

## Total Knee Replacement

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With age and also with rheumatoid arthritis the weight bearing surfaces of the knee joint become worn away. They are no longer smooth and free running and this leads to stiffness and pain. Eventually the joint wears away to such an extent that the bone of the femur grinds on the bone of the tibia. A total knee replacement replaces these surfaces with plastic and metal. The femoral replacement is a smooth metal component, which fits snugly over the end of the bone. The tibial replacement is in two parts, a metal base sitting on the bone and a plastic insert, which sits between the metal base on the tibial and femoral component. If necessary the patellar surface (under the knee cap) is replaced with a plastic button, which glides over the metal surface of the femoral replacement.

### WHAT IS INVOLVED IN TOTAL KNEE REPLACEMENT

To be able to replace the surface of the knee joint a 20cm incision is made down the front of the knee and the joint opened. The bony overgrowth, which commonly occurs in arthritis of the knee, is trimmed away and the joint surfaces removed. This involves some shaping of the bone so that the joint replacement components sit firmly on the bone. In the replacements now being used the bone then grows into the roughened surfaces of the replacement, anchoring it down. In addition, bone cement is used to hold the components in place.



### WHAT IS INVOLVED FOR YOU AS THE PATIENT

*Before admission into hospital:*

You will need to book your surgery at our Sports Surgery Clinic rooms. You will receive a package of information from us containing your admission, consent and questionnaire forms, which need to be completed and sent to the SSC. You will need to attend the SSC preadmission clinic before your surgery. At this time you will be assessed by an Anaesthetist. You should also inform your Surgeon and Anaesthetist of any medical conditions or previous treatments as this may affect your operation. You will also meet the nursing staff and physiotherapists to discuss your admission and treatment.

Prior to the operation any allergies you may have to medications, bandages and ointments should be brought to the attention of the Surgeon. You should stop arthritis tablets for one week prior to surgery as they increase bleeding. Take only panadeine or panadol for pain relief during this period. Please notify your Surgeon and Anaesthetist in advance if you are taking any anticoagulants (blood thinners), hormone tablets or suffer from diabetes. You should inform your Surgeon and your Anaesthetist of any medical conditions or previous treatment as this may affect your operation.

**You must contact our office before you go into hospital if there is any evidence of pimples, ulcers or broken skin around the area to be operated on OR if you have a cold, cough or infection evident. If you are taking medication you must check with the doctor as to whether you need to stop taking any of the medication prior to your surgery.**

### **Admission into the SSC Hospital:**

You are usually admitted to hospital on the morning of the surgery. The staff at the hospital will call you and let you know your admission time. You will need to take all relevant x-rays, current medications and their prescriptions.

When you wake after surgery you will be in the recovery ward. From here you will be transferred back to your ward. Your leg is very firmly wrapped and a drip will be in your arm. The drip makes up for the lost fluid, which may have occurred in your operation and is used to dispense blood or drugs that you may require. The drip is usually removed 48 hours after surgery. You will be given regular pain relief in the form of an injection or tablet as required.

The recovery from the operation requires about 5-7 days in hospital. The day after surgery you will commence your rehabilitation with physiotherapy. This involves exercises to improve the strength of the muscles and regain the range of motion of the knee.

On the first day after surgery your physiotherapist will begin to assist you to get out of bed and walk a small distance. This will be progressed over the next 7 days, till you are independently mobile. The exercising and mobilising of the knee will cause some discomfort and swelling, however this is normal, and is just part of the healing process. If pain is preventing you from exercising effectively, you should discuss this with your nurse. An ice pack will be given after the bandages are removed and should be used regularly to help reduce the pain and swelling in your knee. The swelling normally takes many weeks to subside which causes a tight feeling in the knee.

### **After your hospital stay:**

The hospital staff will help you organise your rehabilitation to continue after you are discharged from hospital, either staying in a rehabilitation unit or going home. You will generally be able to leave with the aid of a single walking stick or crutches. If you are located close to the Mater hospital they may arrange for you to return there for treatment during the day. While at home you should continue your straight leg raising and range of movement exercises, as well as walking regularly. If at any stage you develop a fever or the wound becomes red or painful you should bring this to the attention of our rooms immediately. It is usual to be reviewed by Mr. Vioreanu at 2-3 months after surgery, with new x-rays.

