

# There's Help for Knees in Need

To learn more about Zimmer Biomet joint replacements, obtain helpful information for patients and caregivers, or for assistance in finding a surgeon familiar with our products and surgical techniques,

call toll-free: 800-447-5633 or visit [zimmerbiomet.com](http://zimmerbiomet.com)



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Your progress. Our promise.™

**Important Note:** This brochure is intended to provide an overview of knee replacement surgery and should be reviewed with your doctor. It does not include all of the information needed to determine eligibility for knee replacement or for the proper use and care of artificial knee replacements. Please consult your surgeon for more information. Information may also be obtained by calling the toll-free number or visiting the web site. The toll-free number also can be used to obtain complete product contraindications, warnings, precautions, and possible adverse effects. Individual results may vary. Your results will depend on your personal circumstances. How long a knee replacement will last varies from patient to patient. It depends on many factors, such as the patient's physical condition, activity level, and body weight and the surgical technique. Replacement joints are not as strong or durable as a natural, healthy joint, and there is no guarantee that an artificial joint will last the rest of a patient's life. All knee replacements may need to be replaced at some point.

This device is available only on the order of a physician.

## Persona® The Personalized Knee System

Your Guide to Personalized Knee Replacement Surgery



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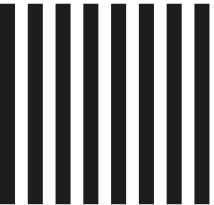
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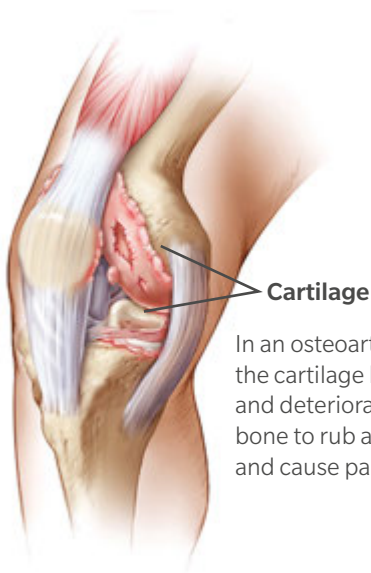


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## Why Does My Knee Hurt?

It's pretty simple. Three bones meet up at the knee joint: the end of the thigh bone (femur), the top of the shin bone (tibia), and the kneecap (patella). Those bones are cushioned by cartilage, but when the cartilage is worn away—which is actually the definition of osteoarthritis—the bones grind against each other. That grinding hurts. You can feel it climbing stairs, working in the garden, or just bending your knees to sit.



In an osteoarthritic knee, the cartilage has thinned and deteriorated, allowing bone to rub against bone and cause pain.

## Is it Time for Knee Replacement?

That's a question you and your orthopaedic surgeon will have to answer together. But when knee pain is so bad it actually interferes with the things you want or need to do, the time may be right. Here are some signs to consider:

- Medication and using a cane just aren't delivering enough relief
- Pain is keeping you up at night
- Your knee aches during and after exercise
- Your knee stiffens up sitting in a car or a movie theater
- You are no longer as mobile as you'd like to be

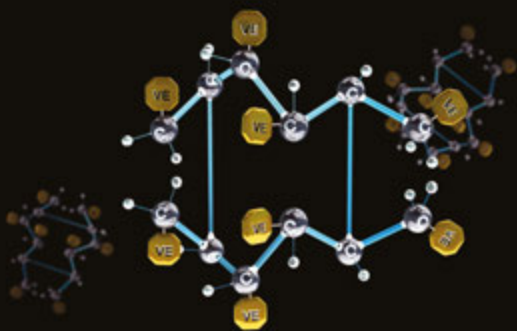


## Personalized Implants

### The right size. The right shape.

Getting a precise knee implant fit is an important key to your comfort and overall experience following knee replacement surgery. Zimmer Biomet research has resulted in a new understanding of the unique size and shape identities of each knee. This understanding builds on Zimmer Biomet's pioneering work on the differences between men's and women's knees and extends that science to elements of ethnicity and stature. This means that the *Persona*® system has knee replacement implant sizes in the smallest increments, giving your surgeon the most comprehensive selection to choose from—all in order to best fit you.



