

**Enhanced Recovery  
Programme  
Total Knee Replacement  
PATIENT INFORMATION**



# Enhanced Recovery Programme

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# Enhanced Recovery Programme

## The Enhanced Recovery Programme

The Enhanced Recovery Programme (ERP) aims to improve the experience and well being of people who require surgery. The Enhanced Recovery promotes your health and wellbeing helping you to return to normal as soon as possible.

Current ERP research states that the sooner you get out of bed, begin to walk and start eating and drinking, the quicker the recovery.

With this new approach to care, recovery after surgery is more comfortable, easier and happens more quickly.

This approach involves:-

- Pre-operative advice and information
- Carbohydrate rich drinks before surgery
- Tailored post operative pain relief
- Early feeding after surgery
- Early mobilization after surgery

These elements speed up recovery and reduce the possibility of complications such as chest infections and muscle wastage.

The ERP aims to ensure patients are involved in their own care. We ask that you play an active role in your recovery and work in partnership with all of the orthopaedic team to achieve this.

## The Team

The ERP focuses on providing the highest quality care using a multidisciplinary approach, which means you may receive input and care from several different members of staff throughout your recovery, for example:-

- Your Consultant and his team of Doctors
- Anaesthetist
- Pre-operative clinic nurse
- Ward Staff (Sister, Staff Nurse, Health Care Assistants)
- Physiotherapist
- Occupational Therapist

# Enhanced Recovery Programme

## Introduction to Total Knee Replacement (TKR)

There are many conditions which require a knee replacement. The most common is osteoarthritis

A TKR helps to relieve pain and allow many people to improve their independence.

We believe it is important for you to be as prepared as possible for your operation, to give you some idea of what the operation and your hospital stay will involve. Our aim is to help you improve the quality of your life and to ensure you benefit fully from your new knee replacement.

## THE KNEE JOINT



## What is a Knee Replacement?

A TKR is an artificial joint, usually made from plastic and metal, which is used to replace your worn (or damaged) knee joint. The knee joint is a hinge-like joint which unites the two leg bones the femur (thigh bone) and tibia (shin bone). The front of the knee is protected with the patella (kneecap) which articulates with the femur. Inside the joint bones are covered with thick elastic and smooth tissue called articular cartilage.

## Why is it necessary?

You may benefit from a knee replacement if:-

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- You are experiencing severe pain which limits your everyday activities
- You are struggling to walk any distance without significant pain

• You may be

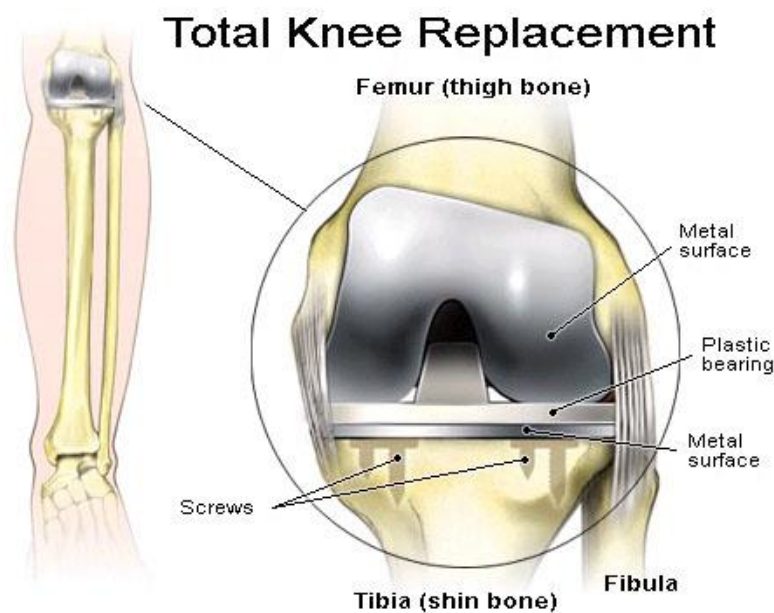
at night

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The pain is often the result of arthritis in the joint. For various reasons, the articular cartilage (which covers the bone in the joint) can become soft, cracked or flaky. The cartilage does not repair itself so over time the quality of the cartilage is reduced. The joint space then becomes narrowed and irregular. When damage is severe, the joint becomes stiff and painful.