After you have had this surgery you MUST take antibiotics prior to any other operations in the future, including dental work. This is to prevent germs lodging on the implant and causing infection in the joint.

## **POTENTIAL COMPLICATIONS RELATED TO SURGERY**

- **Stiffness:** After a total knee replacement the knee is usually quite stiff for up to 3 months. Early and aggressive postoperative physiotherapy and exercises will reduce the risk of stiffness and promote a full range of motion following total knee replacement. The average range of motion following a total knee replacement can be expected to be 115°.
- **Deep vein thrombosis and pulmonary embolus:** A combination of immobilisation of the limb, smoking and the oral contraceptive pill or hormonal replacement therapy all multiply to increase the risk of a blood clot. Any past history of blood clots should be brought to the attention of the Surgeon prior to your operation. Prevention of deep vein thrombosis involves a rapid recovery program, with patients getting out of bed within 24 hours following the surgery, and the administration of anticoagulants in the form of Aspirin or Warfarin.
- **Excessive bleeding** resulting in a haematoma can occur following total knee replacement surgery. This sometimes results in wound break down and the need for re-suturing of the wounds. This occurs in less than 1% of total knee replacements.
- Surgery is carried out under strict germ free conditions in an operating theatre. Antibiotics are administered intravenously at the time of your surgery. Despite these measures, following surgery there is a **less than 3% chance** of developing an infection. Most commonly these are superficial wound infections that resolve with a course of antibiotics. More serious infections may require further hospitalisation and surgical and prolonged antibiotic therapy.

## QUESTIONS COMMONLY ASKED

Q. Anaesthetic?

A. Either general or spinal anaesthesia – discuss with your Anaesthetist at the preadmission clinic.

Q. Duration of operation?

A. One knee: 1-2 hours, two knees: 2-3 hours.

Q. Length of stay in hospital?

A. 5-7 days.

Q. Do I need rehabilitation after my surgery?

A. Yes, this is an essential part of recovery. This can be as an inpatient or an outpatient. The rehabilitation is organised after your surgery by the hospital staff.

Q. Driving a car?

A. Avoid for 6 weeks after a RIGHT total knee replacement. Avoid for 2 weeks after a LEFT total knee replacement (when driving an automatic car).

Q. How long does it take for the swelling to go away?

A. It can take 3-6 months before the size of the knee returns to normal. The knee may also feel slightly warm for this period

Q. How long will the new knee last?

A. Based on the data from total knee replacements from National Joint Registries, 10% fail after 10 years, 40% after 20 years.

Q. What is the prosthesis made of?

A. The metal component of the prosthesis is made from cobalt chrome and the lining from high density polyethylene.

Q. How long do I need off work?

A. This depends largely on the type of work you do. After the time in hospital you may need a few weeks to recover and settle down before returning to light duties. Work requiring a great deal of moving around should not be attempted for 6-8 weeks.

Q. When can I travel?

A. You can travel from the 6 week mark following review.

Q. Will I need to wear stockings after the surgery?

A. The hospital will provide you with stockings following your total knee replacement surgery. The stockings are required to remain on during the day for 6 weeks post surgery. The stockings can be taken off at night.

Q. Can I kneel following the surgery?

A. There are 3 main reasons why patients are unable to kneel following total knee replacement surgery.

1: Following the surgery there is a scar down the knee and this can often be painful when kneeling on it.

2: Following the surgery, there is an area on the outside part of the knee which is usually numb. Kneeling on a numb patch of skin can often result in damage to the skin and potential risk of infection. This is why kneeling is best avoided, unless kneeling on a soft surface that is clean.

3: Following a total knee replacement, a full range of motion is usually not obtained, and it is therefore difficult to get down and get up from a kneeling position. Patients are allowed to kneel following the surgery if they can do it and put up with the above issues.

Q. Can I play sport following my total knee replacement?

A. Sporting activities following total knee replacement surgery do put increased loads through the total knee replacement. More vigorous sports that involve running and pivoting, obviously, apply increased loads than walking. Taking up sports following a total knee replacement that have not been performed for many years is usually not recommended. Resuming sports, following a total knee replacement, that have been performed in the days leading up to the total knee replacement surgery should be allowed, within reason. These sports should be discussed with Mr. Vioreanu to establish a reasonable time frame for them to occur. Returning to golf, doubles tennis, sailing, or lawn bowling usually can be managed after 8 weeks and an appropriate rehabilitation program has been completed.