

## **Introduction**

Severe arthritis in the knee can lead to serious pain and loss of motion. Health care providers may recommend surgery for people suffering from severe arthritis in the knee. Surgery can reduce pain and improve the patient's ability to walk.

If your health care provider recommends total or partial knee replacement surgery for you, the decision whether or not to have the surgery is yours. This reference summary will help you understand better the benefits and risks of this surgery.

## **Anatomy**

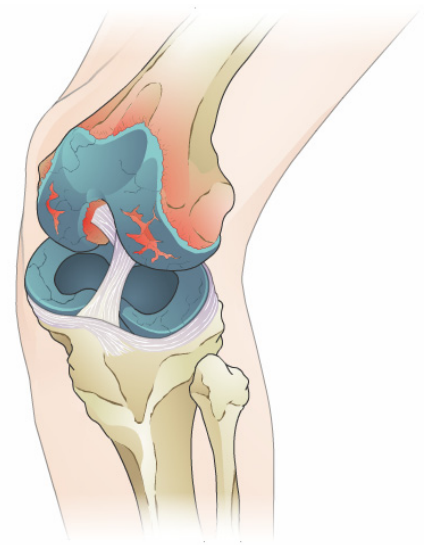
The knee joint joins the thigh to the lower leg. The first bone involved in the knee joint is the femur, or thigh bone. The second bone in the knee joint is the tibia, one of the lower leg bones. The other bone in the knee joint is the patella, also known as the kneecap. The patella is a floating bone that gives the knee its round shape.

The bones in the knee joint are covered by tissue called cartilage, or meniscus. The smooth surface of the meniscus allows for painless movement at the knee joint. Ligaments connect the bones and help stabilize the knee.

## **Symptoms and Their Causes**

Arthritis, or inflammation of the joint, causes the surfaces of the knee joint to become rough. This can result in severe pain and loss of motion.

Knee arthritis can result from arthritic conditions such as osteoarthritis. Osteoarthritis is chronic wear and tear of the joint. It may be caused by an old injury. The pain may make normal work and other activities, like walking, difficult.



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## Alternative Treatments

Physical therapy may help the joint stay as mobile as possible. Using a cane or walker may also help. For overweight patients, losing weight helps reduce the stress on the knee joint. Losing weight also increases the success of the knee replacement operation, if it is needed later.

A healthy diet and regular exercise can help you stay mobile. Ask your health care provider if you need to avoid high impact exercises like running.

If so, choose low impact exercises like swimming or bicycling instead. Weight training, resistance training and stretching should also be part of your exercise routine.

Using certain herbs and natural remedies, such as ginger and capsaicin, may also help ease pain and reduce inflammation. Oral medications such as aspirin and ibuprofen may help reduce pain and inflammation.

Hyaluronan is a natural substance found in the knee joints. It acts as a shock absorber and makes the joint more slippery. Injections of liquids that contain hyaluronan in the knee joint can help with some of the pain and make it easier to move. Injections of steroids in the knee joint may also reduce pain and inflammation.

## Surgical Treatment

The operation is done through an incision in the knee area. The parts of the femur and tibia are then cut and removed where they join each other. Artificial surfaces known as prostheses replace the removed bone.

Depending on the type of prosthesis, it may need to be cemented to the bone. Some prostheses do not need to be cemented. The bone surrounding the prosthesis grows into it and acts like cement. Knee replacements involve the whole joint or only part of it, the inner or outer part. At the end of the operation, the skin is closed. A drain may be used to remove excess fluid.



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## Risks and Complications

This operation is safe. There are, however, several possible risks and complications. These are unlikely, but they can happen.

You need to know about them just in case they happen. By being informed, you may be able to help your health care provider detect complications early.

The risks and complications include risks related to anesthesia, risks related to any type of surgery and risks specific to this surgery.

Anesthesia is safe. However, the older you are and the more medical problems you have, the higher the risks. You should make your anesthesiologist aware of any medical problems you have had in the past, such as heart attacks and lung problems.

Risks related to anesthesia include, but are not limited to:

- Blood clots in the legs.
- Heart attacks.
- Pneumonia.
- Strokes.

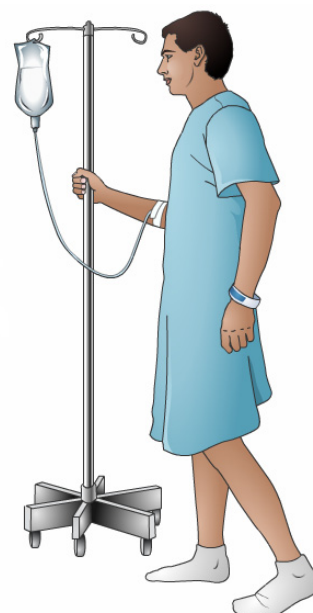
Your anesthesiologist will discuss these risks with you in greater detail.

Blood clots in the legs can happen. These usually show up a few days after surgery. They cause the leg to swell and hurt. These blood clots can become dislodged from the legs and go to the lungs, where they will cause shortness of breath, chest pain and possibly death. Sometimes the shortness of breath can happen without warning.

It is important to let your health care providers know if any of these symptoms happen. Getting out of bed shortly after surgery may help decrease the risk of blood clots in the legs.

Some of the risks are seen in any type of surgery. These include:

1. Infection, either deep in the tissue or in the skin. If the infection involves the prosthesis, the prosthesis may need to be removed. Infections are rare.
2. Bleeding, either during or after the operation. This may require a blood transfusion.



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3. A skin scar that may be painful or ugly.

Other risks and complications are related specifically to this surgery. These again are rare. But it is important to know about them.

Tissue in the knee area close to the surgery may be injured. But these injuries are rare. Arteries and veins going to the leg may be injured. Nerves going down to the leg may also be injured, causing leg weakness or reduced feeling in the leg.

The prosthesis may become loose or may separate from the bone. A difference in leg length may happen in rare cases. The knee may not move as well as a normal knee joint. It may feel stiff.

The pain may not be relieved by the operation. It may even be worse than before surgery. This is rare. In rare cases, the patient may have a potentially fatal allergic reaction to the cement used. The prosthesis may not work right. This is rare and may require another operation.

### **After the Surgery**

After the operation, depending on your specific condition and your surgeon's preference, your health care provider will recommend different physical therapy options.

Over time, you will be able to increase your activities as your physical therapist allows. You may resume most of your activities eventually as you gradually strengthen your thigh and leg muscles.

You may need the help of a cane or a walker at first to take the pressure off your new knee. Over time, you will more than likely be able to walk without any help.

A short stay at an extended care facility may be needed to improve the outcome of the surgery. If needed, social workers at the hospital will help you make plans for this.



### **Summary**

Arthritis, or inflammation of the joint, causes the surfaces of the knee joint to become rough. This can result in severe pain and loss of movement. The pain may make

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normal work and other activities, like walking, difficult.

Health care providers may recommend surgery for people suffering from severe arthritis in the knee. Surgery can reduce pain and improve the patient's ability to walk.

The operation is done through an incision in the knee area. Artificial surfaces known as prostheses replace part of the bone.

Knee replacement is a safe procedure. But complications could happen. You need to know about them just in case they happen.

The risks and complications include risks related to anesthesia, risks related to any type of surgery and risks specific to this surgery.

After the operation, depending on your specific condition and your surgeon's preference, your health care provider will recommend different physical therapy options.

Over time, you will be able to increase your activities as your physical therapist allows. You may resume most of your activities eventually as you gradually strengthen your thigh and leg muscles.



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