

# KNEE REPLACEMENT

## PATIENT INFORMATION DOCUMENT

### **Introduction**

This is a document for patients and their relatives to explain what a knee replacement operation is, what the reasons are for requiring a joint replacement, and what is involved in the rehabilitation process after surgery. If after studying this document you have any further questions please feel free to contact me by e-mail on [martin.logan@harleystreetkneeclinic.co.uk](mailto:martin.logan@harleystreetkneeclinic.co.uk) and I can answer your outstanding issues.

### **Why do I need a knee replacement?**

The primary aim of a knee replacement is to alleviate pain from a joint which is most commonly due to destruction of the joint surface cartilage (osteoarthritis). We usually try non-operative treatments first, usually in the form of physiotherapy and anti-inflammatory medication. However, once the joint surface cartilage has completely worn out, the only way to remove the pain and improve the function of the knee is to replace the joint using a knee replacement.

## **What is a knee replacement?**

Joint replacement procedures (also called arthroplasties) involve replacing a painful joint with an artificial implant known as a prosthesis. This is generally a very successful procedure with very high levels of patient satisfaction. The knee replacement removes the joint surface and replaces it with a metal and plastic prosthesis (see image below). Fixation of the implant is achieved usually by the use of bone cement.

The operation involves an incision over the front of the knee, releasing the muscles attaching around the knee and exposing the joint surfaces.

## **Types of knee replacement**

### **Total Knee Replacement**

This operation replaces the joint surfaces in all three compartments of the knee with metal components articulating with a high molecular weight polyethylene spacer.



Image 1 - Total Knee Replacement - A-P View



Image 2 - Total Knee Replacement - Lateral View

### Partial Knee Replacement

Also known as half knee or unicompartmental knee replacements. The knee is essentially 3 separate articulations within one joint capsule. Each compartment can be replaced

individually leaving the other compartments alone. Unicompartmental knee replacements are suitable for some patients who have damage isolated to only one compartment in the knee. The recovery is rapid due to smaller incisions and the functional outcome is generally very good. The criteria for performing a partial knee replacement are very stringent and if you are a potential candidate this will be discussed at your Consultation.

## FAQs

How long do I stay in hospital after a knee replacement?

A. In hospital: 3-5 days for total knee replacement, 2-3 days for partial knee replacement

When can I drive my car after a knee replacement?

A. Driving a car - not until at least 6 weeks after surgery. You need to be in control of your car and the knee should have a good range of motion and good muscle control before you can drive your car safely.

When can I play golf, bowls etc.?

A. Usually between 3 and 6 months after surgery.

When can I fly?

A. Flying - we recommend you don't fly for at least 6 weeks after surgery. If you fly within 6 months of a knee replacement we strongly recommend prophylaxis against deep vein thrombosis (DVT) in the form of compression stockings and medication (aspirin or if high risk then subcutaneous injections of blood thinning drugs).

How long will my knee replacement last?

A. The knee prosthesis is a mechanical device and as such it cannot last forever. The plastic component can wear over time and the whole implant can loosen in the bone slowly over time. Factors which can lead to failure of the implant:

- High impact activities such as running or skiing
- Obesity - more force is applied to the implant.
- Weak bone - patients with conditions such as osteoporosis or rheumatoid arthritis

Overall the chances of a Knee Replacement lasting 10 years is better than 90%. This means that at 10 years 9 out of 10 people are still doing well. After that there is a failure rate of around 1% per year.

A revision replacement is possible but the results of revision surgery are not good as first time surgery.

## **RISKS**

No operation is without risk. The major risks are:

Infection. Deep infection around the implant is happily very rare (around 1%). Every precaution is taken to avoid this but if it occurred then the consequences can be quite severe.

Blood Clots (DVT). Major clots are very rare but can be very serious and rarely fatal (~1 in 10000). To avoid clots we use daily injections to thin your blood, and you also must wear your compression stockings. Early mobilisation after surgery is also very important.

