

# A Patient's Guide to Total Knee Arthroplasty

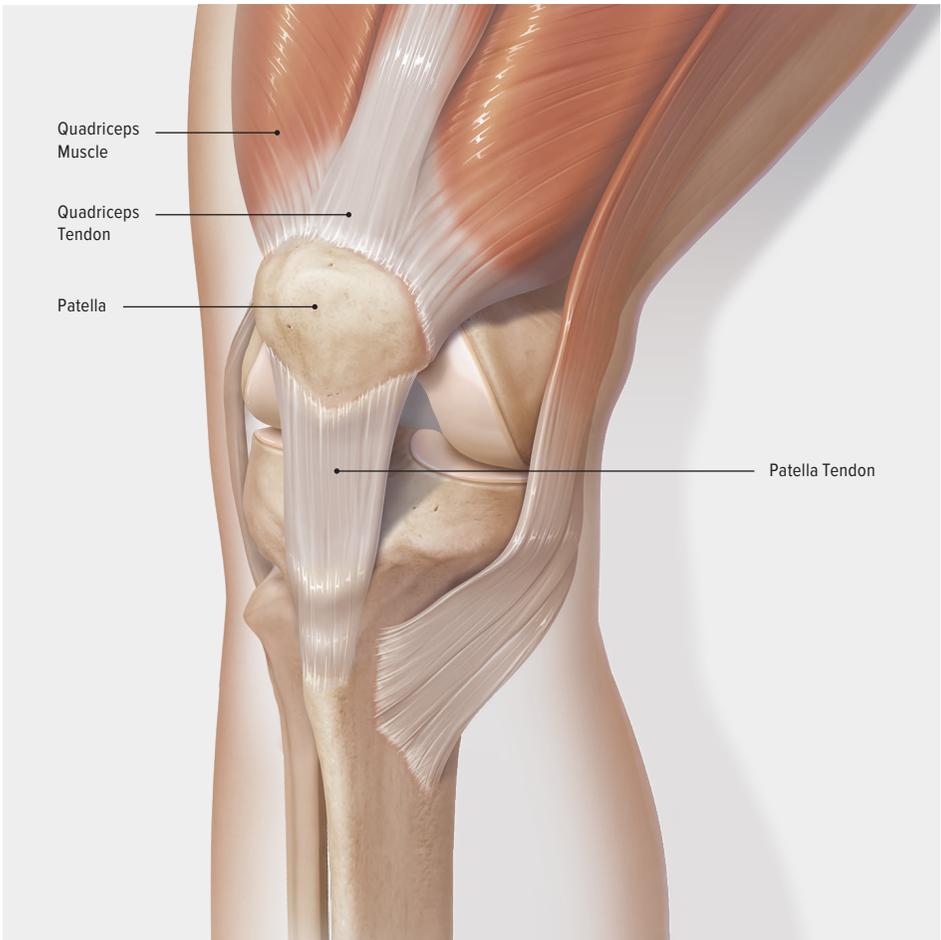


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## Introduction

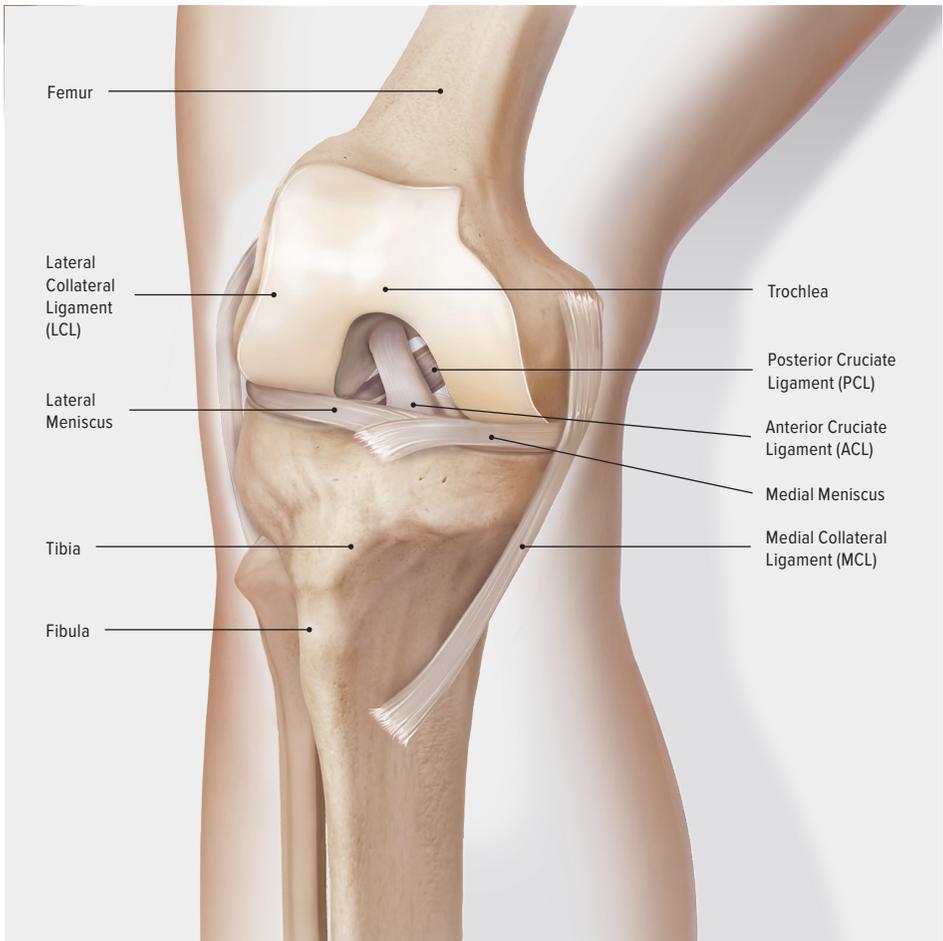
The normal knee joint consists of the femur, patella, and tibia bones, all of which are held together securely with soft-tissue structures including ligaments and tendons. The bones are separated by shock-absorbing cartilage and lubricating synovial fluid. These structures move naturally through an arcing, hinge-like range of motion during daily activity.

The knee can be divided into 3 main compartments or areas: the medial or inner compartment, the lateral or outer compartment, and the patellofemoral compartment under the kneecap.



When the cartilage structures of the knee wear out, the underlying bone surfaces are exposed and rub against each other, leading to swelling and pain with activities of daily living. This condition is commonly known as osteoarthritis (OA). OA is often referred to as degenerative arthritis or wear-and-tear arthritis because of the degenerative nature of the disease process.

