

Soft knee braces and shoe modifications can sometimes help. Pain relievers and anti-inflammatory medications are also recommended. Some dietary supplements might also help. A cane or walker can also be tried to assist with walking and to improve mobility.

Steroid injections directly into the knee can be used to decrease inflammation. A lubricant may be used to improve the function of the knee. These can offer some relief. They can be repeated from time to time if they help.

Surgical Treatment

Knee replacement is recommended for knee arthritis if nonsurgical treatments have failed and the pain is limiting lifestyle and activities. Surgical options include knee arthroscopy (although this is rarely used just for arthritis), partial knee replacement, and total knee replacement.

The goal of knee replacement is to provide a pain-free knee that allows relatively normal activities and lasts for a long time. To achieve these goals, it is important that the knee implants be inserted with proper positioning. The bones and ligaments are prepared very carefully to allow the knee to be functional and durable. Using the current techniques, 90% to 95% of knee replacements last 15 years or longer.

Minimally Invasive Knee Replacement

Minimally invasive knee replacement accomplishes everything that a traditional knee replacement does, but through a smaller incision (4- to 6-inch incision compared with an 8- to 10-inch incision). With the smaller incision come the potential benefits of a shorter hospital stay, shorter recovery, and a better looking scar.

Although there is no question that an artificial knee can be implanted through a smaller incision, doctors still don't know whether it can be done as well as with the traditional approach.

New techniques for opening the knee may be more important than the length of the incision. Some techniques are "quadriceps-sparing" because they protect the quadriceps tendon and muscle in the front of the thigh. Other techniques called "mid-vastus" and "sub-vastus" make small incisions in the muscle but are also less invasive.

Minimally Invasive Total Knee Replacement

Total knee replacement (knee arthroplasty) is a surgery that is performed for severe degenerative disease of the knee joint. More than 300,000 people undergo the procedure each year.

Minimally invasive total knee replacement involves the use of a smaller incision than the one used in traditional knee replacement. In the traditional method, the incision averages 8 to 10 inches in length. In minimally invasive knee surgery, the incision is only 4 to 6 inches long. Because there is less damage to the tissue around the knee, patients who undergo this procedure may expect a shorter hospital stay, a shorter recovery, and a better looking scar.

Arthritis and Knee Replacement

Knee replacement is the resurfacing of the worn out surfaces of the knee and replacing the lost cartilage and diseased bone with metal and plastic. Knees wear out for a variety of reasons, including inflammation from arthritis, injury, or simple wear and tear.

Arthritis can run in families. Most knee arthritis is due to a lifetime of wear and tear. Nobody knows why some people get severe arthritis, while others don't, or why arthritis can occur in one knee and not the other. Previous injury and obesity are some known causes of arthritis.

Symptoms

Knee arthritis leads to pain, which often happens with activity. The knee can also hurt at rest. Patients often find it difficult to climb or go down stairs, walk distances, or get up from low seats. Patients may also have swelling about the knee, stiffness, or a feeling of looseness.

Treatment Options

Nonsurgical Treatment

The first steps in treating knee arthritis are activity modification, regular exercise, and weight loss. The muscles around the knee protect it during activity. With every step, forces equal to several times a person's body weight are transmitted through the knee. Therefore, improved strength and decreased body weight can prolong the life of the knee.

Outcomes

Several early studies of minimally invasive knee replacement surgery have shown some benefits compared with traditional knee replacement, such as less blood loss, shorter hospital stay, and better motion. Other studies have shown a higher rate of complications with minimally invasive knee surgery, including poorer positioning of the knee implants.

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THE OPERATION

Total knee replacement is either performed under a **general anesthetic** where the patient is asleep during the procedure, or some form of **spinal anesthetic** (via an injection into the back) where the patient is conscious but sleepy and cannot feel anything at the knee.

There are several factors that determine the type of anesthetic that is used, but the patient's own preference will be taken into account whenever possible.

The Steps of the Operation Include:

- A tourniquet is usually applied around the thigh so that the surgeon works in a bloodless field.
- A 4-6 inch skin incision is made over the kneecap or along its inner side.
- Using specially designed instruments, the diseased bone-ends are removed. Precise cuts are made to accommodate the total knee replacement.
- The new artificial surfaces are then fitted to the bone ends. Cement may be used.
- The wound is closed with sutures or staples.
- A plastic drain may be left in the wound for a day or two to collect any oozing from the surgical wound.
- Depending on the preference of the surgeon, the knee may be wrapped in a splint or a strong supportive bandage immediately following surgery.