### Replacing your Knee Joint

The operation essentially involves removing the damaged arthritic cartilage and bone of the knee, and resurfacing the joint with high-grade stainless steel components and a plastic 'polyethylene' spacer between them. The metal components may be fixed to the bone using a grouting agent/cement



Different types of Knee Replacement:

- **Uni-compartmental Knee Replacement (UKR):** if damage is confined to just one side of the knee, this procedure replaces just that side, whilst the other side of the knee remains intact.
- **Total Knee Replacement (TKR):** this replaces both sides of the knee. Sometimes the underside of the patella (kneecap) is resurfaced with a plastic 'polyethylene' button.
- **Patellofemoral Resurfacing:** this procedure is done if the damage only affects the joint between the end of the femur and the patella. The weight bearing knee joint is preserved.

### Alternative options to surgery

A TKR is usually offered after other types of treatments have been tried. Your GP, may discuss with you other ways to help control the inflammation and pain these being:-

- Painkillers and/or use of anti-inflammatories
- Physiotherapy
- Trying to reduce your weight where possible

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### What are the risks of knee replacement surgery

Although all necessary precautions are taken occasionally complications may occur:-

#### Respiratory Problems

##### Deep Vein Thrombosis (DVT)

Bleeding or deep bruising can occur around the operation site. A blood clot could form in the legs called a DVT. Rarely one of these clots may travel to the lung and cause a Pulmonary Embolism (PE).

##### Infection

An infection may develop either immediately after your surgery or sometime later that may require other procedures which could involve a return to theatre. Skin changes such as blisters, discolouration or numbness may occur around the scar.

##### Skin Changes

Skin changes such as blisters, discolouration or numbness may occur around the scar.

##### Prosthetic Loosening

In the long term it is unlikely that your knee joint will wear out. However your artificial joint may become loose over time. Should this happen a further operation may be required.

As with all major operations, during or following surgery, death is a risk. However it must be emphasized that this is extremely rare.

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## Before your surgery

It is important that you are as fit as possible before your operation. You should try not to be overweight as this increases the risk associated with surgery and may reduce the life expectancy of your new hip. It may be advisable to see your GP or dietician for advice.

Any blood pressure problems should be known to, and being treated by, your GP.

You should continue with any exercises your physiotherapist has advised. You should remain as mobile as possible. This will help to keep your muscles as strong as possible. **The stronger your muscles are before surgery the easier you will find your recovery.**

## Smoking and Alcohol

Smoking prior to surgery delays wound healing and increases your risk of developing chest complications during and after surgery not to mention increasing your risk of long term chest problems. Prior to hospital admission we advise that you stop smoking at least 2 weeks before and for at least 6 weeks after. If you require assistance with stopping smoking prior to surgery please visit your GP for advice.

Alcohol intake should also be reduced prior to admission and for approx 6-8 weeks after. If your intake is excessive please inform clinic staff or visit your GP.

## Dietary Information

Research shows that if you are well nourished and hydrated before and after your surgery you may recover better and more quickly.

You should try to eat as normally as possible until your surgery:-

1. Eat regular meals containing protein foods such as meat, fish, eggs and cheese, lentils and milk
2. Include carbohydrate foods at each meal such as cereals, bread, rice, pasta and potatoes
3. If you are underweight or experiencing unintentional weight loss
  - Avoid using low fat foods/drinks – use full fat milk, margarine/butter, cheese and yoghurts
  - Include extra snacks e.g. yoghurts, cheese and crackers, rice pudding etc. and nourishing fluids e.g. full fat milk

It may be advisable to see your GP to investigate causes for weight loss.

## Pre-Operative supplements

Pre-op supplements are a special drink designed for patients to take before undergoing surgery. They are clear, still flavoured drinks that contain carbohydrates and minerals and will help you to feel better after your surgery and recover faster. This will mean you will spend less time in hospital.

The drinks can be stored at room temperature but you may prefer it chilled. If you are a diabetic please ask for advice when you attend the ERP ward clinic.

## Enhanced Recovery Programme

**We provide you with a total of 6 drinks. It is advised, patients drink 4 the night before your surgery and 2 on the morning of your operation.**

After your surgery you should eat and drink as you feel able, and try to continue to eat as normally as possible. This will help you in your recovery. If you are having difficulty eating, the nurses will monitor your intake, and refer you to the dietician.

### Medications

Please ensure you bring all your current medications, inhalers, creams, eye drops, ointments and any non-prescribed/herbal medications with you on admission to the ward. Where possible please bring your medications in their original packaging.

