

# INFORMATION SHEET: TOTAL KNEE REVISION

## INTRODUCTION

In knee replacement revision surgery, the surgeon removes and replaces all or part of a previously inserted knee replacement. The surgery may also involve placement of bone graft to the bones, repair of bone or tissue about the knee, or removal of the artificial knee without replacement of new parts.

## INDICATIONS AND GOALS FOR SURGERY

Revision knee surgery is indicated for a number of reasons, including: pain; loosening of the artificial knee component(s) from the bone; instability of the knee (the knee or the knee cap “coming out of track” or “slipping”); stiffness; or infection. In other cases, the knee replacement may feel good, but the surgeon may recommend revision due to severe wearing of the artificial parts and/or loss of bone around the knee due to the wearing process.

Overall, the goal of knee revision surgery is to restore or maintain the pain-free function of the knee and restore or maintain the strength of the bones and tissue around the knee.

## DESCRIPTION OF THE SURGICAL PROCEDURE

During knee revision surgery, the Orthopedic Surgeon will make an incision near the knee to expose the knee. The bones and tissue about the knee will be carefully assessed. The surgeon will check to see if the knee replacement parts are firmly fixed into the bone (stability), check their positioning in the bone (alignment), and assess how the joint moves. One or more components of the artificial knee will be removed and replaced with new parts. Bone graft may be placed in bone and soft tissue (such as tendon and muscle) will be repaired as needed. Tissue and/or fluid from the knee may be tested to see if an infection is present. If these tests show that the knee is infected, or if the surgeon is highly concerned about infection, the surgeon may elect to remove the knee replacement and put a temporary “spacer” in its place instead of a new knee replacement. If this happens, the patient will likely need antibiotics for a number of weeks and will need to undergo additional surgery to have a new knee replacement put in place at a later date. The surgeon’s specific course of action will be determined at the time of surgery, based on evaluation of the joint.

## REHABILITATION

Rehabilitation will begin soon after surgery. The rehabilitation is often longer and more challenging when compared to the patient’s original knee replacement surgery. The patient will participate in physical therapy in the hospital with the goal of achieving safe transfers from the bed, short distance walking, and an early exercise program. The patient may be required to restrict the amount of weight put on the operated leg and/or may need to wear a brace to prevent excessive knee motion. After discharge, the patient will continue with physical therapy and a home exercise program focused on motion and strength of the knee. The patient’s motivation and willingness to participate

in the rehabilitation program are critical in determining their final strength and walking pattern.

### **POTENTIAL BENEFITS**

The primary benefit from knee replacement surgery is to reduce pain in the knee. As rehabilitation progresses, the patient should also note an improvement in the motion of the knee and in walking pattern.

### **POTENTIAL RISKS**

Total knee replacement surgery is considered a major surgical procedure. The overall risks related to knee revision surgery are higher than with a “first time” knee replacement due to longer surgical times, increased blood loss, and decreased strength of the bones and tissue about the knee. Serious medical risks associated with the surgery may include, and are not limited to, problems with anesthesia, heart attack, heart beat irregularities, and stroke. In very rare situations, a person may die related to complications of surgery. Other risks related to this orthopedic procedure include, but are not limited to: blood clots; pulmonary embolism; infection; instability (the knee “giving out”); knee stiffness; differences in leg length; angulation, rotation or fracture of bones; hematoma (blood accumulation in the knee) which may require surgical drainage; nerve injury; blood vessel injury; and numbness and scarring around the surgical incision. Blood loss can occur during or after the surgery which may require transfusion(s). The implants may need to be removed or replaced if they become loose, wear out, or if there is evidence of infection. Knee revision may not alleviate knee pain, restore the range of motion of the knee, or completely cure an infection.

### **ACHIEVING THE GOALS OF SURGERY**

The goals for knee revision surgery will vary according to the reason for the revision surgery. Upon full recover, most patients have less pain. Most patients are able to walk more smoothly, have more endurance with their new knee, and are able to function more normally. A small percentage of patients have persistent discomfort, stiffness, and/or limp after surgery. In cases of infection, a “cure” from infection is possible but varies according to the type of infection present, the patient’s general health and the complexity of the surgery itself.

### **ALTERNATIVES TO SURGERY**

Alternatives to knee revision surgery will depend on the patient’s individual situation. If the knee is not loose in the bone, conservative (non surgical) measures may help control knee pain. Conservative measures include the use of anti-inflammatory and/or pain medications, weight loss, use of a cane or other assistive device, and reduction in heavy and/or pounding activities. If the knee is loose or has changed position in the bone, if the knee or knee cap repeatedly slips out of place, or if parts of the knee replacement show signs of wear there are no non-surgical measures to correct the knee problem. If the patient chooses to delay surgery in these cases, the bone and the tissue around the knee may become more seriously damaged. Future revision surgery may become more difficult and the results of surgery poorer. In the case of infection,

revision surgery will be the only chance of curing the infection. In some situations, the alternative to knee revision surgery would be to seek no treatment at all.

### **CONSEQUENCES OF DECLINING CARE**

If the patient chooses not to undergo knee revision surgery, then it is likely that their knee problems will not improve and may progress. The bone and tissue around the knee replacement may become weakened or destroyed, making future revision knee surgery much more difficult or impossible. If there is an infection in the knee and the patient decides not to undergo knee revision surgery, the knee could become so badly infected that amputation of the leg may be required. An infection could also spread from the knee to the patient's blood stream and could result in death from infection.

### **MEMBERS OF THE SURGICAL TEAM**

The Orthopedic Surgeon will require the assistance of a team of experts during surgery. Physicians other than the Orthopedic Surgeon, including but not limited to Joint Reconstruction Fellows and/or Orthopedic Residents, or Physician Assistants will be performing important tasks related to surgery. These activities are in accordance with the hospital's policies and, in the case of the Residents, based on their skills set and under the supervision of the responsible Orthopedic Surgeon.

### **LONG TERM CONCERNS**

Long term complications are possible after knee revision surgery. Close follow-up is necessary to monitor for changes around the joint replacement which could threaten the strength of the bone near the joint replacement. The risk of problems related to wearing of the artificial joint surfaces increases over time. The risk of recurring infection is also possible. Regular follow-up (every one to two years) becomes more important as the joint replacement becomes older since the risk of problems related to wearing of the artificial joint surfaces increases over time.

### **PARTICIPATION IN CARE**

The patient's participation in his/her care is critical to the success of their knee revision surgery. The patient should provide accurate and complete information about their health and any change in condition after surgery. Patients are encouraged to follow the recommendations made for their care and to ask any questions they may have.