**Although there are many types of arthritis can affect the joints, including rheumatoid, septic, and psoriatic, the focus of this educational guide will be OA.**



## Osteoarthritis

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### What Is OA?

OA is a disease process that affects your joints. It can start with an injury, poor alignment of an extremity, or simply from everyday wear. There is also a genetic component to developing arthritis, which is seen among family members. When OA begins, a series of events takes place that start to degrade the cartilage, bone surfaces, and soft-tissue structures. Eventually, the degenerative nature of this joint disease causes the breakdown and loss of the cartilage serving as a cushion between the bones that make up the joint. Bone spurs around the joint can form, and the joint can stiffen as the soft-tissue structures become thickened and inflamed.

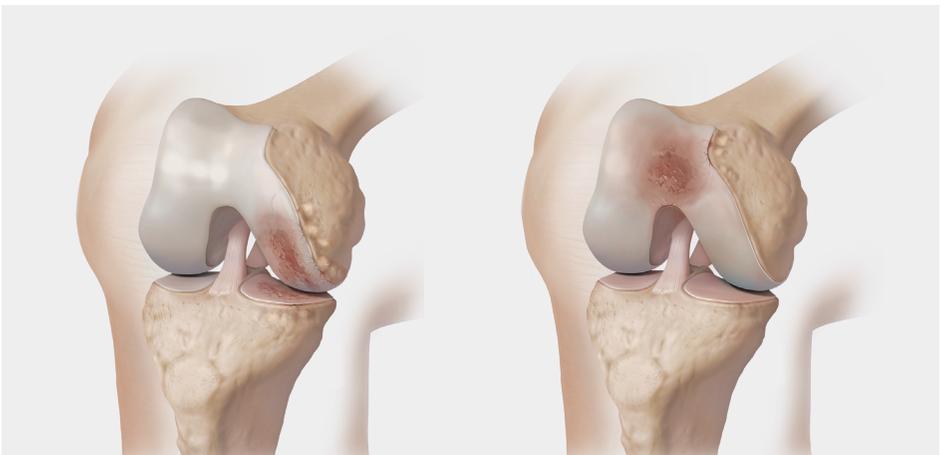
The symptoms of OA can include any combination of pain, joint stiffness, swelling, tenderness to touch, and even a grinding sound when moving the

joint. In some people, OA can become debilitating in severity.

