

# TOTAL KNEE REPLACEMENT





## Knee Pain

When debilitating pain, accompanied by stiffness, swelling and limited motion in your knee keep you from your daily activities, it may be time to consider total knee replacement. Total knee replacements have been used to treat joint disease since the 1970s, and in 2019, more than 900,000 total knee replacements were performed in the United States.<sup>1</sup>

The most frequent cause of discomfort and chronic knee pain is arthritis, which is the leading cause of disability in the United States.

In fact, it's estimated that 1 in 4 people in the United States has arthritis, and 75% are under the age of 65.<sup>2</sup>

Of the more than 100 types of arthritis, the following three are the most common causes of joint damage:

**Osteoarthritis** is a disease which involves the wearing away of the normal smooth joint surfaces. This results in bone-on-bone contact, producing pain and stiffness.

**Rheumatoid arthritis** is an autoimmune disease (auto means self). With rheumatoid arthritis, the body's immune system produces a chemical that attacks and destroys the synovial lining covering the joint capsule, the protective cartilage and the joint surface, causing pain, swelling, joint damage and loss of mobility. It affects women more often than men and can strike young and old alike.

**Trauma-related arthritis**, which results when the joint is injured, is the third most common form of arthritis. It also causes joint damage, pain and loss of mobility.

## DePuy Synthes

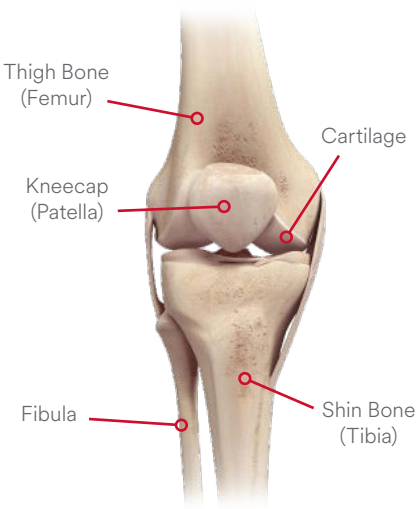
DePuy Synthes is a leader in knee replacement with over 40 years of experience in developing innovative knee replacements for patients.

## The Potential Benefits of Knee Replacement Surgery

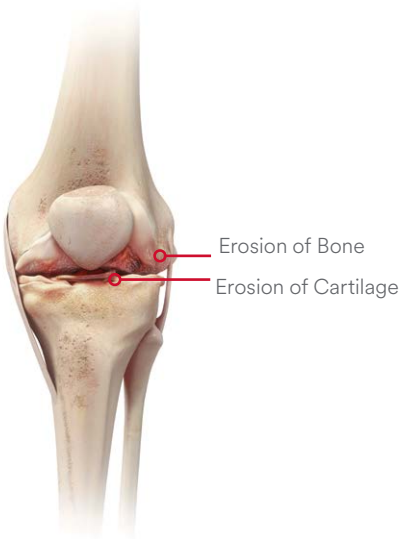
- Relieve pain
- Improve mobility
- Provide more freedom to pursue everyday activities, such as walking or climbing stairs

# Knee Anatomy

The knee is the largest joint in the body. It is commonly referred to as a “hinge” joint because it allows the knee to flex and extend. While hinges can only bend and straighten, the knee has the additional ability to rotate (turn) and translate (glide).



## Healthy Knee



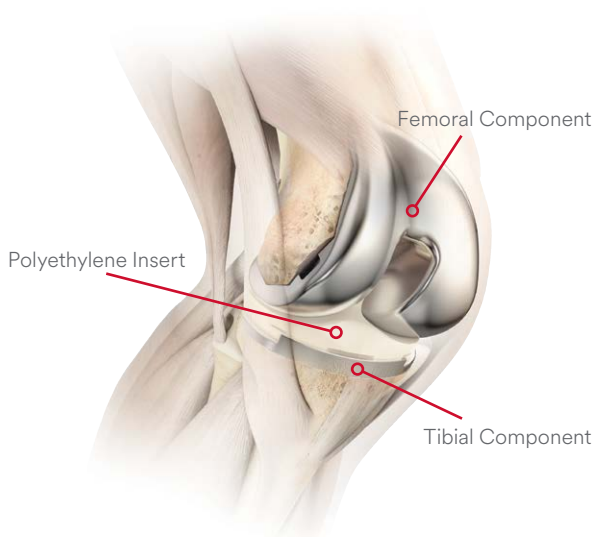
## Arthritic Knee

The knee joint is formed by the shin bone (tibia), the thigh bone (femur) and the kneecap (patella). The joint is embedded with synovial liquid to lubricate the joint. The end of each bone is covered with a layer of cartilage, which cushions and protects the bone while allowing smooth movement. If damaged, the cartilage cannot repair itself.

