

Getting Back Your Freedom Of Movement

KNEE REPLACEMENT SURGERY

With ORTHOPILOT

A Pathbreaking Procedure Using Advanced Computer Navigation Technology

PATIENT GUIDE



Dr. Santosh Kumar

MBBS, D.Ortho, M.Ch.[Ortho],
Specialist Orthopaedic Surgeon



POORVA ORTHOPAEDIC FOUNDATION

About Dr.Santosh Kumar



MBBS (JIPMER), D.ORTH (JIPMER); MCh ORTH (SCYCHELLS)
Head : Department of Computer Assisted Joint Replacement Surgery : BELLE VUE CLINIC
JOINT REPLACEMENT SURGEON, ARTHRITIS FOUNDATION,INDIA
Subspecialty- Knee Joint- Total Knee Replacement, Knee Arthroscopy.
Fellowship in Joint Replacement, Max Hospital, New Delhi
TRAINED IN COMPUTER ASSISTED JOINT REPLACEMENT FROM AUSTRIA
Trained in Revision Knee and Hip Replacements
Trained in Complex Joint Replacement from the DELTA FOUNDATION of AUSTRALIA

INTRODUCTION

Dr Santosh Kumar and his team are leading knee specialists in Kolkata. He is one of the best doctors in Knee replacement today. Knee replacements are routine in Kolkata (Calcutta) today and Dr Santosh Kumar has been instrumental in making international quality knee surgery affordable to the mass.

HE HAS EXPERIENCE OF MORE THAN **TWO THOUSAND KNEE REPLACEMENTS**



GRADUATION

MBBS – from Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER, Pondichery) Directorate General of health Services, Govt. of India from 1995 to 2001.
HOUSE JOB in Department of Orthopedics, JIPMER from April 2001 to June 2002.

POST GRADUATION

D Orth from Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER, Pondichery) Directorate General of health Services, Govt of India from 1st April to 31st March 2005.

BONE BANK JIPMER

In charge bone bank JIPMER from April 2004 to March 2005. TRAUMA COURSE online of ADVANCED TRAUMA LIFE SUPPORT at CMC Vellore January 2005.
Clinical Research Fellow in Orthopaedic Oncology at JIPMER Hospital from April 2005 to June 2005.

REDISTRAR ORTHOPEDICS

Whole time registrar in Orthopaedics at Bhattacharyya Orthopaedics and Related Research Center (P) Ltd., Narayanpur, Kolkata – 136 from 1st July 2005 to 31st June 2007.

MCh ORTH

Passed MCh ORTH from the University of Seychelles American Institute of Medicine, March 13th 2008.

MCh Thesis : a study into the controversial aspects of interlocking nail of femur.

TRAINING

DELTA COURSE for advanced aspects of complex primary and REVISION knee replacement. At MAX Hospital , New Delhi in Sept, 2008.

FELLOWSHIP in KNEE REPLACEMENT in Max Hospital, New Delhi from Sept, 2008 with Dr. S.K.S. Marya for total of 54 knee replacement surgeries.

AO SPINE Training in Bombay July 2009.

AO TRAUMA Training 8th to 10th Oct, 2009, Kanpur

DELTA COURSE for Advanced Aspects of Complex Primary and Revision Knee Replacement, at SUN SHINE Hospital, Hyderabad in Nov, 2009.

Ranawat joint replacement course in Jan 2010 Kolkata

Trained in complex joint replacements, at Bangkok. Jan 2011 by DEPUY institute at Bangkok

Trained in revision joint replacements by DE PUY institute at Chennai, June 2011.

Medtronic Academy course in cervical spine in October 2011

Trained in computer assisted knee replacement at Fortis Chandigarh in Jan 2012

AO advanced trauma course in March 2012 at Kolkata

TRAINING [continued]...

Trained in complex joint replacements in USA , PHOENIX, by KLEOS foundation (Smith and Nephew educational body) April 2012

Trained in minimally invasive spine surgery by Medtronic Academy foundation May 2012

Trained in computer assisted navigation technology for knee replacement in Vienna Austria, in June 2012.