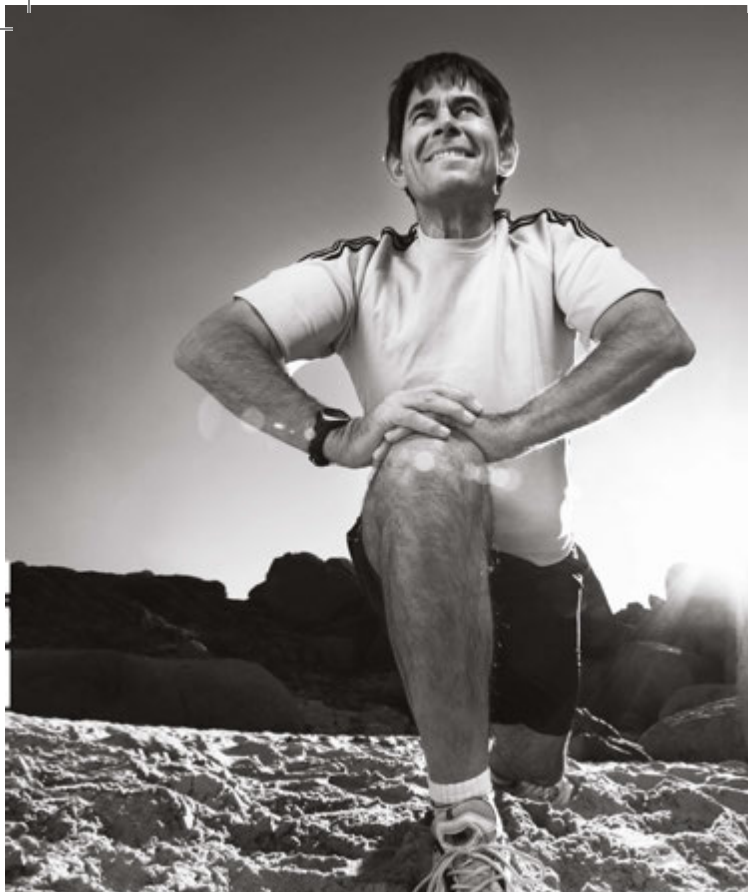


**Vivacit-E Highly Crosslinked molecular structure.**

## Zimmer Biomet Proven Technologies

### **Vivacit-E<sup>®</sup> Highly Crosslinked Polyethylene**

In a knee replacement implant, the “bearing” material is the polyethylene surface on the lower leg (tibia) that the implant on the thigh bone (femur) moves against. Zimmer Biomet has developed a unique material called Vivacit-E Highly Crosslinked Polyethylene that has shown to be very resistant to wear and has exceptional strength.<sup>1</sup> In Vivacit-E Highly Crosslinked Polyethylene, vitamin E is incorporated directly into the material. Vitamin E is a powerful antioxidant that guards against wear and prevents breakdown of the important polyethylene-bearing surface.



## ***Trabecular Metal™* Technology**

An important component of the *Persona* system is *Trabecular Metal* Technology, available exclusively from Zimmer Biomet. *Trabecular Metal* material is not a coating, like the surface of many knee replacement components. Rather, it is a three-dimensional porous material that closely resembles your body's natural trabecular ("spongy") bone. This porous quality allows for biologic fixation, creating a strong hold. While other knee replacement implants may be held in place with cement that can weaken over time, *Trabecular Metal* Technology is designed to give your knee replacement long-lasting stability via biologic fixation.

## What Happens During Knee Replacement Surgery?

It's the same idea as having most things fixed—worn parts are taken out, and new parts are installed in their place. In surgery, the damaged portions of the knee bones are removed, and the knee is resurfaced with metal and plastic implants. With Zimmer Biomet knees, surgeons can take advantage of the most advanced implant techniques, including Zimmer Biomet Minimally Invasive Solutions™ procedures, which may result in a smaller incision, shorter hospital stay, and quicker recovery.<sup>1</sup>





## What Happens Afterward?

Rehab begins quickly! On the day after your surgery, you'll get a visit from your physical therapist and begin learning how to use your new knee. You may be fitted with a "continuous passive motion" machine that will gently straighten and bend your knee. Other exercises that promote blood flow to your legs include ankle pumps and pedaling your feet.

Getting up and around soon is important. If you had considerable pain before surgery, you probably cut back on your activities, so your leg muscles may be weak. You will need to build up enough strength to control your new knee, and early activity encourages healing, too. Your doctor and physical therapist will give you specific instructions on wound care, pain control, diet, and exercise.



## What Risks are Involved?

While there are no guarantees, the complication rate following total knee replacement is low. Serious complications, such as knee-joint infection, occur in approximately 2.0% of patients.<sup>2</sup> Major medical complications, such as heart attack or stroke, occur even less frequently. Each of the following reactions or complications can occur during and after surgery and may require medical attention (such as further surgery and/or implant removal):

- Blood clots
- Bleeding
- Slow wound healing
- Infection
- Allergic reaction to the knee implant components
- Blood vessel damage
- Nerve damage
- Stiffness
- Poor range of motion
- Swelling and joint pain
- Knee instability and/or dislocation
- Loosening or fracture of the knee implant components
- Bone fracture or break during surgery
- Leg length discrepancy

For the first two years after your knee replacement, you must take preventative antibiotics before any procedures (such as dental procedures) that could allow bacteria to enter your bloodstream. After two years, talk to your orthopaedist and your dentist or urologist to see if you still need preventative antibiotics before any scheduled procedures.

It is important to inform your doctor of any preexisting medical conditions before undergoing surgery. To obtain the best possible outcomes from your knee replacement, be sure to follow all instructions given by your healthcare provider(s) prior to and after your surgery.



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