## Knee Replacement

When medications, physical therapy and other conservative methods of treatment no longer relieve pain, total knee replacement surgery may be considered. Knee replacement surgery removes the damaged bone and cartilage, and replaces those areas with metal and plastic implants.

This can be an effective option to relieve pain, improve mobility and help people return to doing the activities they love.<sup>3</sup>



## Knee Replacement Components

# The Potential Benefits of Your DePuy Synthes Knee Replacement

## **A design intended to help preserve your knee's natural movement**

The DePuy Synthes knee has been designed to act much like a natural knee as well as increase the stability of your knee replacement.

## **A close match to your unique anatomy**

Each person's knees are unique. To provide the best fit for your knee, your surgeon will choose from a number of implant sizes and components. Your knee implant will weigh approximately one pound.

## Things to Consider

- Can knee replacement help provide relief from pain and stiffness?
- Is age a factor in knee replacement?
- Am I a suitable candidate for knee replacement?
- What are the benefits and risks of knee replacement surgery?
- How long does it take to recover and rehabilitate from knee replacement surgery?
- What is my role in recovery and rehabilitation?
- Ask your surgeon to explain the advanced technologies available for knee replacement surgery.

## Preparing for Surgery

To prepare for surgery you may need to:

- Compile a list of your medications and dosages for the surgeon

- Inform the surgeon of any aspirin or other over-the-counter medication you may be taking
- Prepare your home for your return from the hospital

## Post Surgery

### Hospital Stay

The hospital stay for knee replacement surgery varies. Some patients will stay longer or shorter depending on their specific situation. A full recovery typically takes 3-6 months. Your knee rehabilitation begins right after surgery, as ordered by your surgeon. Your physical therapist will instruct you to:

- Begin isometric exercises (tighten muscles without moving the joint) a number of times per day while you are still in bed
- Move your ankle and other joints so that you will remain strong
- Learn the safest methods of getting in and out of bed or a chair, and on and off the toilet
- Understand the do's and don'ts of joint replacement recovery

## Rehabilitation Timeline

Rehabilitation after your surgery plays an extremely important role in making your knee replacement a success.

### Goals of Rehabilitation:

- Improve your muscle strength
- Increase the movement in your knee joint
- Protect your new knee joint
- Help you resume most of your normal activities



## Right Leg Example

**Example of how to properly sit while using crutches. Note: The leg must be kept straight.**



## Examples of Knee Extension Exercises

Rehabilitation and recovery take time and discipline. Each person is different and the length of recovery is dependent on your particular situation, overall health and your rehabilitation. Many people achieve recovery in 3-6 months. When your surgeon feels you are ready, you should be able to resume some, if not most, of your normal daily activities.



# Activity after Surgery

## Follow Your Surgeon's Advice

After undergoing knee replacement surgery, it is important you have realistic expectations about the types of activities you may participate in during your recovery phase. These activities may include:

- Driving
- Sexual Activity
- Leisure and Sport Activities
- Work Activities

Activities that may cause high-impact stress on the implant should be avoided.

## For Caregivers

One of the important ways to support your loved one is to ensure he or she receives the best medical care possible by acting as their patient advocate. This means asking questions when you don't understand something, educating yourself, being an active member of your loved one's care team and seeking guidance from qualified medical professionals. This is especially important when your loved one is not able to communicate with their health care providers on their own.

While you may not have a medical or healthcare background, your day-to-day experiences with your loved one can provide critical information, so it is important to stay involved. Their healthcare professional may rely on this information in order to care for your loved one.