OA affects more than 50% of the population older than 65 years of age. By the age of 75 years, nearly everyone has some form of OA in 1 or more of their joints, often including the weight-bearing hip and knee joints. Over the age of 55 years, women are more prominently affected by OA than men.

### How Is OA Diagnosed?

Only your doctor can properly diagnose you with OA. In order to make the correct diagnosis, your doctor will perform a physical exam, consider your symptoms and medical history, and order 1 or more diagnostic tests. These tests could include but are not limited to bloodwork, x-rays, a CT scan, or an MRI to get a clear picture of the painful joint.



Early stage OA of the medial and patellofemoral compartments

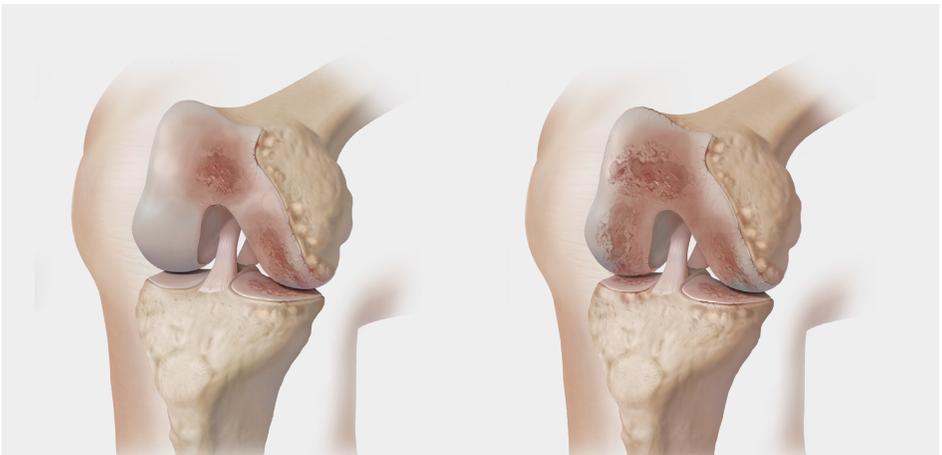
### How Is OA Treated?

Only your doctor can treat your OA, and they will recommend different treatment paths after the severity of your OA is identified. The treatment options will be presented to you according to your medical history, OA severity, and the level of your disability. These treatment options can range from conservative options to surgery.

Conservatively, your doctor will offer you treatment options that could include home-based therapy such as weight-loss options, nutritional supplements, and mild to moderate exercise. If these options don't improve your OA, your doctor may prescribe physical therapy, which may help increase your mobility and provide pain relief through a guided exercise program and other techniques. If your doctor feels that you need additional pain relief, they may prescribe an over-the-counter or prescription-strength anti-inflammatory medication and cold therapy to help reduce the

inflammation and pain associated with OA. If warranted, your doctor may also offer you a localized therapeutic joint injection to help further reduce the inflammation. Joint lubrication injections may also be considered. Additional supportive measures that may be prescribed by your doctor to aid in walking and standing include a cane or walker to take the pressure off of your affected joint(s).

If conservative measures to control your pain, inflammation, and disability are not effective, your doctor may discuss surgical options tailored specifically to your OA location, severity, and overall medical condition. These options range from removal of small amounts of inflamed or diseased tissue by arthroscopic debridement to arthroplasty, which involves replacing or resurfacing the diseased surfaces of the joint. Please consult your doctor to determine the best treatment option for your condition.