PAPERS PUBLISHED / PRESENTED

Bilateral fracture dislocation of Hip, pipkin 1 – its management and the result – published in the West Bengal journal of orthopaedics – vol 20, number 2, September 2006, myself as Primary author. The role of total hip replacement in ankylosing spondylitis patients – under consideration for publication in the Indian journal of orthopaedics.

OPPONENSPLASTY – a method to reconstruct the post polio paralytic thumb – presented at the midcon 2005, West Bengal Orthopaedic Association.

Follow up of 24 total hip replacements in ankylosing spondylitis patients presented at the annual conference of the West Bengal Orthopedics Association 2006.

AWARDS RECEIVED :

Dr.Santosh Kumar received Certificate of International Excellence in Minimally Invasive Computer Assisted Joint Replacement Surgery by the ASCULAP ACADEMY, Germany



Titles

Part A

1. Knee Pain
2. Osteoarthritis
3. Rheumatoid Arthritis
4. Trauma related Arthritis
5. The Knee Joint
6. Knee Replacement
7. Your Knee Evaluation
8. Surgery
9. Navigation With OrthoPilot
10. What To Expect After Surgery
11. Physical Therapy
12. Progress
13. Home Care
14. Medication / Pain Control
15. Resuming Activities
16. Special Instructions



**KNEE
REPLACEMENT
SURGERY**

Part B

15. Other Patients' Experiences
16. For Outstation Patients
17. For International Patients
18. For Corporate Patients
19. For Communities / Institutions
20. What the Press / Media says
21. Cashless Mediclaim Facility
22. The Fees
23. Online Consultation / Video Conference
24. About The Doctor / Surgeon
25. About the Foundation
26. Contact Details



SECTION A



Knee Pain

When debilitating pain, accompanied by stiffness, swelling and limited motion in your knee keep you away from your daily activities, it may be time to consider total knee replacement. The development of total knee replacement technology began more than 30 years ago. Each year, more than 800,000 people worldwide undergo knee replacement surgery to help ease pain and stiffness and restore mobility.

The most frequent cause of discomfort and chronic knee pain is arthritis, which is one of the leading cause of disabilities in India. In fact, it's estimated that 1 in 5 people in India has arthritis, and two-thirds are above the age of 60.

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

1. Osteoarthritis
2. Rheumatoid Arthritis
3. Trauma Related Arthritis



Arthritis

Osteoarthritis is a disease that involves the breakdown of tissues that allow joints to move smoothly. The layers of cartilage and synovium become damaged and wear away, leaving the underlying bones unprotected from rubbing against each other.

Rheumatoid arthritis is a systemic disease because it may attack any or all joints in the body. It affects women more often than men and can strike young and old alike. 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.

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.