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**Did you know that 76% of diagnoses can be made based off of the patient's medical history alone?<sup>4</sup>**

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# Communicating with Health Care Providers

## Avoid communication barriers

- Talk about how your loved one communicates his/her feelings and concerns—physically, verbally, and emotionally
- Ask questions when you or your loved one have them and make sure you fully understand the information being given

## Feel comfortable with the staff

- Make sure doctors and staff listen to the patient's concerns and provide answers to any questions
- See if care options can be adapted to fit within your loved one's religious or cultural beliefs

## Stay involved

- Talk about which family member(s) should be included in discussions about the patient's condition/disease and subsequent treatment
- Talk about whether the patient prefers to discuss his/her diagnoses, test results and treatment options with or without another family member present

## Resources

The website links below have additional information on treatment options for knee pain including rehabilitation, finding a surgeon in your area and hearing about real patients who overcame their knee pain.

[www.depuysynthes.com](http://www.depuysynthes.com)

[www.kneereplacement.com](http://www.kneereplacement.com)

# Important Safety Information

As with any medical treatment, individual results may vary. The performance of a knee replacement depends on your age, weight, activity level and other factors. There are potential risks, and recovery takes time. People with conditions limiting rehabilitation should not have this surgery. Only an orthopaedic surgeon can tell if knee replacement is right for you.



# Your Questions Answered

**Here are some common questions people have about knee replacement surgery, rehabilitation and recovery.**

## **Q. Am I too young for knee replacement?**

A. Knee replacement is not based on age, but on a person's level of pain and immobility.

## **Q. Are all knee implants the same?**

A. Today, knee replacement patients have a choice of knee implant types as well as a variety of implant shapes and sizes designed to accommodate specific needs and different lifestyles. Talk to your orthopaedic surgeon about your individual needs.

## **Q. How should I take care of my new knee replacement?**

A. Knee replacements are designed for the normal activities of daily living. Avoiding trauma, unnecessary kneeling and squatting are all helpful in caring for your new knee replacement.

## **Q. How will knee replacement affect my daily life?**

A. A majority of patients who undergo total knee replacement experience a reduction of knee pain and a significant improvement in the ability to perform common activities of daily living.<sup>5</sup>

## **Q. Do I need to take any precautions before future medical procedures?**

A. From now on, you must inform any doctors (including dentists) treating you that you have undergone knee replacement surgery. More than likely, antibiotics will be prescribed to avoid infection.

**Q. When can I resume sexual activity?**

A. Sexual activity can be resumed at any time as long as all knee precautions mentioned by your surgeon are kept in mind.

**Q. I live by myself. Whom can I turn to for help during recovery and rehabilitation?**

A. You will likely need assistance with your daily activities for several days to a few weeks following your knee replacement surgery. If you live alone, speak with your surgeon about being admitted to a rehabilitation facility for at least a few days following your surgery so you can get the assistance you need.

**Q. Can I have an MRI after knee replacement surgery?**

A. MRI, or magnetic resonance imaging, is used as a diagnostic tool for many types of medical conditions. If a doctor is considering ordering an MRI for you, make sure he or she is aware of your knee implant.

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**This brochure is intended to give you some helpful information about knee replacement and guide you through some of the reasons you may want to consider surgery. You should talk to your surgeon if you have specific questions.**

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## References

1. 2019 GlobalData – 39 Country Hip Reconstruction Market Model Dataset. <https://medical.globaldata.com/Medtrics/OrthopedicMedtrics>
2. Arthritis by the Numbers: Book of Trusted Facts & Figures 2020. Arthritis Foundation. <https://www.arthritis.org/getmedia/73a9f02d-7f91-4084-91c3-0ed0b11c5814/abtn-2020-final.pdf>
3. American Association of Orthopaedic Surgeons. preparing for Joint Replacement Surgery. <https://orthoinfo.aaos.org/en/treatment/preparing-for-joint-replacement-surgery>. Accessed July 7, 2021.
4. Keifenheim et al. BMC Medical Education (2015) 15:159 DOI 10.1186/s12909-015-0443-x.
5. American Academy of Orthopaedic Surgeons. Total Joint Replacement. <https://orthoinfo.aaos.org/en/treatment/total-joint-replacement/>

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**For more information, visit [www.depuysynthes.com](http://www.depuysynthes.com)**

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Please refer to the instructions for use for a complete list of indications, contraindications, warnings and precautions.



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