Total Knee Replacement

Advancing: **Life**

advita ORTHO

UNDERSTANDING

Total Knee Replacement

Knee pain can significantly impact your daily activities. Having a total knee replacement is one solution that your physician may discuss with you to help get you back to a normal, active life. Although the reasons to have a total knee replacement vary from person to person, the goal is the same – to get you back to what you love!

Total knee replacement, also called total knee arthroplasty (TKA), is a very common surgical procedure. Today, more than half a million knee replacement procedures are performed every year in the United States alone.[1]

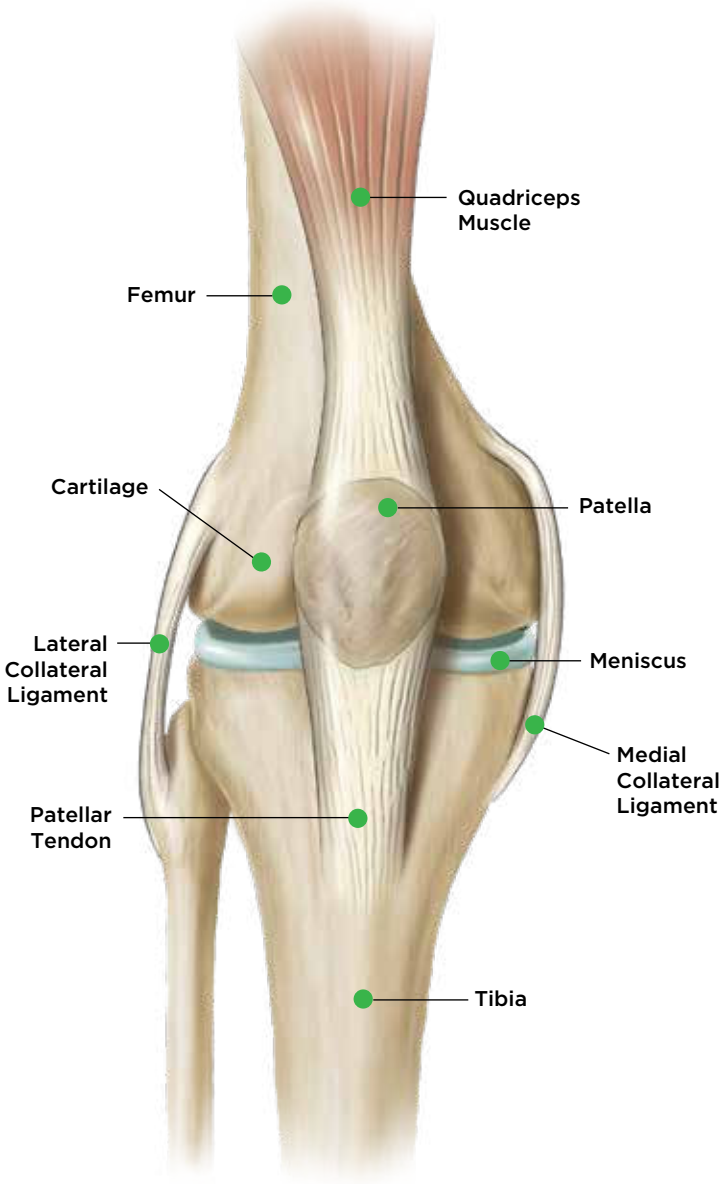
WHAT IS

Total Knee Replacement?

Total knee replacement is often the recommended surgical operation for patients experiencing pain from arthritis in the knee joint.

Over time, different forms of arthritis can lead to cartilage wear or degeneration within the knee. People with severe degenerative joint disease may experience pain and be unable to do normal activities that involve bending at the knee, such as walking or climbing stairs. The knee may swell or give way because the joint is not stable. Your doctor may determine that a total knee replacement procedure is the best treatment option for you.

In this procedure, your surgeon will remove the damaged portion of the femur (or thigh bone), the tibia (or shin bone), and the patella (or knee cap), replacing them with metal and/or plastic components that will replicate the knee's natural movement and function.


Quadriceps Muscle
Femur
Cartilage
Patella
Lateral Collateral Ligament
Meniscus
Medial Collateral Ligament
Patellar Tendon
Tibia