Anaesthetic. Modern anaesthesia is very safe. The decision on the type of anaesthesia for your surgery is discussed with you in depth by your anaesthetist prior to your operation. Any pre-existing medical problems and your current medication must be mentioned to your anaesthetist.

Blood transfusions are not usually required for routine knee replacement surgery

Others - many other complications are possible but the risk of a major problem is very low (less than 1%). These include nerve injury, vessel injury, superficial infection, haematoma and others. If you wish we can discuss this in more depth prior to your operation.

## **YOUR HOSPITAL STAY**

### **Day Before Surgery**

Usually nothing to eat or drink after midnight. Depending on the time of your surgery and for your convenience you can be admitted to the ward the evening before your surgery. This

often helps you relax and get acquainted with the ward environment and the staff who will be looking after them during their stay.

### **Day of Surgery**

The leg which is to have the knee replaced will be marked with indelible ink on the ward prior to you be transported to the operating theatre complex. You will need to change into a theatre gown and be fitted with a graduated compression stocking on the leg which is not being operated on. The first 24 hours after the operation are mainly concerned with patient comfort to minimise the pain, and ensure the heart, lungs, kidneys etc. are all working correctly.

## **POST-OPERATIVE REHABILITATION PRINCIPLES**

**Day 1.** Gentle mobilisation with the help of your physiotherapist.

**Days 2-5** The hard work begins. We get you walking and bending the knee. You might need a walking aid which the physiotherapist will decide on. Stairs are done when you are safe. When not exercising we recommend daily elevation and ice compression.

### **Going Home**

This should be planned BEFORE coming in to hospital. It is wise to have someone to assist for 1-2 weeks after you leave hospital. Shopping should be completed before surgery.

The first 6 weeks are a real test of your motivation. During this time with the help of your physiotherapist we aim to improve the range of motion of the knee and regain muscle strength and control. A good outcome can only be achieved with both successful surgery and a strong commitment to physical rehabilitation.

At 2 weeks: return to clinic for wound check and removal of skin clips.

At 6 weeks: visit Mr. Logan and get a check x-ray. By this stage you should be bending your knee to at least 90°. You need to be working on improving the range of movement of the knee and the strength of the muscles.

At 12 weeks. You should be able to walk comfortably, get out of a chair and hold your leg straight. Most people can now stop formal physiotherapy sessions but must continue some home exercises. You can usually drive your car at this stage and start to enjoy your usual lifestyle activities.

#### Precautions after surgery

- No impact or jarring activities
- Ensure you are given antibiotics before any dental work, or urinary tract investigations or any surgical procedures
- Expect some swelling and warmth around the knee on and off for up to 6 months. This is normal, but should there be any sudden change in pain, range of motion or swelling you must notify us immediately.

### **Total Knee Replacement System**

Over the last few years there has been a tremendous improvement in our understanding of normal knee movement (kinematics). Traditional knee replacements have not attempted to replicate normal knee movement resulting in a reduced range of motion compared to a normal knee. At the Windsor Knee Clinic we use the latest state-of-the-art knee replacement system (Journey - Smith&Nephew), which more closely replicates normal knee motion than previous traditional knee replacement systems. Mr. Logan has considerable experience in using this system having been trained by Dr. Peter Myers (Brisbane Orthopaedic Sports Medicine Centre), who was one of the designers of the Journey system. The Journey Knee produces an excellent range of motion with high flexion often beyond 120° and very high levels of patient satisfaction.

The Journey knee also uses a ceramic type of femoral component (Oxinium™) in an attempt to reduce wear of the polyethylene tibial spacer. Laboratory studies suggest using oxinium reduces the amount of polyethylene wear by 75% compared to conventional cobalt-chrome femoral components.

### **Conclusion**

I hope this guide has been of use to you. You will have been recommended surgery only if the potential benefits of the operation outweigh the risks. If you have any questions relating to this please contact me.

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