

# A Guide To Revision Total Knee Replacement



Patient Information Leaflet

This leaflet is available in large print, Braille and on tape.  
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## **Introduction**

This booklet has been written as a general guide to help you prepare for your operation. Specific practice may vary slightly from surgeon to surgeon.

## **Why is Revision knee replacement necessary?**

Total Knee Replacement surgery is a successful operation for advanced arthritis of the knee. However the components can wear or loosen causing pain, swelling and instability which may limit your mobility.

Revision Knee Replacement surgery involves the removal of all worn or damaged knee components and replacement with new artificial components.

Prior to Revision Knee surgery a number of tests are carried out to exclude, or diagnose infection. If infection is excluded this means you will need a single stage Revision Knee operation. However If infection is diagnosed the Revision Knee surgery may be undertaken as either a single or two stage procedure and long term antibiotics may be given. A member of the Orthopaedic Team will discuss your individual treatment plan with you. It is important to discuss any questions or parts of the treatment plan you don't understand with a member of the Orthopaedic team.

The Revision Knee operation is a more complex procedure than your original Total Knee Replacement however the preparation for surgery is similar. Your Surgeon will discuss the overall chance of success with you, prior to surgery.

**Most patients get immediate benefit from surgery but for some patients recovery can seem slow and this can be a little frustrating. In order to get the maximum benefit from your revision knee replacement you should continue with your exercise programme and gradually increase your mobility.**

**We wish you every success with your post-operative recovery and rehabilitation.**

## **What Does The Operation Involve?**

The operation varies from minor surgical adjustments to major complex surgical replacement with no two revision procedures being the same. It is not always possible to establish how complex the procedure will be until the operation is in progress and the original prosthesis is removed. The surgeon can then assess the quality and quantity of remaining bone. If the remaining bone is poor then it may be necessary to use a bone graft to fill any defects. The bone surfaces are then cleaned up and the new prosthesis inserted. The components usually have long stems to fit inside the bone thus helping the surgeon with alignment and fixation.

The operation is performed with a general or spinal anaesthetic.

## **What are the benefits of Revision Knee Replacement?**

A successful revision knee replacement will give relief from pain in the knee and should allow sufficient movement in the knee joint for you to undertake most normal activities. The aims of surgery are:

- Relieve knee pain
- Correct knee deformity (bow leg / knock knee)
- Restore function and stability to the knee

## What are the possible complications?

Depending on the condition of your knee prior to surgery, a good result can be expected in approximately 70-90% of cases. However, some patients face a higher complication rate that may reduce the chances of a good result. Your surgeon will warn you if this is the case with your knee.

The revision knee operation is technically more difficult than your original knee operation and as a result involves a much longer operating time. Therefore the risks involved are increased. It is most important that careful consideration is given to the risks involved, to help you to make an informed decision.

1. **Medical / Surgical complications**
2. **Infection in the wound or the new prosthesis**
3. **Bone fracture during or after the operation**
4. **Wear / loosening of the artificial knee implants**
5. **Reduced range of movement / stiffness in the knee**
6. **Nerve or vascular damage**
7. **Difference in leg length**
8. **Amputation**
9. **Death**

### 1. Medical and Surgical Risks

Revision knee surgery is associated with the following medical and surgical risks:

- Heart attack
- Stroke
- Deep vein thrombosis (blood clot in the blood vessels of the legs)
- Pulmonary embolism ( blood clot in the lungs)
- Increased risk of bleeding
- Chest infection
- Urinary infection

- **Driving** – We advise against driving for around six weeks following surgery. This can be discussed at your clinic follow-up. You need to be able to control a car in an emergency situation. It is also advisable to check with your insurance company.
- **Swelling** – swelling of the knee is usual following Revision Knee surgery. It is advisable to elevate the legs when sitting and apply regular ice packs 2-3 times per day. It can sometimes take 6 months before the knee regains its usual shape. If your leg or calf suddenly swells more than normal or becomes more painful, then you will need to seek urgent medical advice.
- **Clicking of the Knee Joint** – Clicking is sometimes present following Revision knee surgery.
- **Kneeling** – Most patients find kneeling difficult or uncomfortable following Revision knee surgery.
- **Travelling** – we caution against flying or travelling abroad in the post operative period due to the increased risk of developing deep vein thrombosis (clots in the legs). You should refrain from flying for minimum 12 weeks depending on your progress. However this can be discussed at your clinic follow-up. Long car journeys are also best avoided. We recommend you plan regular stops, to walk and stretch the legs.
- **Returning to work** – This depends on the nature of your job. However as a general guide, sedentary type of work (involving no lifting) 6-12 weeks, heavy manual work, minimum 3 months. This can be discussed at your clinic follow up.
- **Housework** – You should refrain from strenuous housework, gardening and sport for a minimum of 12 weeks depending on your recovery. You will be unable to carry shopping safely whilst using walking aids. It is therefore advisable to ask family or friends for assistance during your recovery period

You play the most important part in your recovery. However whilst the medical, nursing and physiotherapy staff provide important advice and support, only you can get the knee moving! It is therefore important that you are well motivated and committed to working hard both in hospital and following discharge.

