

RISKS AND COMPLICATIONS - SPECIFIC TO KNEE REPLACEMENT

There are some risks that are specific to knee replacement. This list is not complete:

Infection occurs in about 1% of knee replacements. It can be treated with antibiotics but may require further surgery. Eradication of some infections requires implants to be removed for a period. Occasionally there are reactions to the sutures which may require antibiotics or further surgery.

Stiffness in the knee: Ideally your knee should bend beyond 100 degrees but on occasion the knee may not bend as well, especially if the knee is very stiff before surgery. Sometimes manipulation under anaesthetic is required (a return to the operating theatre, and under anaesthetic the knee is bent for you).

Wear or loosening of the implants: All joints eventually wear out or work loose. In general 80-90% of knee replacements survive 15 years or more.

Damage to nerves is also rare but can lead to weakness and loss of sensation in part of the leg.

Damage to blood vessels may require further surgery if bleeding is ongoing.

The knee may look different after surgery because it is put into the correct alignment to allow proper function.

Failure to completely relieve pain is rare but may occur, especially if some pain is coming from other areas such as the spine.

The scar can be sensitive or have a surrounding area of numbness. This normally decreases over time and does not lead to any problems with your new joint. You can also get some aching around the scar.

Vitamin E cream and massaging can help reduce this.

Dislocation is an extremely rare problem when the ends of the knee joint lose contact with each other or the plastic insert loses position within the joint.

The Patella (knee cap) can dislocate. That is, it moves out of place and it can break or loosen.

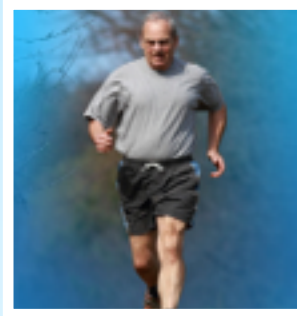
One of the ligaments in the knee can be damaged during surgery or break or stretch afterwards. Surgery may be required to correct this problem.

Fractures or breaks in the bone can occur during surgery or afterwards if you fall. This may require further surgery.

Knee replacement is one of the most successful operations ever invented and serious complications are rare.

TOTAL KNEE REPLACEMENT

INFORMATION FOR PATIENTS



❁ INTRODUCTION ❁

Total Knee Replacement (TKR) is a procedure which replaces all or part of the knee joint with an artificial device (prosthesis) to improve pain and movement.

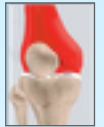
This brochure is provided to give patients a better understanding as to the nature, risks and benefits of knee replacement. It is important that you read it fully and ask questions if there is anything you do not understand.


NORMAL KNEE ANATOMY

The knee is made up of four bones. The femur (thighbone), tibia (shinbone), patella (kneecap) and fibula. The joint acts like a hinge but with some rotation.

The knee is a synovial joint, which means it is lined by synovium. The synovium produces fluid which lubricates and nourishes the inside of the joint. Articular cartilage is the smooth surfaces at the end of the femur and tibia.


FEMUR - *The femur is the largest and the strongest bone in the body. It is the weight bearing bone of the thigh. It provides attachment to most of the muscles of the knee.*



 **CONDYLES** - *The two femoral condyles make up the rounded end of the femur. Its smooth articular surface allows the femur to move easily over the tibia and the meniscus.*

TIBIA - *The tibia, the second largest bone in the body, is the weight bearing bone of the leg. The menisci incompletely cover the superior surface of the tibia where it articulates with the femur. The menisci act as shock absorbers, protecting the articular surface of the tibia as well as assisting in rotation of the knee.*



 **PATELLA** - *The patella, attached to the quadriceps tendon above and the patellar ligament below, rests against the anterior articular surface of the lower end of the femur and protects the knee joint. The patella acts as a fulcrum for the quadriceps by holding the quadriceps tendon off the lower end of the femur.*

FIBULA - *The fibula, although not a weight bearing bone, provides attachment sites for the Lateral collateral ligaments (LCL) and the biceps femoris tendon.*



KNEE CONDITIONS should be evaluated by an Orthopaedic surgeon for proper diagnosis and treatment. Medical History, Physical Examination and Special tests (including X-Rays) are used.

