

---

# Dr. Vivek Mittal

M.B.B.S., M.S. (Ortho), ASIF fellow

---

E-Mail: [vivek@drvivekmittal.com](mailto:vivek@drvivekmittal.com)

Phone: +91 9811082458

---

## Complications after TKR

As with any major surgery, there are potential risks involved after Total Knee Replacement surgery. Even though the incidence of complications after Total Knee Replacement are small, however, their significance is high for both Patient as well as surgeon, considering the complexity of the procedure. The decision to proceed with any surgery is made because the advantages of surgery outweigh the potential disadvantages. It is important that you are informed of these risks before the surgery takes place.

**Complications** can be medical (general) or local complications specific to the Knee.

**Medical complications** include those of the anesthesia as well as your other illness related, almost any medical condition can occur so this list is not complete. Few of them include:

- Allergic reactions to medications
- Blood loss requiring transfusion with its low risk of disease transmission
- Heart attacks, strokes, kidney failure, pneumonia, bladder infections
- Complications from nerve blocks such as infection or nerve damage
- Serious medical problems can lead to prolonged hospitalization or rarely even death

### Local Complications

#### Infection

Infection can occur after any operation. Infection rates after joint replacement surgery is very low (approximately 1%). Being a foreign body artificial joint are always at more risk of infections especially with any dental work or other surgical procedures where germs (Bacteria) can get into the blood stream and find their way to your implant.

Lot of precautions is taken before & during surgery to prevent this complications, which includes preoperative part preparation, blood test & urine test, Antibiotics, Sterile operation rooms with laminar airflow etc. Patients with Diabetes, Rheumatoid arthritis, Psoriasis, Renal & Hepatic Compromised patients, HIV patients, h/o past infection like TB, Chronic urinary tract infection, etc. are at a higher risk for developing postoperative infections.

Early infections and low virulence infections can be treated with antibiotics, but may require further surgery like surgical debridement (joint cleaning), if they do not respond to antibiotics alone. If infection persists or gets aggravated in spite of adequate antibiotics / joint cleaning then your artificial joint may need to be removed and replaced by cement antibiotic spacer to eradicate infection.

If you have any unexplained pain, swelling, or redness in the operated knee joint, you should consult your surgeon as soon as possible.

### **Blood Clots (Deep Venous Thrombosis)**

Blood clots in the veins of the legs are one of the most common complications of total knee replacement surgery. They can form in the calf veins and can travel to the lung (Pulmonary embolism). Pulmonary embolism is serious and even life threatening complication. It is treated with medicines to dissolve it. Adequate precautions are taken before & after surgery to prevent them from occurring; like LMWH (medicines), Aspirin, Calf pumps, early exercises, Stockinet's etc. Blood clots can occur despite all these precautions and are usually not dangerous if appropriately treated. If you get calf pain or shortness of breath at any stage, you should notify your surgeon immediately.

### **Stiffness in the Knee**

Ideally, your knee should bend as much as before surgery but on occasion, may not bend even, as much as, was present before surgery. For unexplained reasons, some patients form excessive scar tissue in the knee after surgery, resulting in diminished bending of the knee (a condition called arthrofibrosis). It is impossible to predict ahead of time which patients might develop arthrofibrosis. In these patients manipulation of the knee is required to break down the excessive scar tissue, this means going to the operating room where the knee is bent for you while under anesthesia. Arthroscopic surgery to clean up the excessive scar within the knee joint may be required, rarely if nothing helps.

### **Ligament Injuries**

There are a number of ligaments surrounding the knee. These ligaments can be torn during surgery or break or stretch out any time afterwards. Ligament injury to inside of the knee (medial collateral ligament) can be of serious consequence requiring reoperation.

### **Patellar Complications**

Occasionally the kneecap does not track properly on the femoral component causing it to "jump" as the knee bends. The chance of this occurring is very less with the current generation of total knee implants. The plastic part on the patella can wear through. These problems sometimes need reoperation for correction.

## Damage to Nerves and Blood Vessels

Rarely these can be injured at the time of surgery and are debilitating. Nerves and blood vessels run very close to the knee joint. **Nerve damage** can (rarely) occur with knee replacement. The most common nerve damaged is the nerve to the muscles that bring the foot up toward the face (the peroneal nerve). The odds of this occurring are very low. If it does occur, the affected nerve usually recovers after 6 to 12 months. Quite commonly the skin around the knee feels "numb" because of small skin nerves that get cut at surgery. Sensation usually returns to normal within a few months. **Arterial injury** is an uncommon but serious complication. The major arteries of the leg lie just behind the knee joint. Once injured, blood vessels are explored and repaired by a vascular surgeon. If not, you could even lose your leg. The chance of this occurring is extremely small.

## Fractures or Breaks in the Bone

Incidence of such fractures is low. Fractures or breaks can occur during surgery in severely osteoporotic bones. Sometimes patient also develop stress fracture around knee without any fall especially those with severe deformity and who delays surgery for long. These fractures can be managed successfully during the surgery with special implants. Sometimes fractures are noticed only on post operative x-rays, and they are managed by modifying postoperative rehabilitation protocol or rarely may requires resurgery.

Fracture around the implant (peri-prosthetic fractures) can happen many weeks or months after the surgery. These peri-prosthetic fractures usually require surgery.

## Aseptic Loosening

It is the most important long-term problem & the reason for revision of total knee replacement surgery. Loosening of the prosthesis from the bone is the most important long-term problem. Current generations of implant have good survivorship. Good surgery, choice of correct implant with proven design and good survivorship, maintaining good quality of bone & muscle, maintaining weight and avoiding high impact activities are some of the factors which delay this complication. As implants gets loose & bone quality & quantity becomes poor, Revision Total knee Replacement surgery is the ultimate solution.

## Cosmetic Appearance

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

## Leg length Inequality

This is most likely to happen when a patient with significant deformity of both knees chooses to undergo one knee operation at a time. This happens due to the fact that a corrected knee is straighter and hence longer.

## Dislocation

An uncommon complication where the ends of the knee joint lose contact with each other or the plastic insert may come out of tibial base plate. This requires reduction under anesthesia, however surgery is needed for reduction of dislocation of plastic, and sometimes for dislocation of knee.

## Allergy to the Metal Parts of Implant

Allergy to the metal parts of the implant has occasionally been reported. People who know they have metal allergies should mention to their surgeon before surgery. Metal allergies are rare and also the tests are not completely reliable. Oxinium Total Knee implant is completely inert and can be successfully implanted in these patients.

## Summary

I understand surgery is not a pleasant prospect for anyone, but for some people who are crippled with arthritis, it could mean the difference between leading a near normal life and putting up with a debilitating condition.

Surgery is only offered once non-operative treatment has failed. It is an important decision to make and ultimately it is an informed decision between you, your surgeon, and your family. Surgery offers **correction** of knee deformity, **relief** in pain, and **restoration** of movements to bring independence in all the activities important for daily living. With recent advances in medicines and anesthesia this is done with the least amount of possible risk.

Although most people are extremely happy with their total knee implant, complications can occur and you must be aware of these prior to making a decision. You should discuss all of your concerns thoroughly with your Orthopedic Surgeon prior to surgery so that you can be sure that this is the procedure for you.