

Questions & Answers about Total Knee Replacement

Q: What is degenerative knee? When should I consider operative treatments?

In terms of a human body's the ability to of carry weight bearing, the knee joints are the most important joints ones. The state of health conditions of the knee joints has a direct effect affect directly on movements and all daily activities.

Degenerative knee is common among old and middle-aged populations, affecting females more than males. It often involves both knee joints of both legs, but with various symptoms may vary. Clinically, the early symptoms include pain and rigidity over the knee joints, frequent knee swelling and warmth for active inflammation of the synovium, popliteal soreness, ambulation difficulties in walking, stair-climbing, and raising up from sitting or squatting. The locked knee is caused by direct bony contact without the protection and lubrication from the worn cartilage. In advanced stage, the patients may feel pain not only occur inside of the knee joint but radiates upwards or downwards to cause back pain, calf pain or ankle pain. In addition to squatting difficulty, quadriceps femoris muscle atrophy and obvious deformity with bowing knee develop. Some patients have knee flexion contracture and can't completely extend their legs. In this instance, most patients can't to walk a long distance and take the gait of side-swing, need ambulatory support. The troublesome aches are not relieved by rest and even persist during sleep. Typically, various surgical interventions will be suggested by your orthopaedic doctors according to the stages of degenerative joint; however, the surgery of TKR is indicated for patients with advanced stages with poor response to other treatment modalities.

Q: What is the TKR operation like?

Total Knee replacement is a surgery for people with severe knee damage to relieve pain and allow the patients to be more active. During the operation, the surgeon uses special instruments to carefully remove the damaged cartilage and bone from the surface of your knee joint and replaces them with specially designed metal and plastic parts. The surgery has been proven to be a durable treatment in many studies and our clinical experiences for more than 85% patients enjoy normal functions over ten years without a second operation.

Q: When is this operation needed indicated?

TKR is not always considered in the beginning to treat these disorders. Your doctor may recommend it if you have severe knee pain and medication or other modalities like resting, physical therapy, modifications of daily activities, etc, are not helping you anymore.

Q: What would happen if I would keep waiting or conservative treatments?

Your knee might feel frequent pain, soreness or rigid, even tend to fall when walking. The primary goals of performing a TKR are to relieve the pain, restore functions and improve life qualities with the durable reconstruction.

Q: What are the potential risks involved in this operation?

TKR is often indicated for patients whose knee joints have been damaged by severe with advanced degenerative knee joints and the discomforts in their knees can't be managed by other treatments. As a result of more than a decade of practice, the design and materials of artificial knee joints have improved substantially. After the operation, not only is the pain relieved, but patients also regain complete mobility and the weight-carrying functions of their knees. For decades, with the improvements in biomechanical design, use of antibiotics, concepts of sterilization and surgical tech, the associated risks or complications has been reduced significantly. However, there is no surgery without potential risk, as is the same in the surgery. Some rare risks do occurred, including:

- ★ Bacterial infection: the Incidence of bacterial infection is about 1%. To prevent bacterial infection, patients will be given antibiotics during hospitalization antibiotics will be given prophylactically and incorporated with the implants during surgery.
- ★ Defective wound healing: In rare instances, a patient may have a bleeding oozing wound and resulting or residual hematoma, which could lead to an increasing the risk of infection of the surgical wound. This may be dependent upon mostly related with the patient's health condition constitution .
- ★ Peri-prosthetic fracture: Fracture adjacent to the artificial joint might occur in the future due to the stress it bears.
- ★ Thromboembolism in the lower extremities may occur, causing swelling and pain tenderness in the lower extremities. The blood clots could travel to the lungs via circulation and obstruct the pulmonary artery, which would endanger a patient's life.
- ★ Heart attacks Myocardial infarct, strokes and stress-related gastric ulcer may occur due to the physiological physical and mental stress borne by the patient.
- ※ A patient with some major medical problems, such as diabetes, liver diseases (e.g. cirrhosis), kidney renal diseases (e.g. dialysis), cardiopulmonary diseases, endocrine disorders, and tumors, may have a higher surgical risk.

Q: How long will it take to perform the suegery? What kind of anesthesia is required?

Typically, most surgeons perform a primary TKR surgery within two hours, however, if the time spent on preoperative preparation, the anesthesia process and the post-operative monitoring in the recovery room is added, the whole process would take three hours more or less. Actually, the situation varies with different patients.

