



Operation Information

Total Knee Replacement

Introduction

The knee joint is made up of three bones, the top is the thigh bone (femur), below is the skin bone (tibia), and the front is the knee cap (patella). They move and work together to ensure a smooth motion and function of the knee.

Total knee replacement (TKR) is an operation which involves replacement of the damaged bearing surfaces in the knee that are causing pain and decrease the normal motions and functions of the knee joint. TKR involves resurfacing the knee joint with an artificial joint made of metal and plastic. There are usually three components – femoral prosthesis, tibial prosthesis and patellar prosthesis. The materials used are very strong and are designed to last a reasonably long time inside the body. TKR is a common procedure and the replacement should last around 15-20 years.

Outcomes

The expected outcome of this operation is to repair the damaged knee joint. The knee joint will return to its normal motions and functions. This operation also help to prevent further damage of the affected knee joint and significant helps to relief from knee pain, improved mobility and the quality of daily living.

Procedures

1. The operation can be performed under spinal or general anaesthesia.
2. A tourniquet may be put around the thigh region of the limb to decrease blood flow to the leg.
3. An incision is made in the anterior aspect of the knee joint.
4. The diseased cartilage and bone are removed.
5. The femoral, tibial and patellar prosthesis are implanted.
6. A drain may be inserted for drainage of blood if necessary.
7. The wound is closed and covered with sterile dressing.

Possible Risks and Complications

1. Bleeding
2. Infection
3. Joint stiffness
4. Fracture
5. Deep vein thrombosis
6. Limited range of movement
7. Damage to the nerve and blood vessel
8. Loosening of the parts

** The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all operations are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

Pre-operative Preparations

1. Good hygiene can prevent wound infection. Therefore, we advise you to clean up yourself on the day of operation.
2. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
3. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia.
4. You may be asked to stop taking blood-thinning medications such as aspirin, warfarin, xarelto and pradaxa for a few days beforehand.
5. You may have to obtain tests such as blood tests, an electrocardiogram (ECG) or chest x-ray for pre-operative assessment.
6. Clipping of hair may require on the incision sites.
7. Nurse will give you a surgical soap to clean your knee.
8. Bowel preparation may require as doctor's instruction.
9. Pre-medication may be necessary as doctor's prescription.
10. No food or drink six hours before operation.
11. Please change into a surgical gown after removing all clothing including undergarments, dentures, jewellery and contact lenses.
12. Please empty your bladder before the operation.

Post-operative Instructions

General

1. After general anaesthesia, you may:
 - experience discomfort in the throat after tracheal intubation.
 - experience side effects of anaesthesia including feel tired, drowsy, nausea or vomiting. Inform the nurse if symptoms persist or worsen.
2. Please inform the nurse of wound pain. Proper pain relief treatment by injection or oral medication may be prescribed by the doctor.
3. An indwelling urine catheter will normally be removed in a few days after the operation.

Wound Care

1. The wound will be covered with a sterile dressing which must be kept clean and dry.
2. You may have a small drain coming from the knee to help drain any excess bleeding and reduce the swelling.
3. The drain will normally be removed after 1 – 3 days (if applicable).
4. Cryotherapy and elevation can reduce swelling of the affected leg.
5. The stitches will be removed at around 2 weeks after the operation.

Activities

1. You are encouraged to mobilize the ankle to promote circulation of the calf and decrease risk of the deep vein thrombosis.
2. Physiotherapy will be started later to maintain and restore the range of movement. These include achievement of full extension, maximal flexion and regaining the strength of quadriceps. The physiotherapist will advise you on what weight you are allowed to take on your operated leg.

Diet

A normal diet may be resumed as instructed after recovery from general anaesthesia.

Advice on Discharge

1. Please comply with the medication regime as prescribed by your doctor.
2. The dressing must be kept clean and dry.
3. Loose trousers or shorts can be worn to minimize the friction over the wound.
4. Compression stocking can be used to control and prevent oedema.
5. The affected limb should be elevated when resting and sitting to minimize oedema.
6. Walking exercise is gradually increased as instructed by the doctor or physiotherapist.
7. Kneeling is not advisable for several months following your operation.
8. Some loss of appetite is common for several weeks after surgery. A balanced diet, often with an iron supplement, is important to help your wound heal and to restore muscle strength.
9. Immediately consult your doctor or return to hospital for professional attention in the event of severe wound pain associated with redness and swelling, large amounts of stinking discharge, massive bleeding, collapse, shivering, high fever over 38°C or 100.4°F, or any other unusual symptoms etc.
10. Any follow-up consultations should be attended as scheduled.

Protecting Your Knee Replacement

After surgery, make sure you also do the following:

1. Participate in regular light exercise programs to maintain proper strength and mobility of your new knee.
2. Take special precautions to avoid falls and injuries. If you break a bone in your leg, you may require more surgery.
3. Make sure your dentist knows that you have a knee replacement. Talk with your doctor about whether you need to take antibiotics prior to dental procedures.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification