

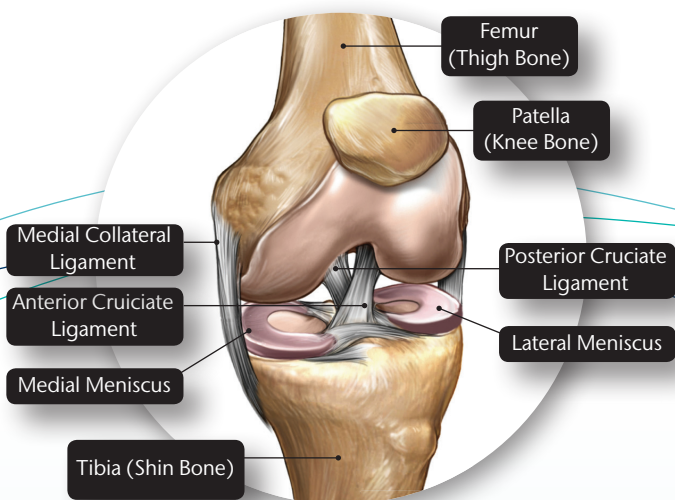


TOTAL KNEE REPLACEMENT SURGERY

FROM PREPARATION
TO RECOVERY

THE KNEE JOINT

The knee joint is formed by three bones with the support of ligaments and muscles. The large bone in your thigh is called the femur. On the opposing end is the tibia (shin bone). Along with the patella (knee cap), the knee joint is held together by several ligaments. These ligaments interact with the leg muscles to stabilize and control the motion of the knee, and protect it from damage. Between the weight-bearing surfaces of the knee, a layer of cartilage helps the bony surfaces of the knee move smoothly against one another.



Healthy Knee Function

The medial/lateral collateral ligaments (MCL/LCL) run parallel down the side of the knee, and provide stability side-to-side. The anterior cruciate ligament (ACL) and posterior cruciate ligament (PCL) cross in the center of the knee and provide stability front-to-back as the knee flexes and extends. The patellar tendon connects the patella to the muscles in the thigh and the tibia. The patella moves along the front of the knee joint, providing extra stability and protection.

The knee cannot function correctly if all the parts do not move smoothly. The cartilage interacts with two horse-shoe shaped shock absorbers called menisci. These shock absorbers are cartilaginous structures that cushion the knee from the stress of everyday activities. The combination of the menisci, the articular cartilage, and a small amount of fluid creates a nearly frictionless gliding surface. For the knee joint to function well, a person must also have healthy, flexible muscles, and the cartilage and ligaments must be smooth and strong. Problems occur when any of these parts are damaged or irritated.

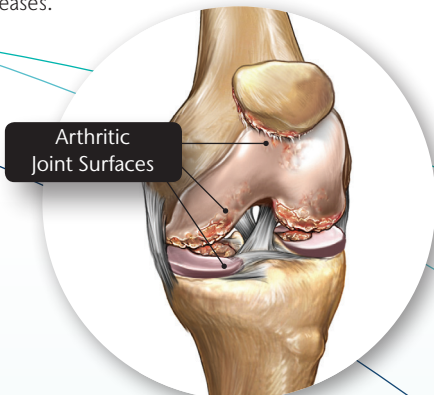
KNEE PAIN

Knee pain can be debilitating and may significantly affect your daily life style. There are many causes of chronic knee pain, but the most common cause is arthritis. Of more than 100 types of arthritis, two occur most frequently:

Osteoarthritis is characterized by the progressive wearing of the cartilage of the knee joint. As the protective cartilage is slowly worn away, the smooth gliding surfaces are worn down, resulting in bone-on-bone contact, producing pain and stiffness.

Rheumatoid arthritis is a systemic disease that may attack any of the joints in the body. This disease causes the body's immune system to attack its own joint capsules, progressively wearing down the protective cartilage and fluids. This can cause pain, swelling, joint damage and loss of mobility.

There is a genetic predisposition to arthritis, meaning the condition tends to run within families. In addition to arthritis, knee pain can also be due to trauma, cartilage damage, ligament injuries, bursitis, and other diseases.



Symptoms of Arthritis

- Pain with activities
- Limited range of motion
- Stiffness of the knee
- Swelling of the joint
- Tenderness along the joint
- Feeling the joint may “give out”
- Deformity of the joint (knock-knees or bow legs)

Treatment Options

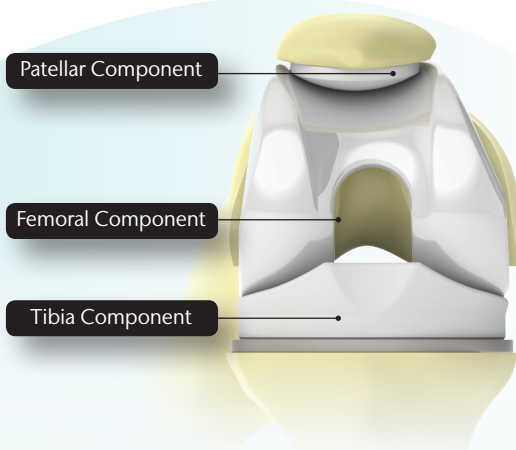
- Weight loss
- Activity modification
- Walking aids
- Physical therapy
- Anti-inflammatory medication
- Cortisone injections
- Knee arthroscopy
- Knee osteotomy
- Total knee replacement surgery
- Partial knee replacement surgery

TOTAL KNEE REPLACEMENT

Do Away with the Pain

Total knee replacement implants are designed to replace affected areas with components that re-create healthy knee joint mechanics. The main components of an artificial knee consist of the tibia component (shin bone), the femoral component (thigh bone), and the patellar component (knee cap). The tibia component is a two piece construct: a metal baseplate that is fit into the tibia, and a polyethylene (plastic) insert that locks onto the baseplate. The insert is shaped to create a smooth articulating surface for the femoral component. With each of these components working together, you should be able to move your knee joint without pain.

After examining your knee's damage, your physician will determine what procedure is necessary to get you back to a normal, active life.



Increased Motion

Although artificial knees may not function better than a healthy knee, the goal is to enable you to resume most everyday activities without pain. In some cases the knee replacement may allow you to return to active sports or heavy labor, under guidance of a physician.

Surgery

Your surgeon will make an incision over your knee, then will clear away any damaged bone and shape the surface of the bones to hold the prostheses. Each knee component is put into place and tested for proper fit, stability, and range of motion.

After your surgeon determines that the parts are the correct size and are properly aligned, he or she will implant the final total knee components. The surgery should take from 60 to 90 minutes. Your orthopedic surgeon will discuss the specifics of the surgery with you.

PREPARING FOR SURGERY

Once the decision is made to undergo total knee replacement surgery, you should maintain good physical health. Any strenuous or unusual activities should be cleared by your operating physician.

Blood Transfusions

For some, a blood transfusion is required after knee surgery. Many patients choose to do an autologous blood donation, where they donate pints of blood beforehand, to ensure they can receive their own blood. The first donation must be given within six weeks of the surgery date. The latest time period to donate is a week before the surgery. In order to donate, you must be in good health, free from cold, flu or infections.

Anesthesia

An anesthesiologist will begin the procedure by administering anesthesia. The most common types are general (you are put to sleep), or spinal, epidural, or regional nerve block (you are awake but the body is numb from the waist down). The anesthesia team, with your input, will determine which type of anesthesia is best for you.

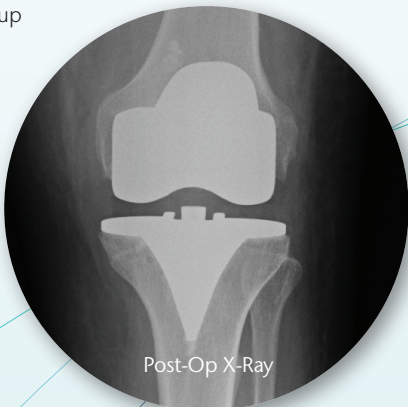
Medication and Diet

Be sure to discuss all medications you take, including over the counter medicine, with your physician. There are some medications that should not be taken with anesthesia. Common medications such as aspirin and ibuprofen act as blood thinners, which in most cases will be discontinued in the days leading up to surgery. The day before surgery, you should not eat or drink after midnight. On the day of the surgery, you may brush your teeth and use mouth wash, as long as you do not swallow the water.

Creating a Safe Environment

Since during the first couple of weeks after surgery your activity may be limited, you may want to rearrange items in their home so that they are more accessible.

Keep in mind that going up and down stairs will be difficult and rearranging furniture into more convenient locations may be a good idea prior to surgery. Your surgeon may provide some suggested guidelines for preparing your home.



RECOVERY

First Day Post Operation

While in the recovery room the nurses will closely observe your blood pressure, pulse, respiration, temperature, and circulation in the legs and feet. It is important that someone on staff be notified if numbness, pain or tingling is felt in the lower extremities. After surgery the operative site will be bandaged to absorb fluid and keep out bacteria. During this time, you will still be hooked up to an IV (intravenous tube) until you are able to take fluids well on your own. You may also have a sterile tube called a catheter inserted into your bladder to provide a clear urinary passageway.

Food Intake

Anesthesia is known to cause nausea and vomiting in some patients. If this is the case, you may be given some anti-nausea medication. Ice chips and clear liquids are recommended before moving to solid foods.

Physical Therapy

Physical therapy should begin within one to two days after surgery. Therapy is critical to get the knee joint fully functional, and to get you closer to the goal of relieving knee pain. To begin, the therapist will help you to walk on your new joint. Assistive devices such as a walker, crutches, or cane will be used. How much weight put on the knee is determined by your surgeon and physical therapy team.

Before you are released from the hospital, you should be given examples of exercises to be done at home, and also referred to a physical therapist who will help further the recovery process.

Possible Risks of Having a Total Knee Replacement Surgery

- Blood clots
- Urinary tract infection
- Excessive bleeding
- Weakened or stiff knee joint
- Damage to blood vessels, nerves or bones
- Breakage or loosening of knee replacement components
- Wound infection
- Infection of knee replacement early or later in life

Please consult your physician for a complete list of possible adverse effects.

FREQUENTLY ASKED QUESTIONS

Q: How do I know if I need a knee replacement?

A: People with daily knee pain that restricts regular activities, chronic stiffness of the knee, constant knee instability, or severe deformity are good candidates for a total knee replacement. As always, it is best to discuss possible treatments with your physician.

Q: What will a knee replacement enable me to do?

Within a few weeks to months, you should be able to move your knee freely and with limited to no pain. Increasing range of motion makes it possible to resume regular daily activities, including some sports and exercise.

Q: Will my recovery from knee replacement surgery be painful?

A: As with most surgeries there will be a considerable amounts of tenderness in the repaired area. Pain medication will be given to you during the hospital stay and the pain should decrease over several weeks.

Q: When can I resume regular activities after surgery?

A: You should be able to stand and walk with assistance within a few hours after surgery. Physical therapy will begin as soon as you feel ready, generally one to two days after surgery. The return to normal activities may take several months.



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