DIFFERENCE

Through Design

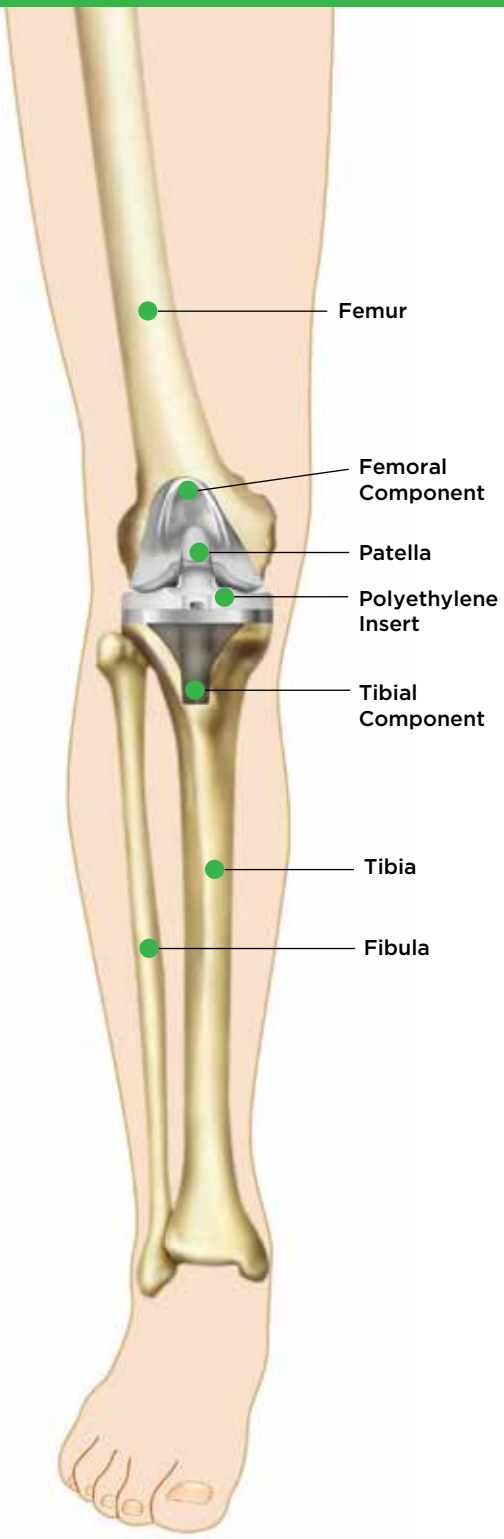
Just like your natural knee, the components of a knee implant are subject to wear caused by bending, straightening and supporting weight. The shape of knee implant components—particularly the parts that slide against each other—is very important to ensure the least possible amount of wear.[2]

One part of a knee system that is subject to wear is the place where the femoral and tibial components meet – the polyethylene (or plastic) tibial insert. When weight is placed unevenly, as often happens with normal activities of daily living, a high level of pressure may be exerted on the edge of the joint. This can lead to pain and discomfort.

The unique shape of the Advita knees' femoral and tibial components are designed to distribute weight and pressure evenly across the area where the components meet, even when weight is concentrated on one side of the knee.[3]

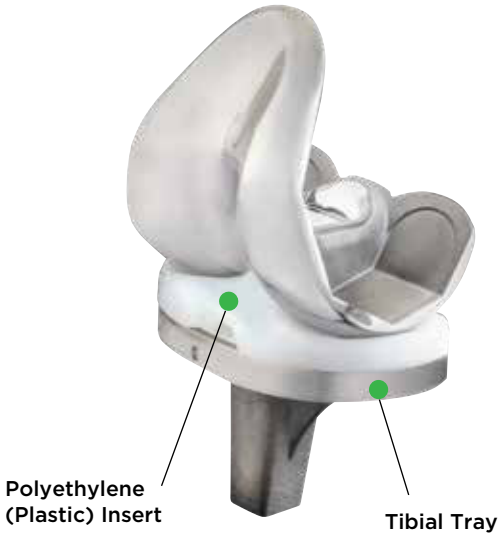
Another key factor in the way a knee implant performs is the way the knee cap (patella) moves when you bend your knee. From the earliest knee designs, surgeons have struggled to recreate the correct patella tracking and limb alignment to ensure you have a comfortable, natural feel and function.

Advita knee systems feature a wide femoral groove that is designed to allow the kneecap to track naturally (to either the inside or the outside) during normal bending and straightening of the leg. This patented tracking feature is designed to reduce potential pain or stress on the surrounding ligaments and muscles.


Femur
Femoral Component
Patella
Polyethylene Insert
Tibial Component
Tibia
Fibula

Molded for You

Critical to the knee replacement implant is the polyethylene, or plastic, insert that fits into the tibial tray. The purpose of this insert is to allow the femoral component to slide easily while bending the leg.



Whether it's dancing, golfing or relaxing on the beach, the Advita Knee is here to help you get back to what you love with a goal of reduced pain and increased mobility.

WHY THE ADVITA KNEE

May Be Right for You

Your surgeon will consider a number of variables when selecting the knee implant that's right for you. Your age, height, weight, lifestyle and your general health are among the most important factors.

Sure, there are plenty of choices out there and new knee systems are being introduced every day. But there's nothing like the confidence that comes from the test of time. With Advita's knee systems, you have the best of both worlds—a proven design foundation, enhanced by today's most modern surgical technologies.

References: **1.** American Academy of Orthopedic Surgeons. OrthoInfo website. Total Knee Replacement. https://orthoinfo.aaos.org/en/treatment/total-knee-replacement/ **2. Furman, B.D., Bhattacharyya, S., Li, S.** A Comparison of Degradation of UHMWPE for Shelf Aged and Implanted UHMWPE Components. Trans. 27th Ann. Meeting Soc. Biomaterials, 459, 2001. **3. Cottrell JM, Townsend E, Lipman J, Sculco TP, Wright TM**. Bearing surface design changes affect contact patterns in total knee arthroplasty. Clin Orthop Relat Res. 2007 November; 464:127-31.

At Advita Ortho, we don't innovate for innovation's sake. We innovate to enhance human life. Our intelligent orthopedic solutions help people live healthier, more active lives — allowing them to regain their mobility and their freedom. By utilizing new technologies in revolutionary ways, dreaming up game-changing solutions and empowering surgeons to achieve greater success, we are working to restore function and reignite possibility. Because to us, orthopedics is about more than advancing technology. It's about advancing life itself.

patients.advita.com

advita ORTHO