### Prepare 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. It would be beneficial to think about the things you would normally do and make some adaptations. For instance, you may want to move any crockery or household items for better access i.e. nothing too high or too low. You may want to consider making or buying some ready meals that are easy to freeze and use when home. It is also wise to be up to date with any household chores as you may not want to or you may not be able to do some things for the first few weeks after your operation.

Where possible, an Occupational Therapist will visit your house a few days prior to your operation date and provide you with any equipment you may need for the house at home, e.g raised toilet seat/ bath aids

### Pre-Admission Assessment

If your consultant decides you are appropriate for a total hip replacement you will be seen in a pre-admission clinic by the pre-admission nurse, where your general health and suitability for the operation will be assessed, along with any investigations necessary carried out. This may involve blood tests, Electrocardiogram etc. Swabs for MRSA will also be taken along with a routine urine sample.

The risks may already have been discussed with you at your routine appointments; however, the risks/complications of surgery will be re-iterated.

After your pre-admission appointment an occupational therapist will visit you at home and provide you with any suitable aids you may find useful after your procedure.

Following this appointment, and a few days prior to your operation you will be seen by the ward based Enhanced Recovery Team. At this appointment a nurse will complete all your admission paperwork and issue you with nutritional drinks to take before your operation, you will also be seen by a Doctor. A physiotherapist will issue you with your home post-operative exercise programme



and assess your mobility, they will also provide you with further information to ensure you maximize your post operative rehabilitation.

You will also be advised of the post operative care pathway lead by the Enhanced Recovery Team and advised of the movements and activities you must avoid doing after your operation.

## Enhanced Recovery Programme

### **Beauport Ward**

On the day of your surgery you will be admitted into our Elective Bay. This bay accommodates patients undergoing orthopaedic procedures. Male and female patients are nurses in separate bays. Please be assured it is a very rare occurrence that we have to cancel patients on the day of planned surgery.

The visiting times are 3:30pm - 7:30pm

Please nominate one person to ring the ward with any enquiries as answering multiple phone calls greatly impacts on the time nurses could spend with patients. Please advise your family members that specific details of your condition cannot be discussed over the telephone.

### **What to bring into hospital.**

- Toiletries
- Nightclothes
- Loose fitting day clothes
- Comfortable supportive shoes or slippers (please avoid backless or heeled shoes/slippers)
- Usual medicines
- Books, puzzles, magazines for entertainment
- Mobile phones are allowed on the ward
- Small amount of money
- Please avoid bringing valuables into the hospital

### **Day of Surgery**

You will be admitted to hospital on the day of your operation. You will be allocated a bed and a nurse will do some final paperwork. A member of the orthopaedic and anesthetic team will also see you, they will gain consent and explain the procedure to you and mark the limb to be operated on.

The choice of your anesthetic will depend on:

- Your operation
- Physical condition
- Your preferences
- The anesthetics recommendations

### **Pain Control**

The majority of patients undergoing orthopaedic surgery will receive both a general anesthetic, and a spinal to help ensure your pain is controlled following your surgery.

### What is a spinal?

A local anesthetic drug is injected through a needle into the small of your back to numb the nerves that supply the lower half of your body for a few hours.

### What will I feel?

Usually a spinal should cause no unpleasant feelings and should take only a few minutes to perform. However as the medicine is given into your back you may feel pins and needles or a sharp tingle in one of your legs – **if you do, try to remain still, and tell your anaesthetist about it.** When the spinal is working fully you will be unable to move your legs or feel any pain below your waist.

### What are the benefits of having a spinal?

- Reduced blood loss during surgery and less need for a blood transfusion
- Less risk of blood clots forming in the leg veins
- Less risk of chest infections after surgery
- Less effect on the heart and lungs
- Good pain relief immediately after surgery
- Less need for strong pain relieving drugs
- Less sickness and vomiting
- Earlier return to drinking and eating after surgery
- Less confusion after the operation in older people

### After your spinal

It takes approximately 1½ - 4 hours or maybe longer for the feeling to return to the area of your body that has been numbed. If you have any worries about this please speak to the staff. As the sensation/feeling returns you may experience tingling in the skin as the spinal wears off. At this point you start to feel discomfort at the site of your operation, and it is important that you let the nurses know so that they can give you some more pain relief to prevent the pain from becoming too severe.

