



Procedure Information Sheet

Introduction

Total Knee Replacement is a surgery involving replacing your existing diseased cartilage and bone in the knee joint by a prosthesis composed of metal and plastic. There are usually three components: femoral prosthesis, tibial prosthesis and patellar prosthesis. The knee joint can be divided into two parts: femoral-tibial articulation and femoral-patellar articulation. Depending on the severity of disease in your knee, the femoral-tibial articulation, with or without the femoral-patellar articulation, will be replaced by the prosthesis.

Indication

- End stage arthritis of the knee joint:
 - Usually due to osteoarthritis, rheumatoid arthritis.
 - Sometimes gouty arthritis, osteonecrosis, ankylosing spondylitis, haemophilia, Charcot joint, etc.
- Occasionally for tumor, fracture, etc.
- The most common symptoms in end-stage arthritis are pain, deformity and stiffness. Occasionally, patients may complain of instability of the joint.
- After surgery, pain is usually much reduced. Original deformity and stiffness are usually improved. However, the range of motion is usually not as good as a normal knee. If the knee range was already very good before the surgery, it is difficult to further improve the range of motion.

The Operation / Procedure

- Operation is done under general anesthesia or spinal anesthesia.
- Prophylaxis antibiotic may be need for the operation. Please inform doctor or nurse if patient has drug allergy history.
- A tourniquet may be put around the thigh region of the limb. It will be inflated during the procedure to decrease the blood flow to the leg.
- Incision is made in the anterior aspect of the knee joint.
- Diseased cartilage and bone are then removed. The femoral prosthesis and tibia prosthesis are usually fixed to the bone by cement or other mechanical means. If patella needs to be replaced, doctor will implant the patella prosthesis.
- At the end of the procedure, drain(s) may be inserted for drainage of haematoma.
- Before going back to a general ward, may be kept in the recovery room of the operation theatre for observation.

Before the Operation / Procedure

- A written consent is required.
- Fasting for 6 - 8 hours before operation.
- Inform doctors about drug allergy, regular medications or other medical conditions.
- Treat and optimize existing disease conditions, e.g. heart disease, hypertension, diabetes mellitus, anaemia, asthma, etc.
- Blood tests, ECG and X-rays of the appropriate regions before operation.

After the Operation / Procedure

- Allow to eat and drink when condition is stable.
- Need to start mobilization exercise of the ankle. This will help the circulation of blood inside the calf and decrease the chance of deep vein thrombosis.
- Physiotherapy will be started later to maintain the range of motion gained during the operation. These include achievement of full extension, maximal flexion and regaining the strength of quadriceps. After a few days, therapists will start walking training.
- The stitches / staples will be removed after the wound heals.
- Keep the wound clean and dry.
- Must follow the instructions strictly on taking medication, see the doctor as scheduled.
- If any excessive bleeding, collapse, severe pain, fever or signs of wound infection such as redness, swelling or large amounts of stinking discharge, consult doctor immediately.
- Our Infection Control Nurse may contact you by phone to enquire of your wound condition 90 days after discharged.

Patient's Label
Patient Name: _____
Hospital No: _____
Episode No: _____



Risk and Complication

1. There are associated risks and complications with total knee replacement surgery, for example, those associated with anaesthesia, wound complications, pneumonia, stroke, heart attack, etc.
2. Total Knee Replacement is a safe and well accepted surgical procedure internationally. However, similar to other surgical procedures, there are still chances to encounter potential undesirable effects and complications.
 - 2.1 Revision Surgery: The artificial joint is expected to suffer from mechanical wear. The joint will be loosened eventually and revision surgery will be required.
 - 2.2 Infection: One of the biggest enemies of artificial joint replacement is infection. The infection rate increases if you have adverse comorbidity, for example, diabetes mellitus.
 - 2.3 Dislocation: The chance of dislocation in a total knee replacement is infrequent.
 - 2.4 Nerve palsy: Nerve may be injured during total knee replacement. Nerve injury can result in loss of sensation and function. Some numbness of skin around and at the outer side of the incision should be expected.
 - 2.5 Bleeding: Some amount of blood loss during a total knee replacement is expected and transfusion may be required.
 - 2.6 Vascular injury: Despite the chance of major vessel injury in total knee replacement is remote, the consequence of such injury can be devastating and may lead to potential loss of the limb. If such injury occurs, vascular surgery will be needed.
 - 2.7 Fracture: Fracture can occur both within the operation and in the post-operative period. If fracture is encountered, doctor may need to stabilize the fracture by extending the wound and fixing the fracture with additional metal implants.
 - 2.8 Problem in wound healing: The problem encountered in wound healing may range from persistent wound discharge to wound edge necrosis and wound dehiscence, which may require further surgical reconstruction.
 - 2.9 Thromboembolic disease: Deep vein thrombosis after Total Knee Replacement is not uncommon. However, the chance of subsequent pulmonary embolism is low. Death can follow pulmonary embolism but the incidence is very low.
 - 2.10 Complications associated with extensor mechanism of knee: The complications of extensor mechanism complication include symptomatic patellar instability leading to the need of re-operation, patellar fracture, rupture of patellar tendon and soft tissue impingement problem.
 - 2.11 Stiffness: Stiffness occurs occasionally after surgery which may require any further treatments.

Alternative Treatment / Investigation

Doctor will consider total joint replacement only if the symptoms cannot be controlled after exhausting other means of conservative treatments, including analgesics, physiotherapy and activities modification. On the other hand, total knee replacement is not a life saving surgery. One can always select to adopt conservative treatments, despite the presence of significant symptoms in terms of pain, stiffness and deformity.

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Reference

Smart Patient Website of Hospital Authority, Procedure Information Sheet: Total Knee Replacement (4/2019)

Patient's Label	
Patient Name: _____	
Hospital No: _____	
Episode No: _____	

Patient's Signature: _____ Date: _____