Most patients report some immediate benefit from surgery but overall recovery can sometimes feel slow and this can be a little frustrating. The first three to four months involve a lot of hard work on your part in order to get the knee working properly.

A revision knee replacement is generally not expected to last as long as the first (primary) knee replacement. However the early to medium term results are very encouraging as more patients report a high level of satisfaction following revision surgery.

## **Discharge Advice**

- **Mobility** – It is important to keep doing your knee exercises to get the full benefit from your Revision Knee replacement and to keep as active as possible. The key is to exercise little and often and gradually increase as tolerated. You will be given an appointment to attend the physiotherapy department as an outpatient. They will assess your mobility needs and work out an individual exercise plan. It is important that you make every effort to attend this appointment.
- **Pain control** – Please take regular pain relieving medication for a minimum of 6 weeks following surgery. This is most important during the healing process. Regular ice packs may also help reduce pain and swelling.
- **Clinic follow up** – You will be reviewed by the Orthopaedic team in the out-patients clinic, approximately six weeks following surgery. This is to check on your progress and examine the range of movements in the new knee. Further follow-up visits and x-rays, will be arranged depending on your Consultants request.

Medication is prescribed to thin your blood and minimise the risk of clots developing. Preventative measures such as early mobilisation, deep breathing and leg exercises are also most important. However despite precautions a clot may still develop and you would require a period of treatment. In addition you will be given compression stockings (TEDS) to help reduce the risk of blood clots forming and the leg swelling. Please wear them for six weeks following surgery.

## **2. Risk of Infection**

**Superficial infection: (Delayed wound healing):** This mainly involves the skin of the knee joint but does not extend into the knee joint itself. When a superficial infection is present, the wound may be moist and skin around the surgical wound looks red and inflamed. These problems often settle with simple measures and occasionally antibiotics.

**Deep Infection:** In a small number of cases (less than 1%) a deep infection may develop. Whilst this complication is rare, the consequences can be very serious. A deep infection extends down to the new artificial knee joint. A patient developing this complication may feel unwell and have a high temperature. The joint is invariably more painful than normal.

When a deep infection is present your surgeon may recommend surgery to wash out and clean the infection away and also put you on intravenous antibiotics. The antibiotics will generally be continued for a long period and many early infections can be cured successfully in this manner.

## **3. Risk of bone fracture**

This may be caused if the bone is weak or by the pressure that the surgeon must sometimes apply to remove the old components or cement.

#### **4. Wear / Aseptic loosening of the revision knee prosthesis**

The Revision Knee components can wear or loosen just like the components from your original (primary) total knee replacement. The risk is increased if you are overweight. The length of time the Revision Knee components last depends upon factors such as how much use you subject the knee to and your age and weight.

#### **5. Stiffness in the Knee**

A revision knee replacement may not bend as far your first (primary) knee replacement. However we hope you are able to flex the knee to well beyond a right angle, which is sufficient for most daily activities. Unfortunately there are occasions when the artificial knee becomes excessively stiff, leaving the patient with little movement in the knee joint. The cause of this is often unknown, although it may be associated with the production of excessive scar tissue inside the knee joint (Arthrofibrosis).

#### **6. Risk of Nerve or Tissue Damage**

The two main nerves supplying the leg (femoral and sciatic) can be damaged from surgery however this is quite rare. Nerve damage may recover over time, however sometimes it may be permanent. Small areas of numbness are sometimes present around the knee. Occasionally wounds can become painfully sensitive which generally settle with time.

#### **7. Difference in leg length**

Sometimes there may be a difference in leg length, resulting in shortening of the leg on the operated side.

#### **8. Risk of Amputation**

This is rare but if a serious complication develops that does not respond to urgent treatment, very occasionally the leg has to be amputated.

#### **Admission to hospital**

The routine length of hospital stay is seven days but may be more or less depending on your recovery. It is important that you are well motivated and committed to working hard to get the most out of your new knee.

You may experience some discomfort after your operation this is usually associated with “wound pain” which we call “healing pain”. Healing pain is of a different character and it improves daily. We aim to reduce this as much as possible with the aid of:

- **Nerve blocks to cover the first few hours after your operation.**
- **P.C.A. (Patient Controlled Analgesia) this “wrist watch” is used to deliver pain relief and is usually in place for 24-48 hours after surgery.**
- **Oral painkillers, ice packs and leg exercises.**

#### **Recovery**

Aftercare following revision knee surgery is similar to that following your primary knee replacement. This involves a combination of physiotherapy, knee exercises, pain relief and ice packs. You will be encouraged to walk with a frame or walking aids as soon as possible after your operation. The physiotherapist will provide you with exercises to undertake whilst in hospital and when you go home. The exercises are most important to improve muscle strength and range of movement in the knee

We advise regular movement of the knee joint and early walking using your knee fully. We encourage you to:

- Transfer yourself from bed to chair
- Walk with walking aids – as soon as possible after your operation
- Going to the bathroom (with help if necessary)

## **Prior to admission**

To help you prepare for surgery and assist you in the discharge period it is advisable to plan ahead

- If possible nominate a friend or family member to support you following your discharge from hospital.
- If you need help with shopping or house hold tasks please arrange privately before your admission to hospital.
- Remove loose rugs or mats around your home that could potentially cause you to slip.
- Stock up food in freezer and cupboards.
- It is advisable to bring into hospital warm night clothing, full slippers (not mules), dressing gown and comfortable outdoor clothes to wear during your hospital stay.
- If you are able, we recommend you shower or bath prior to admission, especially if your admission is on the day of surgery.
- You will often be given hair removal cream please use as advised, 6 inches above the knee and 6 inches below. Do not shave your leg.
- Please do not apply moisturising cream to your operated leg on the day of surgery.

