MyKnee™
PATIENT MATCHED TECHNOLOGY
IN KNEE REPLACEMENT

Medacta
International

Innovation in knee arthroplasty

MYKNEE

Your 3D Printed
Patient-Specific Solution!

Suffering from knee pain?

If your knee pain limits your daily activities, affects your mood, your health and your general well-being...
You're certainly not alone!

Are you considering Total Knee Replacement?

There are a number of solutions, surgical and non-surgical to treat your disease. Ask your doctor what is the most suitable treatment based on your age, activity level and expectations.

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MyKnee, a solution designed for you

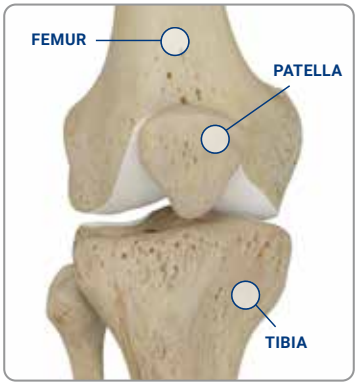
MyKnee is a precision instrument which is tailored for each individual patient from a radiological image of their knee.

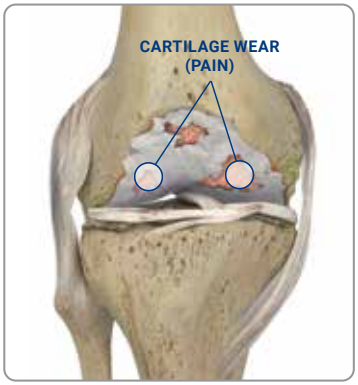
MyKnee technology was designed to achieve **MORE ACCURATE, FASTER AND LESS TRAUMATIC**, total knee replacement.

What is osteoarthritis?

The knee joint comprises three bones: thigh bone (femur), shin bone (tibia) and kneecap (patella) the ends of which are covered by a smooth surface (cartilage) which allows movement.

The main cause of knee joint diseases is the wear of the cartilage: osteoarthritis. **This wear is perceived as pain**. In the case of advanced osteoarthritis your doctor may suggest that you undergo a total knee replacement.





What is a total knee replacement?

Total knee replacement surgery aims to substitute the bone and cartilage of the joint damaged by arthritis with metallic and plastic implants. The surfaces of the thigh and shin bones are replaced with high-resistant metallic components, called the femoral component and tibial baseplate.

Between the femoral component and the tibial baseplate, a plastic tibial insert is implanted. It replaces the cartilage function allowing the thigh and shin bone to slide on each other. All materials used in a total knee replacement are highly biocompatible.

Why total knee replacement?

With almost 50 years of history, total knee replacement surgery is a very common and safe procedure for the treatment of severe arthritis. Approximately 1,000,000 knee replacements are performed annually worldwide.

FEMORAL COMPONENT METAL

TIBIAL INSERT POLYETHYLENE

TIBIAL BASEPLATE METAL

The main benefits of a successful total knee replacement are:

1. **Reduction of knee pain**
   Pain may be rapidly and dramatically reduced, or potentially eliminated!

2. **Recovery of mobility**
   You may dramatically improve the mobility of your knee.

3. **Improvement in quality of life**
   Your everyday activities may no longer be limited by pain and reduced mobility!

Conventional procedures and MyKnee

CONVENTIONAL PROCEDURES

The positioning of a knee prosthesis is achieved using surgical instruments. In conventional procedures the surgical instruments are the same for all patients.

MYKNEE: THE INNOVATION

MyKnee is a surgical instrument which fits your knee accurately, because it is created for you. Engineers in Switzerland analyse a CT scan of your leg, providing your surgeon with customised instruments created specifically for your knee. MyKnee technology allows preparation of the bones for implanting the prosthesis, respecting your natural anatomy.

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Your 3D Printed
Patient-Specific Solution

DESIGNED FOR YOU,
BY YOU!

MyKnee technology potentially assures the following results:

1. **More accurate positioning of the prosthesis**
   MyKnee fits the shape of the knee accurately, allowing precise preparation of the bone for implanting the prosthesis.[1,2] Each phase of the operation is planned by your surgeon prior to the operation. He analyses a tridimensional model of your knee and is able to create a plan specifically for you. It has been proven clinically that accurate positioning of the implant results in increased survivorship of the prosthesis.[3]

2. **Less traumatic procedure**
   Conventional procedures require damaging anatomic structures (e.g. medullary canal) in order to position the surgical instruments used to implant the prosthesis. MyKnee preserves these structures, allowing a potential decrease of blood loss and risk of embolism.[3,4,5]

3. **Faster operation**
   The use of the MyKnee technology is very simple and straightforward. It potentially allows a reduction in operative time, thus decreasing the time under anaesthesia and potentially reducing the risk of infection.[6]

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The MyKnee adventure

1. Obtain an image of your knee

Your Surgeon will ask you to have a CT scan of your leg.

2. Replication of your knee and creation of MyKnee

Engineers in Switzerland will create a 3D model of your knee using the image from the CT scan in order to select the best implant for you.

3. Creation of MyKnee

Using the 3D model of your knee, the engineers and your Surgeon will create your personalised surgical instruments.

4. Preparation for surgery

Your Surgeon will receive the MyKnee instruments and a 3D replica of your knee prior to surgery. These will be used in your surgery to achieve more accurate implant sizing and position.

Bibliographic references:
[1] Koch P, Müller D, Pisan M, Fucentese S, Radiographic accuracy in TKA with CT-based patient-specific cutting block technique, Knee Surg Sports Traumatol Arthrosc. 2013 Oct;21(10):2200-5. [2] Anderl W et al, CT-based patient-specific vs. conventional instrumentation: Early clinical outcome and radiological accuracy in primary TKA; Knee Surg Sports Traumatol Arthrosc. 2014 [3] Ritter MA. et al. Postoperative alignment of total knee replacement: its effect on survival. Clin Orthop. 1994; 299:153-156. [4] Kalairajah Y. et al. Blood loss after total knee replacement: effects of computer-assisted surgery. JBJS Br. 2005 -Nov;87(11):1480-2. [5] Kalairajah Y. et al. Are systemic emboli reduced in computer-assisted knee surgery?: A prospective, randomised, clinical trial. JBJS Br. 2006 Feb;88(2):198-202. [6] Peersman G. et al. Prolonged Operative Time Correlates with Increased Infection Rate after Total Knee Arthroplasty. Hospital for Special Surgery Journal 2006 -Feb;2(1):70-2.

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If you have any concerns about your new knee
don't hesitate to contact your doctor and, finally...

...enjoy your new knee!

For further information visit the website:

myknee4me.com

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