Mid and Late Stage OA

## Arthroplasty: Knee Replacement Surgery

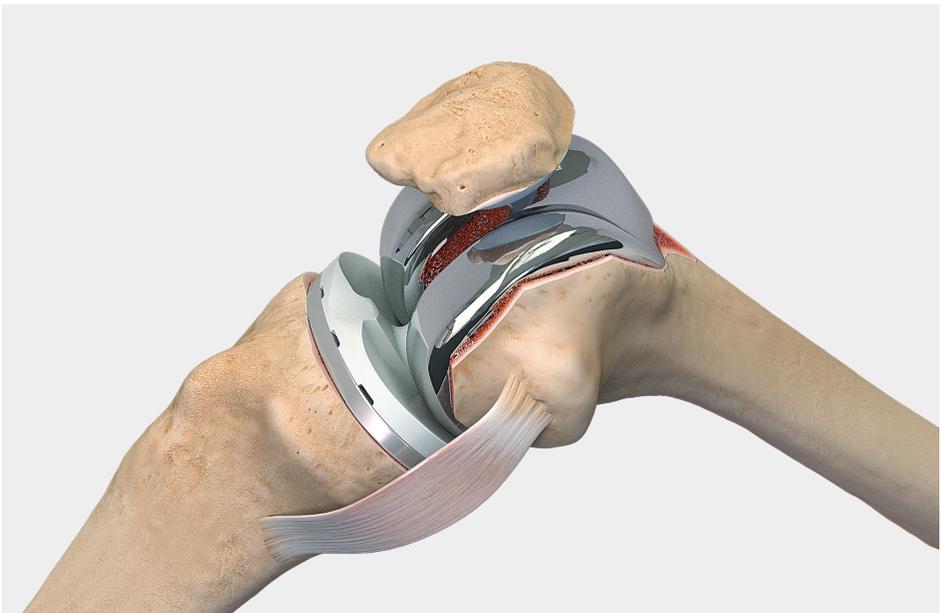
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If conservative treatment for your knee OA fails and you continue to experience pain and reduced quality of life, your doctor may recommend knee replacement surgery. Annually, 800,000<sup>1,2</sup> people in the US undergo knee replacement surgery, and it has been performed for approximately 50 years.

Knee replacement surgery can include either partial knee resurfacing or total knee replacement. Total knee replacement surgery is the most common surgical procedure performed for knee OA affecting all 3 compartments of the knee. In this procedure, all 3 compartments of the knee are replaced or resurfaced.

Total knee replacement is not always optimal for younger patients with early- to mid-stage arthritis in only 1 or 2 compartments of the knee. Partial knee replacement involves resurfacing only a portion of the knee. Your doctor will determine which procedure is right for you using your physical examination, x-rays, age, health, and activity level.

Knee replacement and resurfacing surgery requires a surgical incision near the knee. Your doctor uses this portal to remove the bone, cartilage, and soft tissue with OA and replace them with an artificial joint or prosthesis made from very smooth, high-grade metal alloys and advanced plastic components. In many



iBalance® Total Knee Arthroplasty (TKA)

ways, your new knee prosthesis moves like a normal knee joint. It is important to understand, however, that an artificial knee may not work as well as your original knee did before you developed arthritis.

Because patient conditions can affect results and outcomes, your surgeon should give you detailed instructions on the use and limitations of your artificial joint. Prior to surgery, your physician should carefully assess your activity level since increased activity and weight can lead to accelerated wear of certain device components. Performing activities that increase stresses on implants, such as running, lifting, skiing, etc. can cause faster wear or early failure of these implants.

Your surgeon will discuss the following information with you:

- Information about the surgical procedure
- Surgical risks
- Preparation for surgery
- What to bring to the surgical facility
- Discharge planning
- Home preparation for after surgery
- Postoperative management/ rehabilitation

Your doctor's office will provide you with the information to schedule the required tests. These usually include:

- Blood tests
- Urinalysis
- EKG and chest x-ray
- History and physical from an internist

### **How Should I Prepare for Knee Replacement Surgery?**

Most knee replacement surgical procedures are performed in a hospital setting and require a patient to stay for a few days to recover before being discharged home. There is a growing trend, especially in younger and healthy patients, of same-day or outpatient joint replacement. Your surgeon may or may not choose to perform this procedure at a hospital depending on your overall health status and/or facility availability. More and more patients are electing to go home directly after surgery without staying in the hospital overnight. Your surgeon can determine whether you are healthy enough for this treatment option.

