

# Partial Knee Replacement, Robotic-Arm Assisted Informed Consent



Side:  Right  Left

Patient's Name: \_\_\_\_\_

Surgeon: \_\_\_\_\_ Frederick F. Buechel, Jr. MD

Date: \_\_\_\_\_

Your doctor has recommended a partial knee replacement procedure for you. It is important to understand the goal of the surgery is to allow return to ordinary activities of daily living with reduced knee pain and increased function. Most patients enjoy a more active, less painful lifestyle than before surgery. However, this procedure may not restore you to the same level of function you had before the damage to the knee joint began. Some patients still have small areas of pain with activities after surgery even after complete healing at 12-18 months. Some can develop soft tissue conditions like tendonitis, bursitis, meniscus injury to remaining meniscus, ligament sprains, and muscle strains around the knee that are not related to the implant and need to be managed separately. In rare occurrences, further surgery may be required to address other painful areas or scar tissue. Significant pain requiring conversion to a total knee replacement is less than 1%. Patients who undergo joint replacement are at risk for certain known complications, as is the case with major surgical procedure. Complication rates following knee joint replacement are very low. The following list represents some of the rare but more serious complications that can occur from knee replacement surgery. Your doctor will take all the steps necessary to reduce the chance of any of these complications.

## Risks of Anesthesia

You will meet with the anesthesia team prior to your procedure and they will review the risks of undergoing anesthesia, and the types of anesthesia that can be selected for your procedure. General or Regional anesthesia are the options for the procedure and local blocks will be added by your surgeon in addition to the main anesthesia, to reduce post-operative pain. All procedures small and large, can be complicated by heart, lung, neurologic, and/or vascular complications including death, despite the best planning and most meticulous surgery. Every effort will be made to reduce the risk of any complications for your procedure.

## Lung Congestion / Pneumonia

To avoid pneumonia and lung complications it is important to cough and take deep breaths after surgery to expand the lungs. You should perform deep breathing exercises a few times an hour while awake after surgery to reduce your risk of pneumonia. While at home, you need to consciously take good slow deep breaths to expand your lungs fully.

## Bleeding/Bruising/Leg Swelling/Bursitis/Tendonitis

These findings can be the direct result of surgery and are not complications, but temporary effects of the nature of surgery. These findings are self-limiting if present and vary in amount from patient to patient. Some incisions will have bloody drainage in small amounts for a few days and should be monitored closely until this has stopped. Elevation of the operative leg to heart level for the first several weeks when not walking can reduce the swelling in your leg. The use of ice packs or cooling sleeves on the knee, isometric exercises, and lymph massage of the legs will also reduce swelling. In rare instances, needle aspiration of excess blood from the knee joint can be considered after surgery if necessary.

## Damage to the Blood Vessels

Some blood loss is expected after surgery. The amount associated with this technique does not commonly require blood donation or transfusion. In the unusual event of significant blood loss, your symptoms, medical conditions, and lab results would be evaluated to determine further treatment. Major blood vessel injury is extremely uncommon. In the event of such a situation, all appropriate treatments would be provided as would be medically necessary.

## Fracture

Bone fracture is a very rare complication of knee replacement which can result in additional surgery, bracing, protected weight bearing or revision surgery. The navigation pins in the femur and tibia can cause fracture with overly aggressive early activity after surgery before the bone heals in these holes.

**Heterotopic Bone Formation (HBF)**

This is bone growth that may occur beyond the normal edges of the bone after surgery that can cause pain or loss of motion. If HBF occurs, it may take up to 18 months to complete its process at which time decision on the need to treat can be discussed. If you have a known history of HBF and inform your surgeon, preventative measures can be taken. This is a rare condition in knee replacement surgery.

**Adhesions**

The healing process requires collagen fibers to connect and seal the incisions. Tissues can sometimes rapidly form new tissue connections and too much tissue called “adhesions” are formed causing loss of motion and pain. It is important to move your knee after surgery and perform your exercises each day to allow these new tissues to heal and stretch properly. If you develop painful tissue adhesions that limits motion significantly or causes sharp pains in certain locations when bending or walking, you may require further surgery to remove the scarring tissue which can be done arthroscopically.

**Nerve Injury**

A common side effect but not a complication of any knee skin incision is that the skin just to the side of the incision will become numb, tingly, more sensitive, or feel different after surgery. The area affected commonly shrinks in size and stabilizes by 12-24 months. Major nerve injury is very uncommon in knee replacement. A major nerve injury may cause the partial or complete loss of sensation and/or motor function to the lower extremity. This may be temporary in which the symptoms improve over time and go away completely or may be permanent.

**Loosening/Failure of the Prosthesis**

Greater than 9 out of 10 knee replacements survive greater than 15-20 years. However, over time the implants may wear down or loosen requiring replacement or revision surgery. In rare cases, the cement used to hold the implants can either de-bond from the implant or bone and loosen, requiring re-operation. Increased activity levels and high impact exercises like running and jumping can potentially cause implants to loosen, wear down faster becoming painful. It is important that you maintain your ideal body weight as the artificial replacement surface is more likely to wear down faster or loosen in people who are overweight, requiring revision surgery.

**Residual Pain**

Some patients may have residual pain despite having a well installed implant. Most of these pains can be resolved with proper rehabilitation and muscle maintenance. In the rare case that the symptoms cannot be reduced or eliminated with medications, injections, muscle or bone stimulators, braces, protected weight bearing or therapy, further surgery may be necessary. Revision total knee replacement may improve this condition but does not always eliminate all residual pain.

**Blood Clots**

Patients who have surgery on their lower extremities can form blood clots or “deep venous thrombosis (DVT)” in the leg. A blood clot can block or slow blood flow to the leg causing swelling and/or pain from the foot to the thigh. Blood clots can travel to the lung, called a pulmonary embolism (PE), causing shortness of breath, chest pain, rapid or irregular heart rate.

**Infection**

Infection is a rare but serious complication in total knee replacement. Short and long-term problems are associated with infections. Infections can occur in the superficial skin incision area or deep in the joint. Infections require treatment with oral and/or IV antibiotics and can require more surgery. Many steps are taken to reduce the chance of infection. Patients with a history of diabetes, chronic liver disease, obesity, corticosteroid use, and smoking are at a higher risk of infection after surgery and should alert their surgeon of any signs of infection immediately.

**Summary**

The patient below has read this information and has had the opportunity to discuss their surgery with their surgeon. He/she understands their knee diagnosis, the agreed to procedure, the risks, the benefits, alternatives to this surgery, and he/she agrees to proceed with this surgery.

Patient's Name: \_\_\_\_\_

Patient's Signature: \_\_\_\_\_

Surgeon's Name: Frederick F. Buechel, Jr. MD  
\_\_\_\_\_

Surgeon's Signature: \_\_\_\_\_

Witness Name: \_\_\_\_\_

Witness Signature: \_\_\_\_\_