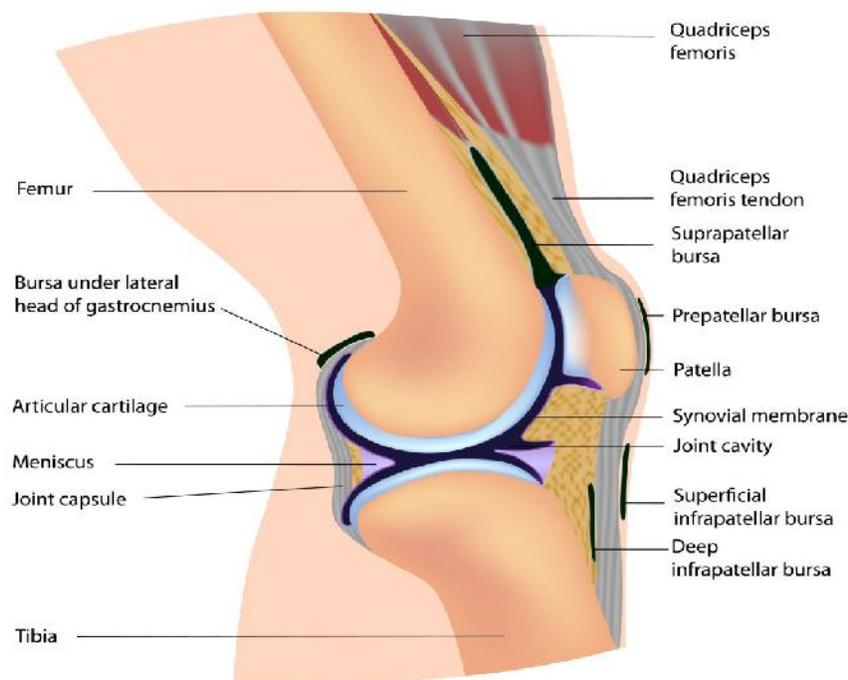


The Knee Joint

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

Tough fibers, called ligaments, connect the bones of the knee joint and hold them in place, adding stability and elasticity for movement. Muscles and tendons also play an important role in keeping the knee joint stable and mobile.

Anatomy of the Knee Joint

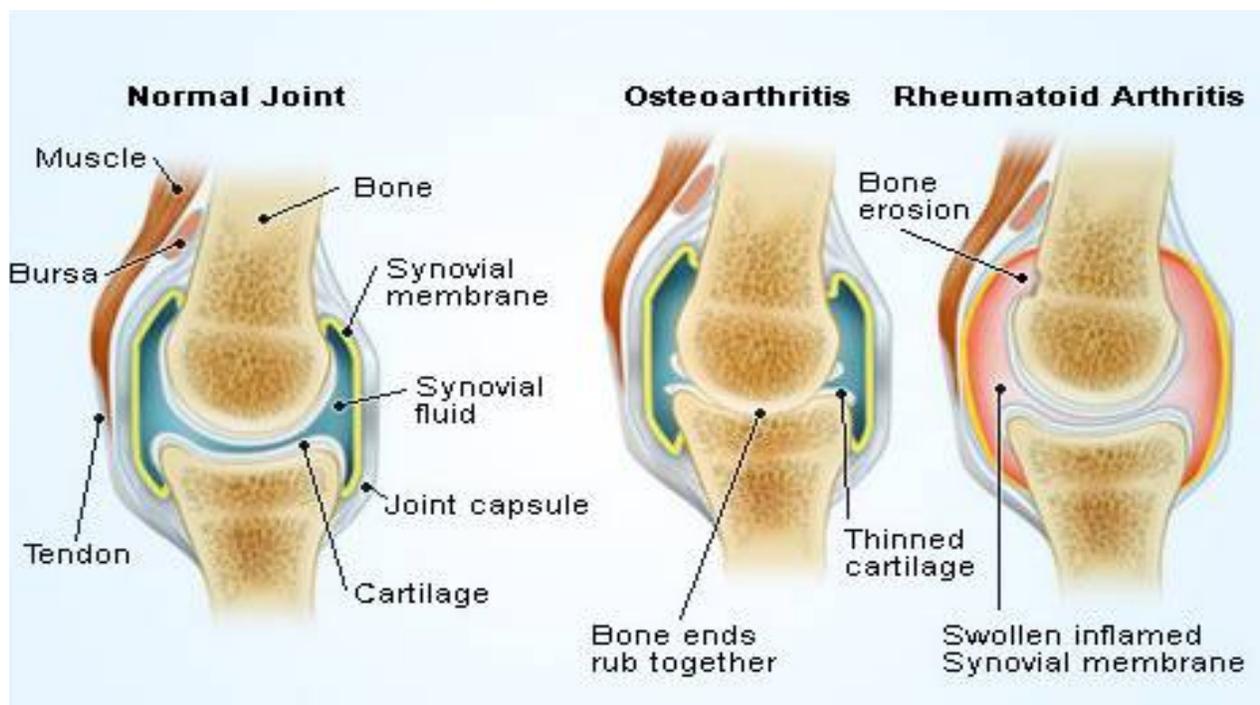


Knee Replacement

When medications, physical therapy and other conservative methods of treatment no longer relieve pain, total knee replacement surgery may be considered. Your surgeon will help you decide if the pain and loss of movement is severe enough that you should undergo the procedure. Your orthopaedic surgeon can replace your arthritic knee with total knee implants, which have been shown to provide long-term relief.