During your preoperative appointment, your surgeon will provide preoperative instructions, and you may ask questions or raise concerns. Every hospital or surgical institution has their own particular checklists, procedures, and basic routines. These may include but are not limited to:

- Preadmission checklists
- Hospital checklists
- What to expect on the day of surgery
- What to expect before being discharged from the hospital (if applicable)
- What to expect at home (eg, home health care, physical therapy, wound care)

These checklists and expected routines will be provided by your doctor and their staff, your internist, your anesthesiologist, and the facility where the surgical procedure will be performed. You will most likely be assigned a liaison at your doctor's office(s) who you can call anytime during this process for answers to your questions. Your doctor will coordinate all of your preoperative and postoperative visits prior to scheduling and thoroughly explain all of the risks and benefits of total knee replacement surgery.

## Preparing for Your Surgery

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Typically, you will be admitted to the outpatient surgery center or hospital on the morning of your surgery. This is called a same-day admission. Insurance companies generally do not allow admission to the surgical facility the day before your procedure. Patients are asked to arrive at least 1 to 2 hours before the actual time of the surgery. Please make every effort possible to arrive on time as a starting time for your surgery has been reserved.

You may be able to go home the day of surgery, although some patients benefit from 1 or even 2 nights in the facility. Typically, patients do not require an extended-care facility. With your help, your surgeon will make every effort possible to anticipate your needs and provide you with the appropriate support services.

## What to Expect After Your Surgery

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### Recovery Room

After your surgery, you will be placed on a hospital bed and taken to the postanesthesia care unit (PACU/ recovery room). Your vital signs (heart rate, blood pressure, temperature, and breathing), IV, wound dressing, and level of comfort will be checked frequently. The anesthesiologist and your surgeon will continue to oversee your care in the recovery room. You may receive medications to decrease postoperative discomfort. When you leave the recovery room, you will be asked to move your toes and ankle to test the motor function of your leg. The circulation and sensation of your leg will also be checked frequently. Your leg may be in a brace after the procedure.

Once you are awake and your vital signs are stable, you will be discharged from the recovery room and brought to a recovery suite. Most patients spend 1 to 2 hours in the recovery room for close observation after surgery. Your family members should be aware that after they leave you to go into the OR, it may take a number of hours before they are contacted by your surgeon to discuss the results of your surgery.

**Please be aware that surgery and recovery protocol may vary and any questions pertaining to the surgical procedure or postoperative protocol should be discussed with your surgeon.**



## Preparing For Home

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### Home Health Care

You and your surgeon will discuss whether you need home health care. It is important that your surgeon understands your level of independence, your general health status, and how much help you have at home. Many patients can get assistance from other family members, which will help ease the transition upon their return back home. Patients who live alone and do not have available transportation are more likely to be candidates for home care. Not all insurance companies allow for home health care or home physical therapy.

Prior to surgery, it is important that you understand the availability of these services and whether your insurance company will pay for this care. If your surgeon decides that you are an appropriate candidate for home care, a nurse and a physical therapist will come to your home to assist you. Home health care will be coordinated with the assistance of the facility discharge planner and the home health care service while you are in the hospital.

### Outpatient Physical Therapy

Eventually, you will attend outpatient therapy or continue your exercise program at home on your own. You will be given a prescription for physical therapy when you leave the hospital or during an initial post-op visit.

To receive supervised physical therapy outside your home, you must be able to travel to a facility that offers these services. It is recommended that you avoid driving for the first 2 to 3 weeks following your surgery or otherwise directed by your physician. Outpatient physical therapy centers may be located within a hospital setting or may be a free standing clinic. Your surgeon and staff will make every effort to recommend an appropriate facility that is within a reasonable distance from your home or one that provides transportation.

You will be expected to attend supervised therapy sessions 2 to 3 times a week. Eventually, you will learn your exercise program and be able to continue with your exercises at home without supervision. Please consult your physician for instructions regarding physical therapy.

Surgeon's name \_\_\_\_\_

Surgeon's telephone number \_\_\_\_\_

Hospital \_\_\_\_\_

Date/time of surgery \_\_\_\_\_

## References

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1. American College of Rheumatology. Joint replacement surgery. Accessed October 27, 2023. <https://rheumatology.org/patients/joint-replacement-surgery>
2. Personalized Orthopedics of the Palm Beaches. Knee replacement surgery statistics you should know. Accessed October 27, 2023. <https://www.popb.md/2021/11/19/knee-replacement-surgery-statistics-you-should-know/>

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