ARTHRITIS is a general term covering numerous conditions where the cartilage on the joint surfaces is damaged or worn. Once the joint is worn out, the bone ends rub painfully on one another. The degree of cartilage damage and inflammation varies with the type and stage of arthritis. Arthritis results in damage to the cartilage.



Cartilage is not seen on X-ray, so we see a "joint space" between the femoral condyles and the Tibia (compare this with the arthritic knee at the top of this column).



In general, but not always, Arthritis affects people as they get older (Osteoarthritis).

Although often the definite cause is not known, arthritis can occur for a number of reasons;

- Lifestyle- Being overweight puts an additional burden on your hips, knees, ankles and feet.
- Trauma (fracture)
- Infection
- Inflammatory conditions like Rheumatoid arthritis

NON-OPERATIVE TREATMENT

- Rest & Activity Limitations
- Weight loss
- Painkillers
- Anti-inflammatory tablets (during flare-ups)
- Glucosamine
- Physical Therapy
 - Physiotherapy
 - Hydrotherapy
- Corticosteroid Injection into the joint

Total Knee Replacement

Surgery is performed under sterile conditions in the operating theatre under spinal or general anaesthesia.

Often a tourniquet is applied to your upper thigh to reduce bleeding during the procedure.

An incision is made along the affected knee exposing the knee joint.

The damaged surfaces of the femur, Tibia and usually the Patella are then removed using special instruments. This removes the deformed part of the bone and creates a good surface to which to attach the implants.



The soft tissue and ligaments in the knee need to be carefully balanced.

Next, the components of the new knee are attached to the cut bone surfaces, either with or without bone cement, depending on the design.



Occasionally screws are also needed.



Lastly a plastic insert is placed between the femoral and tibial implants to make a smooth, low friction joint.

With all the new components the knee joint is tested

through its range of motion.

The knee is then carefully closed and drains usually inserted and the knee dressed and bandaged.



AFTER SURGERY

Remember that your new knee is artificial and must be treated with care.

After surgery scar tissue will begin to form around the knee. You will need to work hard with the physiotherapist to restore the range of motion in order to prevent permanent stiffness. Your rehabilitation and exercises will continue for 3-6 months.

TAKING CARE OF YOUR WOUND:

- You can shower once the wound has healed.
- You can apply Vitamin E or moisturising cream into the wound once the wound has healed.
- If you have increasing redness or swelling in the wound or temperatures over 38° you should call your doctor.
- If you are having any procedures such as dental work or any other surgery you should take antibiotics before and after to prevent infection in your new prosthesis. Call us for details.
- Your knee replacement may trigger metal detectors at the airport - depending on the detector's settings.

There is usually no weight bearing restriction after surgery and you can put as much weight through the knee as is comfortable. Most patients use crutches or other walking aids for comfort for a period. It is advisable not to over-exert too early after the procedure as this cause more discomfort and swelling. You should gradually reintroduce and build up activities as your symptoms allow.

You can drive a car as soon as you can do so without discomfort. If your job is seated at a desk you can usually go back to work after a few weeks. People with more physical jobs will need longer before returning.

RISKS AND COMPLICATIONS - GENERAL

As with any operation there are risks. The decision to proceed with the surgery is made because the benefits of surgery outweigh the risks. It is important that you are informed of the risks before deciding to have the surgery. This list is not complete:

Complications of the anaesthetic such as complications from nerve blocks.

Allergic reactions to medications.

Blood loss requiring transfusion. Heart attacks, strokes, kidney failure, pneumonia, urine infections.

Blood clots (Deep Venous Thrombosis) can form in the calf veins and can travel to the lungs (Pulmonary embolism). They can occur after any type of surgery, or even without any surgery at all. Rarely they can cause serious problems and even be life threatening. If you get calf pain or shortness of breath at any stage, you should see a doctor.

Serious medical problems can lead to ongoing health concerns, prolonged hospitalisation or very rarely death.