### **Rare complications – affects 1 in 10,000 people**

#### Nerve Damage

This is a rare complication of spinal anaesthetics. Temporary loss of sensation, pins and needles and sometimes muscle weakness may last for a few days or even weeks but almost all patients who have these symptoms make a full recovery in time. Permanent nerve damage is even rarer. In the unlikely event that you experience persistent tingling, heaviness or weakness in your legs after the spinal has worn off or you have increasing pain in your back, whilst in hospital inform the ward nurse immediately.

Prior to your surgery you will be asked to change into a theatre gown and anti-embolic stockings. You are able to wear your glasses, hearing aids and dentures until you are in the anaesthetic room but jewellery, makeup or decorative piercings should be removed beforehand.

When ready, you will be escorted to theatre by the nurse looking after you. Here you will be checked in, your personal information verified and your observations monitored (Heart rate, blood pressure etc) as you go to anaesthetics.

After the operation you will be taken to recovery where you will be closely monitored and given any oxygen, fluid or medical intervention as necessary. When the recovery team are happy you are recovered satisfactorily, your Beauport nurse will collect you and escort you back to the ward area.

# Enhanced Recovery Programme

## **When you are back on the Ward**

It is important that after surgery you follow the daily routine that is outlined to you by the Enhanced Recovery Team.

In order to reduce the incidence of clots in your legs you will be given a small tablet, called Rivoroxaban, this will continue for 5 weeks following the date of your surgery. Occasionally it is not possible to use Rivoroxaban and clexane a sub cutaneous injection is used.

Blood tests and X-rays will be ordered in the days after your surgery by your team of Doctors.

## **Diet and Fluids**

You can eat and drink as normal, we may monitor your food intake to ensure you are eating and drinking enough to help with your recovery.

## **Sickness**

Sometimes people experience feeling or being sick after an operation. If you do develop such symptoms please inform staff and they can give you some medication to help relieve this.

## **Post Operative Pain Relief**

Occasionally, despite regular painkillers, you may experience stronger pain. This may occur before or during physiotherapy exercises or walking. You will have additional painkillers prescribed to help relieve this pain but you have to ask your nurse for these. You must inform the nurses who will give you extra painkillers.

It is important you are comfortable enough to be able to comply with physiotherapy to prevent any delay in discharge and to progress your rehabilitation.

## **Wounds**

It is not unusual for your wound to be slightly red and uncomfortable for the first 1 to 2 weeks. However, please let us know if your wound becomes:-

- Inflamed (red), swollen or painful
- Begins to discharge excessive fluid
- Or separates in any place

# Enhanced Recovery Programme

## Physiotherapy

After your operation you will be expected to sit out of bed and walk with a walking aid and supervision. You will be assisted to do this by the physiotherapists or the nursing team in your bay.

Staff will remind you regularly of the benefits the Enhanced Recovery Programme offers and the breathing and leg exercises you should be performing.

The physiotherapist will visit you each day to assess your mobility and ability to complete your home exercise programme, the nursing staff will also be encouraging you. It is your responsibility to continue to practice walking and complete your exercises as advised by the physiotherapist.

Start the following exercises as soon as you are able to walk independently:

Please complete your exercises 4 times a day, you can start with 4 or 5 of each and gradually increasing to 10:-

1. Lying on your back with one leg straight and the other leg bent. (You can vary the exercise by having your foot pointing either upwards, inwards or outwards).

Exercise your straight leg by pulling the toes up, straightening the knee and lifting the leg 20 cm off the bed. Hold approx 5 secs. - slowly relax.

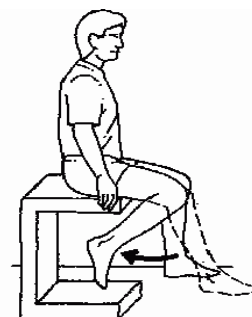
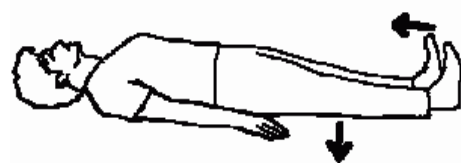
Repeat   10   times with both legs.



2. Lying on your back with legs straight.

Bend your ankles and push your knees down firmly against the bed. Hold 5 secs. - relax.

Repeat   10   times.



3. Sit on a chair with your feet on the floor.

Bend your knee as much as possible.

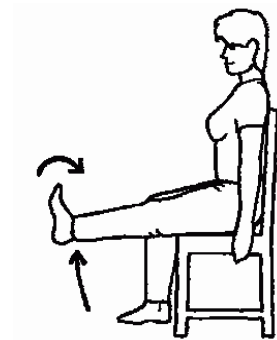
Repeat 10 times.

