

Total Knee Replacement

The first step when making the decision about knee replacement is to meet with your surgeon to see if you are a candidate for total knee replacement surgery. Your surgeon will take your medical history, perform a physical examination, and X-ray your knee. Even if the pain is significant, and the X-rays show advanced arthritis of the joint, **the first line of treatment is nearly always non-operative**. This includes weight loss if appropriate, an exercise regimen, medication, injections, or bracing. If the symptoms persist despite these measures, then you could consider surgery.

The decision to move forward with surgery is not always straight forward and usually involves a thoughtful conversation with yourself, your loved ones, and ultimately your surgeon. **The final decision rests on you** based on the pain and disability from the arthritis influencing your quality of life and daily activities. Those who decide to proceed with surgery commonly report that their symptoms keep them from participating in activities that are important to them like walking, taking stairs, working, sleeping, etc.), and that non-operative treatments have failed.

How long will it last?

A common reply to this question is that total joint replacement lasts 15-20 years. A more accurate way to think about longevity is via the annual failure rates. Most current data suggest that both hip and knee replacements have an annual failure rate between 0.5-1.0%. This means that if you have your total joint replaced today, **you have a 90-95% chance that your joint will last 10 years, and an 80-85% that it will last 20 years**. With improvements in technology, these numbers may improve.

What types of implants will I get?

The orthopaedic implant industry has developed a number of innovative technologies in an effort to improve the outcomes of total joint replacement surgery. In recent years, these technologies have been marketed directly to patients, which has increased the awareness as well as confusion on what these different designs mean. The most important message is that while a certain manufacturer may claim that their design is better, almost all of the available registry data (large collections of data that track total joint surgery outcomes) show that **there is no clear advantage to any of these designs when it comes to improving outcomes**. Here are specific implant design terms:

- **Gender specific:** This refers to a modified implant design that accounts for average anatomic differences between men's and women's knees. Most manufacturers have incorporated similar modifications in their newer designs, which allow for more sizing options so that the prosthesis can be more accurately fit to the patient's native anatomy and recreate the natural function of the knee.
- **Rotating platform:** This refers to a plastic bearing that independently rotates on a metal tray on which it is seated. More often, the plastic bearing locks into the metal tray – referred to as a “fixed bearing.” Some theoretical advantages to the rotating platform concept when it was initially designed was that it could reduce the wear of the plastic bearing, reduce the rate of loosening of the metal parts, and better replicate how a patient's knee works (kinematics). Most current data shows that after five to ten years in use, **there does not appear to be any difference** between rotating platform and fixed bearing designs in any of these outcomes.

Will my surgeon use a computer, robot, or custom cutting guide in my surgery?

There are many studies attempting to evaluate these emerging technologies and their influence on the success of surgeries. Each of these technologies has a specific goal that has fueled its development (i.e. more accuracy in implant placement, more efficient or faster surgery, etc.).

To date, there appears to be both pros and cons to each of these technologies without any clear advantages, but more research is required to determine what advantage, if any, these may offer.

Despite a substantial amount of direct-to-consumer marketing, **the best approach is to discuss this topic with your surgeon**. You may want to know if they use one of these technologies, why they have chosen to do so, and what their experience has been in using it.

Is knee surgery and recovery very painful?

Pain following total knee replacement has come a long way over the last 10-15 years with increased use of regional nerve blocks, spinal blocks, and various other modalities used for pain control. Total hip replacement is generally considered to be less painful than total knee replacement. Early range of motion and rapid rehabilitation protocols are also designed to reduce early stiffness and pain, making the procedure in general much less painful than in years past. You may have relatively mild pain following the procedure, or you may have a more difficult time than others. Everyone is unique and handles and perceives pain differently.

What is minimally invasive surgery?

Minimally invasive surgery is a term that describes a combination of reducing the incision length and lessening tissue disruption beneath the incision. This includes cutting less muscle and detaching less tendon from bone. There have also been advancements in anesthesia and pain management during and after total knee replacement surgery. All of these practices allow you to feel better, have less pain, and regain function faster than in the recent past.

How big will my scar be?