In general, 90% to 95% of patients are satisfied with the outcome of their total knee replacement, and in some designs, 95% of the knee replacements are still in use after 10 to 15 years. In total knee replacement (or arthroplasty), the diseased surfaces of the bones are replaced with implants called prostheses. The femoral (thigh) component is made of metal and covers the end of the thigh bone. The tibial (shin bone) component is made up of both metal and polyethylene (medical-grade plastic) parts that cover the top end of the tibia. The metal forms the base of this component, while the polyethylene is attached to the top of the metal. That polyethylene “insert” serves as a cushion—a smooth gliding surface between the two metal components.

The third component, the patella or kneecap, may be all polyethylene or a combination of metal and polyethylene. The components may be cemented to the bone or, in some cases, inserted without cement to allow bone tissues to grow into the three-dimensional porous coating of the device. The total knee replacement is inserted through an incision and the new components are stabilized by your ligaments and muscles, just as they are in your natural knee.



**Knee replacement
surgery is a
highly successful
(99% & above)
and very safe
procedure.**



Your knee evaluation

Your knee evaluation will begin with a detailed questionnaire. Your medical history is very important in determining whether surgery is necessary and medically safe. It helps the surgeon understand your pain, limitations in activity and the progression of your knee problem.

After your history is taken, a physical exam is performed. The range of motion of your knee is measured, your legs are evaluated for conditions such as bowlegs or knock-knees, and your muscle strength is analyzed. The surgeon will observe how you walk, sit, bend and move. X-rays will be taken of your knee joint.

A small amount of fluid may be taken from your knee joint to check for infection. After your initial orthopaedic evaluation, the surgeon will discuss all possible alternatives to surgery.

If the X-rays show severe joint damage and no other means of treatment has provided relief, total knee replacement surgery may be recommended.



Surgery

To prepare yourself for surgery, you may be asked to do a number of things, including lose weight and / or stop smoking (if applicable). It is essential that you tell your surgeon about any medications or supplements you are taking. Bring a list of all medications and dosages, including over-the counter medications to your appointment. Your doctor may want you to donate your own blood ahead of time for a possible transfusion during surgery.

Your surgery is done here



Advancement in Knee Replacement

- The Improvements in joint replacement surgical techniques and technology have greatly increased the effectiveness of this surgery.
- Dr.Santosh kumar does the surgery using the latest & most advanced computer navigation system - Orthopilot



Computer Assisted Knee Replacement

Computer navigated surgery is a state-of-the-art surgical technique which lifts the accuracy of knee replacement surgery from around 80 per cent to up to 95 per cent, so improving the longevity and functioning of the artificial joint. An increasing number of skilled and respected Orthopedic surgeons are using computer navigated systems, such as Ortho Pilot, because they ensure their patients get precisely aligned knee replacements time after time.

Everyone is different and so are their knees! Computer navigated surgery takes into account each patient's shape and size and allows a surgeon to use, what is essentially a mini GPS system, to register the exact bio-mechanic anatomy of the leg and knee joint to ensure each replacement is as accurate as possible.

Computer navigated surgery maps the position of the bones which make up each patient's knee joint using sensors which are placed at either side of the knee. These create a detailed image and provide real-time information on a computer screen which helps the surgeon accurately guide the implant into position.

Computer navigated systems, such as OrthoPilot, do not perform the operation! They do not replace the skill and experience of your surgeon, but are an invaluable tool which enhance the outcome of total knee replacement operations.



What the Surgeons Say :

“This is the breakthrough of the 21st Century”

Dr. Alberto Gregori

An increasing number of Orthopaedic surgeons are adopting computer navigated systems like OrthoPilot, because it is delivering superb outcomes for their patients time after time.

This surgical breakthrough lifts the accuracy of total knee replacement surgery from around 80 to more than 95 per cent which should lead to longer lasting and better functioning implants.

“OrthoPilot takes the guesswork out of surgery”

Dr Frederick Pickard

As we are living longer, more active lives experts predict there will be a 700 per cent increase in knee replacements by 2030. By that time, many more surgeons will be performing navigated surgery, not just for knee surgery but for spine, hip, and trauma surgery.