Despite of the most used spinal anesthesia, the choices of anesthesia types vary with patients; the professional anesthesiologists would suggest and perform the appropriate method according to the delicate preoperative visits and communication. A well-trained team will give complete peri-operative care to patients, including preoperative visits, care during operation and postoperative monitoring in the recovery room.

Q: Who will perform this operation? Is he/she good?

This operation is performed by the most experienced orthopedic surgeons and a well-trained surgical team.

Q: What is the recovery process after this operation?

- * Because of the use of tourniquet tied around the thigh to control bleeding during the operation, the thigh may swell and ache then. You can apply ice packing to reduce these discomforts.
- * The wound will be covered with gauze and elastic bandage. You can elevate the operated leg above the level of heart to reduce swelling. As to surgeons' favor, no drain will be installed after the operation for natural absorption of the residual body fluid. The wound is most likely to ooze in the first two days after the operation. The dressing will be changed by the faculty if needed. Besides, some bruise developed around the wound and resolves with time.
- * To prevent pressure sore, you should change your position every two hours to avoid long term pressure on the same area.
- * A blood sample will be drawn on the second day after the operation to check the changes of hemoglobin and other biochemical parameters for reference of post-operative care.
- * On the second or the third day after the operation, patients may have some rehabilitation exercises with the support of continuous passive movement device a knee joint simulator. With the tolerable pain, you can get out of bed with the support of a cane or walking aid, and can try to stand with partial weight bearing the limited strength of the operated leg.
- * With ideal wound healing situation, sutures can be partially removed in every two stitches at a time on the fifth day after the operation, and the remaining can be removed in the seventh day.

Q: How soon will I be able to walk and resume normal lifestyle activities?

The hospital stay for patients underwent a TKR surgery is around one week. The rehabilitation programs begin right from the first day after the operation. You can try to stand with partial weight bearing by the support of a walking aid. Then you will be taught some exercises and trainings to increase the active or passive joint movement and muscle strengthening. Gradually, you will find that they are freed of the old pain in their knees, and will accustom yourselves to normal lifestyle activities with your new knee joints. The function and strength of the operated knee will improve as long as you continue the rehabilitation exercises. It is not recommended for people with artificial knee to perform strenuous exercises like running and jumping, but some gentle exercises such as walking and cycling are suggested.

Q: What else should I know about this operation?

Patients should pay attention to the following after discharge:

1. Maintain an ideal weight to lessen the loading of the knee joint.
2. Keep the wound area clean and dry till the sutures are removed. Do not wet the

dressing.

3. No shower or bath is recommended until 2~3 days after the sutures removal and the wound is healed. Allow the dressing tape to come off naturally and there is no need to remove or change the tape.
4. Avoid excessive burden on the knee joint to reduce the risk of joint wear. For example: use a cart instead of hands to carry heavy items; use a handrail when going upstairs or downstairs.
5. Avoid the following activities after the surgery: squatting, running, mountain climbing, carrying heavy articles, going up- and downstairs, walking for long distances. Patients will, typically, resume their normal activities in six months later, including swimming and cycling.
6. Maintain knee and muscle exercises and increase the training intensity gradually. Follow the physician's advices about the limit s of weight bearing while using the ambulatory support.
7. A numbness sensation around the lateral side of the incision wound is a common and normal phenomenon after the operation.
8. The physician will offer further instructions and information in the subsequent outpatient appointments.

Suggested Exercises for Postoperative Rehabilitation

1. **Thigh Muscle (Quadriceps) Exercise**
Lie on your back and try to straighten the treated leg. Tighten the muscle on the top of your thigh and pressing the back of your knee down. Hold this for 5 seconds then rest. Repeat this for several times.
2. **Active Range of Motion of the Ankle**
Lie on your back with your leg straight and your knee toward the ceiling, move your ankle up and down, in and out, and in circles.
3. **Hip Adductor stretch**
Lie on your back and slightly spread your legs. Try to stretch the muscles on the inside of your thigh. Hold this for 5 seconds then relax. Repeat this for several times.
4. **Straight Leg Raises**
Lie on your back and try to tighten the muscles on the top of your thigh without bending your knee. Raise your leg 6~8 inches off the floor and hold this for 5 seconds. Slowly lower it back to the floor. Repeat 20 times.
5. **Supine Knee Flexion**
Lie on your back and raise your leg 6~8 inches off the floor. Slowly bend your knee and try to touch your buttock with your heel as possible. Return to the starting position and lower it back to the floor.