The size of the incision can vary and depends on several factors that include the size of the patient, the complexity of the surgery, and surgeon preference. Most studies have shown that **smaller incisions offer no improvement in pain or recovery** and may actually worsen the surgeon's ability to adequately perform the procedure.

Will I need general anesthesia?

While general anesthesia is a safe option, both hip and knee replacements can be performed under regional anesthesia. Choices for regional anesthesia include spinal anesthesia, epidural anesthesia, or one of a variety of peripheral nerve blocks. Many surgeons and anesthesiologists prefer regional anesthesia because data shows it can reduce complications and improve your recovery experience with less pain, less nausea and less narcotic medicine required.

Recently, peripheral nerve blocks have become more popular as an adjunct for pain control. For total knee replacement this can include an adductor canal block, which allows pain control without causing weakness of your muscles. You should have a discussion regarding anesthesia and post-operative pain management with your surgeon and anesthesia team prior to your surgery.

How long will I stay in the hospital?

You will likely stay in the hospital for **one to three days** depending on your rehabilitation protocol and how fast you progress with physical therapy. This is highly dependent upon your condition before surgery, your age, and medical problems which can influence your rehabilitation. A safe discharge plan will be arranged for you by the orthopaedic team.

How long does it take to recover?

It can take up to three months for you to return to most activities, and likely six months to one year to fully recover to maximal strength and endurance following total knee replacement surgery. This depends on your condition before surgery, additional medical problems, and your expectations.

When can I shower?

Many surgeons use waterproof dressings that allow for showering as early as the day after surgery. If your surgeon uses a standard dressing, you won't be allowed to shower for five to seven days, and usually no soaking for three to four weeks to allow the incision to fully heal.

When can I walk after surgery?

Most surgeons and hospitals today emphasize getting you out of bed quickly. Most people are walking with the assistance of a walker on the day after surgery and using a cane or nothing at all by two to three weeks.

When can I drive?

Most surgeons allow patients to drive at **four to six weeks after surgery**, and sometimes sooner if the operative leg is the left leg. There is some literature that states that your reaction time will not be back to normal prior to six weeks. **You should not drive while on narcotics** and should discuss returning to driving with your surgeon.

When can I return to work?

Returning to work is highly dependent on your general health, activity level and demands of your job. If you have a sedentary job, such as computer work, you can expect to return to work in four to six weeks. If you have a more demanding job that requires lifting, walking, or travel, you may need up to three months for full recovery.

What restrictions will I have after surgery?

Restrictions following total knee replacement surgery are generally few and should be discussed with your surgeon. After surgery, you will have some difficulty **kneeling** on the operative knee, which you will become less aware of with time, but will always have a general perception that the knee is artificial and doesn't really feel like a normal knee.

Most people are able to return to **usual activities and work** but may have some difficulty performing **heavy labor such as construction or farming**. Most sporting activities are fine with the exception of **running or jumping**.

Traveling should not be affected by a joint replacement after the first four to six weeks when most surgeons advise against prolonged seated travel or flying due to increased risk of blood clot.

Will I need physical therapy, and if so, for how long?

Most people who have had a total knee replacement require outpatient physical therapy following surgery. A skilled therapist can accelerate the rehabilitation as well as make the process more efficient with the use of dedicated machines and therapeutic modalities. Depending on your condition before surgery, physical therapy is beneficial for up to three months and rarely longer. The amount of therapy needed depends upon your condition before surgery, motivation, and general health.

Are there complications to total knee replacement surgery?

- Total knee replacement surgery is primarily a pain-relieving procedure; however, it may not relieve all pain, and there is a possibility of residual stiffness and swelling.
- Although complications are relatively rare (1-2% of patients), patients may experience a complication in the postoperative period. These include very serious and possibly life-threatening complications such as heart attack, stroke, pulmonary embolism and kidney failure.

- Stiffness or loss of motion can also occur.
- Infection (1%) is one of the most debilitating complications and often requires prolonged antibiotics with several additional surgeries to rid the infection.
- A blood clot in the leg is also a relatively common complication requiring some type of blood thinner following surgery to reduce the incidence.
- The implants can also fail over time due to wear or loosening of the components, but this generally occurs many years after surgery.

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