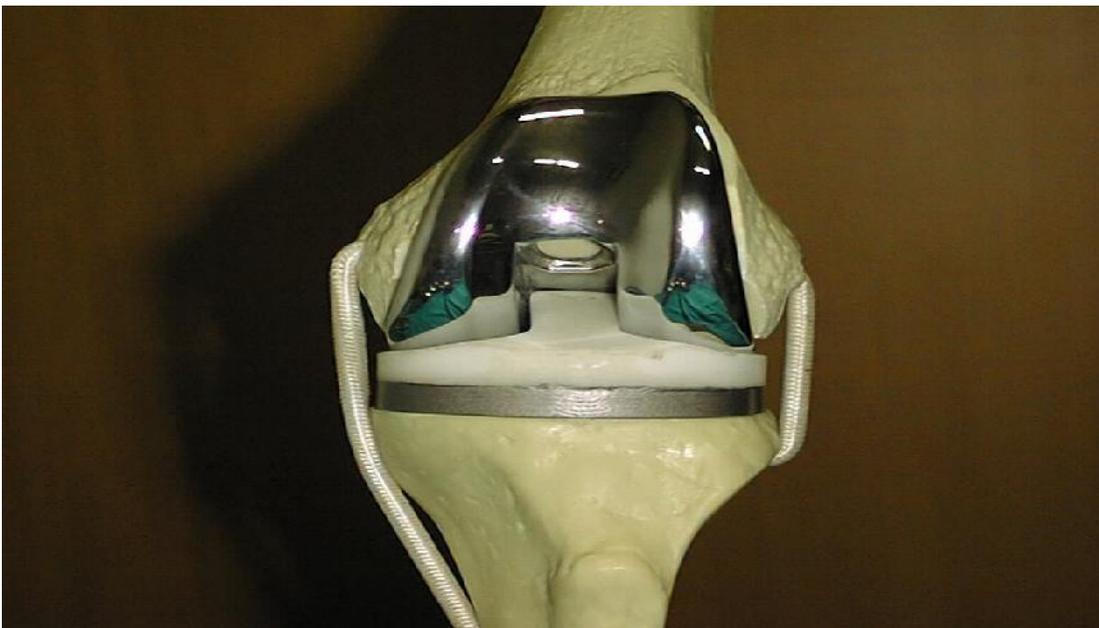


Dr.Santosh Kumar here is seen with the advanced Orthopilot System : used in Knee Replacement surgery

Joint Prosthesis are made as per Patients' need using this advanced system. Very few surgeons have access to this technology in India.



Third Generation Knee



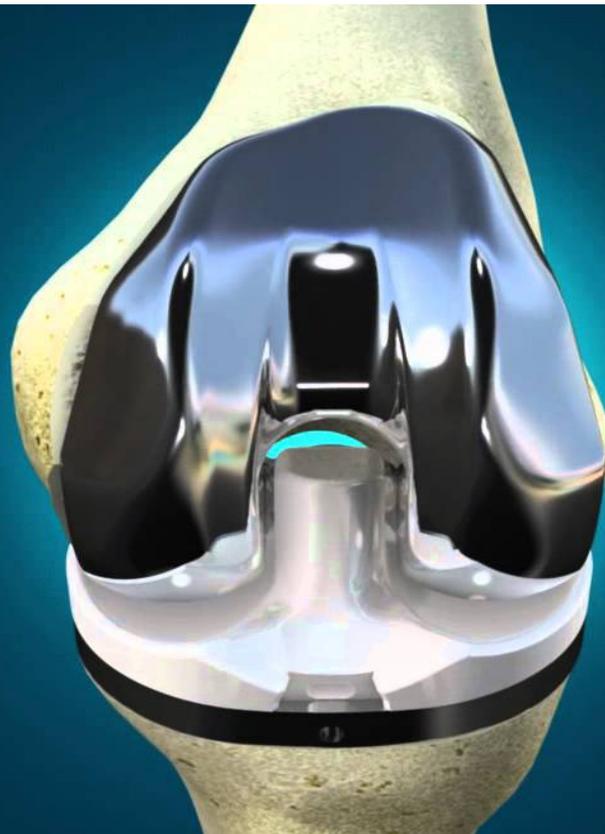
Can you see how well the artificial knee fits perfectly on the bones ?