## **Advice for patients and relatives on staying warm pre-operatively**

Keeping warm before your operation is very important.

Becoming cold can increase the risks of complications during and after your operation. Hospitals can be cold places so it is very important that you tell the hospital staff if you feel cold. You should bring some warm night clothing to the hospital with you, such as a dressing gown, a vest as well as slippers.

If you get cold despite wrapping up well, we may warm you with a special warming blanket or gown that can be used during your operation.

## **9. Risk of Death**

The revision knee operation involves a much longer operating time therefore the risk of death does increase.

### **High Risk Groups**

Some people are classed as high risk and this includes people who have:

- Medical problems (heart, chest diabetes)
- Inflammatory Arthritis or Rheumatoid Arthritis
- Previous infection within the knee
- Multiple knee surgery
- Take steroids or immunosuppressant drugs
- Obesity, high body mass

### **Preparing for surgery / Health promotion advice Awaiting the operation date**

Please keep a check on your general health and wellbeing whilst you are awaiting surgery. It is important that all existing medical conditions are well controlled and stable, prior to any planned surgical procedure. Any new problems that develop need to be dealt with promptly, as they may lead to your operation being postponed.

### **Skin**

To prevent infection it is important that your skin is healthy with no broken areas, ulcers or active skin conditions such as psoriasis or eczema. Please seek advice if you develop any skin problems.

### **Smoking**

If you smoke it is important that you stop prior to surgery as smoking can affect your heart, lungs, circulation, and the process of bone and wound healing.

Research has shown that stopping smoking 6-8 weeks before your operation can help to reduce risks of complications and wound healing.

However the longer you have stopped smoking before your operation, the greater the benefit. Continuing to smoke will increase the risks associated with surgery and may complicate your post-operative recovery. If you wish to stop smoking and would like advice or support, please discuss the matter with your G.P, practice nurse or phone the NHS national helpline for support.

## **Weight**

If you are overweight, it is strongly advised that you lose weight prior to surgery. Being overweight increases all of the risks associated with surgery and may increase the chance of your artificial joint failing. Your recovery and rehabilitation may also be slowed if you are overweight. Weight loss is difficult, especially when your level of exercise is reduced by knee pain. However we will advise and support you in reducing your weight to a satisfactory level prior to surgery. Please see your GP for support / referral for dietary advice / weight management.

## **Teeth and gums**

As soon as your name is placed on the waiting list for surgery you should make an appointment with your dentist so that any problems can be treated. You will need to provide a letter from your dentist confirming that your mouth and gums are healthy and free from infection.

Please bring the letter when you attend the pre-assessment clinic. This is important as unhealthy teeth and gums can harbour infection, which may find its way to an artificial joint via the blood stream, leading to deep infection. You should also have regular check-ups after your operation.

**A letter from the dentist is required, even if you wear a full set of dentures. Failure to provide a letter will result in your operation being postponed.**

## **Pre – Operative Assessment Clinic**

Prior to surgery you will be asked to attend the **pre-assessment clinic** at **Arrowe Park or Clatterbridge Hospital**.

The purpose of this visit is to assess your overall level of fitness prior to anaesthetic and includes:

- Medical and social history – this will be recorded by the **assessment nurse**.
- Physical examination – this is performed by the **advanced nurse practitioner** and includes a chest examination.
- **Anaesthetic review** may be required depending on your medical history. This may involve the anaesthetist reviewing your medical records or an anaesthetic consultation may be arranged if necessary.
- Medical investigations including routine blood tests, heart tracing and x-rays may be undertaken.

**All patients are screened for MRSA bacteria (Methicillin Resistant Staphylococcus aureus) at the pre-assessment clinic. A nasal and groin swab will be sent to the laboratory. You will only be contacted by the hospital if your results are positive for MRSA. This contact will be by telephone and then by letter. Your doctor will also be informed so you can begin your treatment.**

Please note - new or uncontrolled medical conditions may require additional tests or anaesthetic review, which could possibly delay your admission.

### **Please bring with you to this visit:**

- All medications you are currently taking in the original packaging, including tablets, inhalers and lotions. Also over the counter medicines including herbal medication
- Your dental letter, indicating your mouth and gums are free from infection.
- A sample of urine (mid-stream). Please bring this in a sterile container available from your doctor or chemist. The urine sample will be sent to the laboratory to exclude infection.

**Please note that your operation cannot proceed without your attendance at the pre-operative assessment clinic.**