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4. Sit on a chair.

Pull your toes up, tighten your thigh muscle and straighten your knee. Hold approx. 5 secs. and slowly relax your leg.

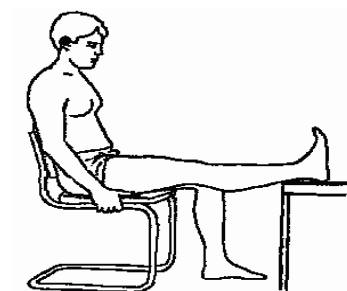
Repeat \_10\_ times.



5. Sitting on a chair, with the leg to be exercised supported on a chair as shown.

Let your leg straighten in this position. Hold \_30\_ secs.

Repeat \_5\_ times.



6. Stand. Place your affected foot on a shallow step.

Slowly shift your weight forward over your foot. Keep your heel in contact with the step during the exercise. Hold \_10\_ secs.

Repeat \_10\_ times.



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The physiotherapist will provide you with an appropriate walking aid and advise the correct use of it. You will be walking with an aid, which your physiotherapist will advise you of. When possible you will be discharged home when safely walking with 2 Elbow Crutches.

You will be assessed for safety in going up and down steps and stairs before you go home, as appropriate.

We aim for all our patients to be ready for discharged home on Day 2 or Day 3 after your operation.

### **Occupational Therapy**

Following your surgery you will be seen by the Orthopaedic Occupational Therapy team, who will assess your needs in preparation for discharge home. The Occupational Therapy team will teach you the safe washing and dressing techniques and provide gadgets to help with your normal daily activities. The Occupational Therapists will discuss the day to day activities you carry out within your home.

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## General Advice

Progression is largely dependant on you. You must exercise as advised by your physiotherapist to regain movement, strength and independence. Periods of rest in between are equally important. Do not sit for too long: get up and walk and exercise regularly. Little and often is the key!!

## Discharge Home

It is our aim for you to be in your home recovering as soon as possible. It is important that adequate support from your family and friends is organized prior to your surgery. Where possible you will be discharged home on Day 2 or 3.

You must arrange for a family member or friend to collect you from Beauport Ward on the day of your discharge, ask your nurse for a suitable time. You will need to make your own way in to all further hospital appointments e.g. taxi, friend or bus

On discharge from hospital you will be given an appointment card detailing a date to which a member of the Enhanced Recovery Team will see you. You will be seen at home for an initial physiotherapy assessment, up to Day 5 and any change of dressing and removal of clips will all be completed at home.

Your physiotherapist will advise you of when to progress your mobility distance and when you can begin to become less reliant upon your aid. They will refer you for further rehabilitation as appropriate.

You will also receive a letter in the post to be seen in our Orthopaedic Clinic by the Arthroplasty Nurse at approximately 6 weeks following surgery.

A discharge letter will be sent to your GP detailing the events of your hospital stay.

## Housework

Increase the amount of housework that you carry out over the next few months. Be careful when bending and twisting.

## Driving

At the discretion of your consultant, you may drive after your 6 week review. It is important that you feel comfortable to drive before you choose to. You must be able to **safely** perform an emergency stop and change gear comfortably.

## Restrictions

At 12 weeks all of the precautions can now be discarded and the aids supplied by the Occupational Therapy department can be returned.

## Travel

Please check with your consultant before flying especially long haul flights.

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## Work

If you work we advise that you discuss with your consultant the need for the time off work and you keep in regular contact with your employer so they can support your return to work. The length of time off will depend on what job you do.

## Sport/Leisure

Most sporting activities can be resumed after 3-6 months, depending on comfort and level of competition.

- Low impact sports are no problem e.g. swimming (breast stroke after 3 months), cycling, gym work after instruction, golf
- High impact sports are not recommended and therefore participate at your own risk e.g. jogging, tennis, squash, jumping activities, football
- Gardening should be undertaken with care.

## **Useful contact numbers:**

Complications are a very rare occurrence however it is important to know what to do if one occurs. Below are useful contact numbers where you can seek advice:

Beauport Ward	01534 442777
Physiotherapy Department	01534 442639
Occupational Therapy Department	01534 442127
Alison McConnachie	01534 442162
Rebecca Young (Arthroplasty Practitioner)	01534 442436