The Modern Knee



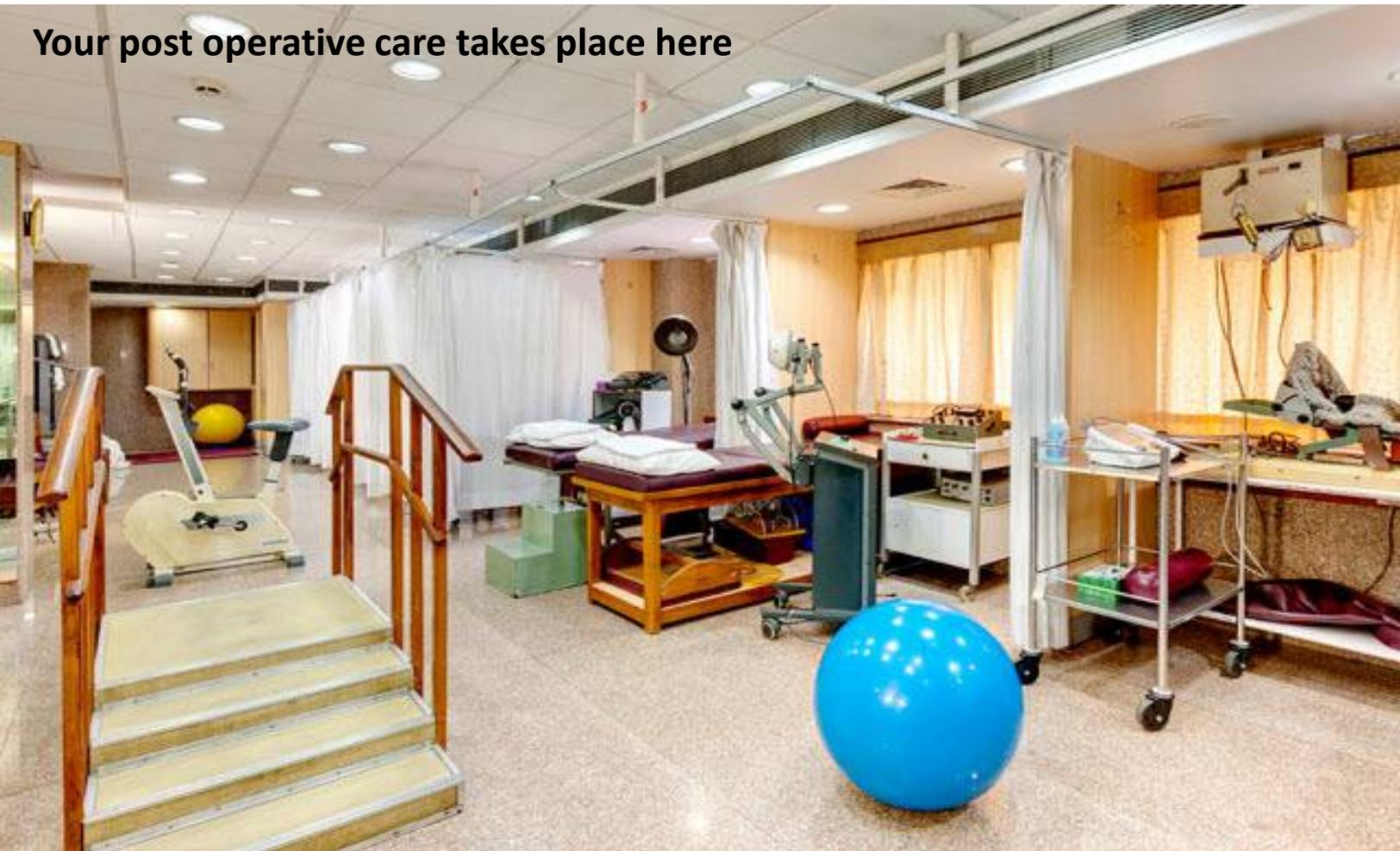
**Knee for the
modern
Lifestyles !**



What to expect after Surgery ?

