any invasive treatment, e.g. dentist.

Falls Prevention Advice

1. Consider removing loose rugs and matting. Alternatively, they can be secured to the floor by slip-resistant grips.
2. Ensure there are no trailing cables within your home e.g. from electrical appliances orthe telephone.
3. Ensure you have a night light next to your bed so you can make your way to the toilet safely at night.
4. Ensure there is sufficient room to manoeuvre around the room with your walking aids. If necessary, consider removing excess furniture or ornaments.
5. Cordless telephones are useful, as they can be taken from room to room. They avoid you rushing to get to the telephone and provide you with an accessible means of contacting someone in an emergency.

6. Auto-dial alarms, which can be worn as a bracelet around your wrist or on a pendant, can be useful. This will enable you to call for assistance if you have a fall.

Returning of Issued Equipment

Items issued on equipment should not be returned, only items loaned from the ward need to be returned.

Useful Contact Numbers

The Hillingdon Hospital

Pield Heath Road, Middlesex, UB8 3NN
Main Switchboard: 01895-23-82-82

Mount Vernon Hospital

Rickmansworth Road, Northwood, HA6 2RN
Main Switchboard: 01923-826-111

Hillingdon Hospital Wards

Kennedy – 01895-279-502

Jersey – 01895-279-505

Hayes – 01895-279-508

Mount Vernon Hospital Wards

Trinity – 01923-844-345

Patient Advice and Liaison Service (PALS)

01895 279973
A supportive service, providing advice, information and offering help to patients, carers and relatives.

Discharge coordinator for surgery (8am – 4pm only)

01895-279-531 (answer phone) or
bleep 407 (requested through Hillingdon Hospital switchboard)

Pre Assessment Clinic (Hillingdon Hospital)

01895-279-498

Admissions Office (Hillingdon Hospital)

Only for enquiries regarding your operation date – 01895-279-301

Urgent Queries after 5pm and on weekends

Contact the ward you were staying on

Useful Organisations

Medequip

Medequip Assistive Technology Ltd,
Unit 2, Summit Centre, Skyport Drive, Harmondsworth, West Drayton, Middlesex, UB7 0LJ,

Tel: 0208 750 1580

Fax: 0208 759 2345

www.medequipuk.com

Your equipment supplier

Age UK

63a High St,Uxbridge, UB8 1JP

Tel: 01895 231841

Tel: 01895 238593

www.ageukhillingdon.org.uk

The Arthritis Research Campaign

Copeman House, St Mary's Court, St Mary's Gate, Chesterfield, S41 7TD

Tel: 0870 850 5000

www.arthritisresearchuk.org

Funds research and produces a free range of leaflets and information booklets.

Arthritis Care

18 Stephenson Way, London, NW1 2HD

Tel: 0207 380 6500

www.arthritiscare.org.uk

Offers self-help support and a range of leaflets on arthritis.

Patients Association

PO Box 935, Harrow, Middlesex, HA1 3YJ

Tel Helpline: 0845 608 4455

www.patients-association.com

Provides a helpline, information and advisory service. It also campaigns for a better health care service for patients.

Orthopaedic Research UK -

At Orthopaedic Research UK, patients are at the heart of all we do. We provide high quality education, training and research with an aim to increase mobility and enhance the quality of life for millions of patients, as well as their carers and loved ones; we are the voice of bone and joint health in the UK.

Tel: 020 7637 5789

www.oruk.org

e. info@oruk.org

Internet Sites

- The Hillingdon Hospital ..... *www.thh.nhs.uk*
- Royal College of Anaesthetists ..... *www.youranaesthetic.info*
- European Society of Anaesthesia and Pain Management ..... *www.postoppain.org*
- The Arthritis Research Campaign ..... *www.arthritisresearchuk.org*
- Best Treatments ..... *www.besttreatments.co.uk*
- National Institute for Clinical Excellence ..... *www.nice.org.uk*
- NHS Direct Health ..... *www.nhsdirect.nhs.uk*

Data Protection and the use of Patient Information

This Trust has developed a policy in accordance with the Data Protection Act 1998 and the Human Rights Act 1998. All of our staff respect these policies and confidentiality is adhered to at all times.

www.dataprotection.gov.uk

All patient leaflets are regularly reviewed and any suggestions you may have as to how they may be improved would be valuable. Please contact the Communications Department via Hillingdon Hospital Switchboard.

Disclaimer

The Hillingdon Hospital NHS Trust ('THH') has taken all reasonable care to ensure that this booklet is accurate on the stated date of publication. However, THH assume no responsibility or liability for any injury, loss or damage incurred as a result of any use or reliance upon the information and material contained within this booklet and is unable to provide any warranty concerning the accuracy or completeness of any information contained herein.

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This booklet and the Rapid Recovery Programme is kindly supported by Biomet Ltd.

Notes

Notes

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The Hillingdon Hospital, Pield Heath Road, Uxbridge, Middlesex UB8 3NN
Tel: 01895 238282 Fax: 01895 811687

Mount Vernon Hospital, Rickmansworth Road, Northwood, Middlesex HA6 2RN
Tel: 01923 826111 Fax: 01923 844460

The Hillingdon Hospital NHS
NHS Foundation Trust

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