It is normal to feel pain and discomfort after surgery. Be sure to inform the nurse of your pain. Your leg will be supported and elevated on one or two pillows to help your circulation and stretch your muscles. Under the direction of your surgeon, you will be asked to move your ankle to promote circulation and prevent stiffness in your ankle joint. The nurse will help you find comfortable positions and encourage you to do the ankle exercises. After 24 hours, you should begin to drink fluids regularly, according to your surgeon's directions.

Your post operative care takes place here



FACILITIES

State of the art Equipments & Advanced Diagnostic & Surgical Facilities are available here



Before & After Knee Replacement



Before



After



BEFORE



AFTER



Physical Therapy

Your surgeon will recommend and supervise your knee rehabilitation program, which typically begins 24 hours after surgery. Isometric exercises (tightening muscles without moving the joint) will begin while you are still in bed. You will be instructed to do these exercises a number of times per day. You will be encouraged by the physical therapist to move your ankle and other joints so that you will remain strong.

These exercises will help you regain strength and mobility. The therapist will teach you the safest methods for getting in and out of bed or a chair, on and off the toilet and other ways to protect your joint while you recover.



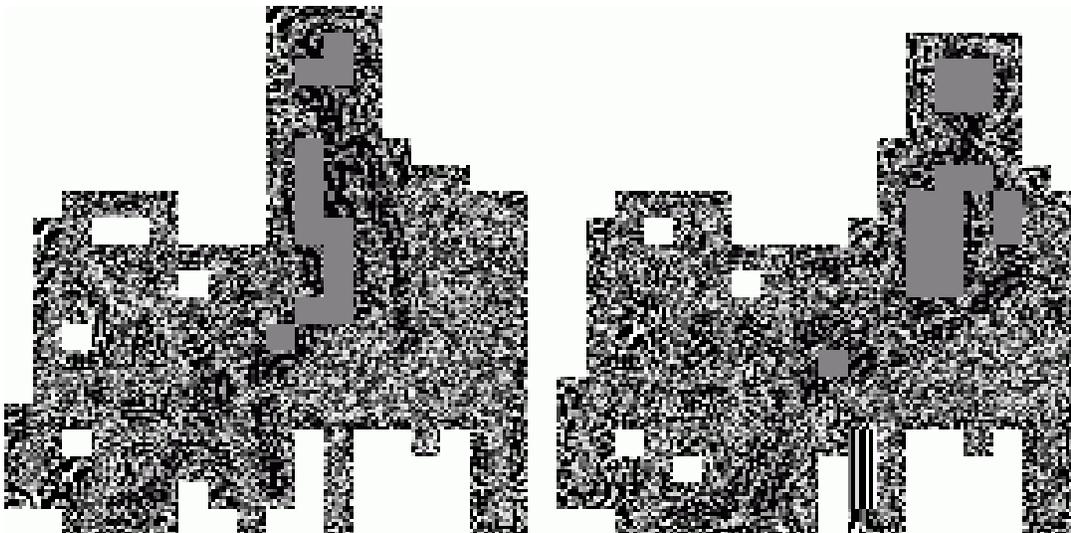
Physical Therapy

The day after surgery, you will probably begin walking and exercising your knee joint. The exercises will probably be done twice daily. While in the hospital, the physical therapist will assist you when getting out of bed, standing up, or learning to use a walker or crutches. Your walking distance will gradually increase.



Examples of knee extension exercises

Bending your knee during the exercises may be painful. Pain medication taken before therapy will make the exercises more comfortable. Ice packs, hot packs and other treatments may also help. The therapist will monitor your daily progress and inform your surgeon.



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



Progress

Knee replacement typically requires a hospital stay of three to five days. Depending on your progress, you could gain independence within one week after surgery. The hospital may provide an elevated chair and elevated toilet, both of which should make it easier to sit. At home, you will need a firm chair with arms.

The therapist will teach you how to dress, get out of bed without help and use a walker or crutches. You will continue strengthening exercises in preparation for your return home. It is important for you to follow your surgeon's directions throughout your rehabilitation. Arrangements will be made for follow-up visits with your surgeon. It is not uncommon to still experience some pain. The full recovery period normally lasts three to six months.



Common Post Operative Course

- **Day 1** **Standing, bending and sitting out in a chair, May take a few steps with help**
- **Day 2** **Walking (with aids)**
- **Day 4/5** **Stair climbing**
- **Day 5-7** **Home (with 2 walking sticks)**
- **Week 6** **Walking unaided (or 1 stick),
Driving**
- **Week 10-12** **Full Recovery**



Home care

Just prior to your discharge, you will receive instructions for your at-home recovery. Once you arrive home, one of the first things you should do is call the surgeon and make an appointment for a follow-up visit. Look for any changes around your incision. Contact your surgeon if you develop any of the following:

- 1. Drainage and/or foul odor from the incision.*
- 2. Fever (temperature about 101 degrees F or 38 degrees C) for two days.*
- 3. Increased swelling, tenderness, redness and/or pain.*

Take time to adjust to your home environment. It is normal to feel frustrated, but these frustrations will soon pass. It is OK to take it easy.



Medication/ Pain control

It is normal for you to have some discomfort. You will probably receive a prescription for pain medication before you go home.

If a refill is needed, please call your surgeon's nurse at least five days before you run out of pills. Please contact your surgeon if you have increased discomfort or pain.



Resuming activities

Since recovery is different for each person, your surgeon will inform you when you can resume activities such as returning to work and driving a car. You may resume sexual activity at any time as long as you keep all knee precautions in mind. As you heal, it's important to remain active—but don't overdo it. It generally takes three to four months before you can begin low-impact activities such as walking, golfing, bowling and swimming. Jogging, high-impact aerobics and contact sports should be avoided. Although your new knee is made of durable materials, it is still vulnerable to wear and tear. As you progress, ask your surgeon for guidance on activities. Please seek advice on future activities from your orthopaedic surgeon.



- Do's and Don'ts -

Allowed activities

Walking
Slow Dancing
Stationary or Non-stationary
Bicycle
Bowling
Golf
Low-impact Aerobics
Croquet
Swimming
Shuffleboard
Horseshoes

Allowed Activities With Some Experience

Hiking (mild to moderate)
Rowing
Cross-Country Skiing
Stationary Skiing (Nordic Trac)
Faster walking
Tennis (non-competitive)
Certain Weight Machines
Ice Skating

Activities Not Recommended

Handball
Squash
Rock Climbing
Soccer
Singles Tennis
Volleyball
Football
Gymnastics
Lacrosse
Hockey
Basketball
Jogging
Running

Probably Not Recommended

Roller Blading
Inline Skating
Downhill Skiing



Special instructions

You may be seen six weeks, five months and one year after your surgery. Your surgeon may request to see you once a year after the first year, even if you are not having problems.

Any infection must be promptly treated with proper antibiotics because infection can spread from one area of the body to another through the bloodstream. Every effort must be made to prevent infection in your implant. You should always tell all your doctors (including dentists) that you have a knee replacement. If you are to have dental work performed, please call your surgeon prior to having this work done. Your surgeon will most likely prescribe an antibiotic for you. Antibiotics must be used before and after any medical or dental procedure—a precaution that must be taken for the rest of your life.



Frequently Asked Questions

Q: How do I know if I need a knee replacement?

A: The best time for surgery is based on how bad your osteoarthritis is, the level of pain, how much you can move, and other factors. It's your knee's condition, not your age, that generally determines when you need knee replacement. You and your surgeon will decide the best time for surgery.

Q: Why do some people delay knee replacement surgery?

A: People are often fearful about surgery. Yet once they have it, many of these same patients wish they had done it sooner. When they are able to go back to several of the activities they enjoyed before the surgery, with less pain and more mobility, they are very happy they had the surgery.

Q: What can I expect from my new knee?

A: Patients may be able to return to a healthy, low impact, active lifestyle after knee replacement surgery – including walking, swimming, cycling and low-impact sports such as golfing. You and your surgeon should discuss what's right for you.

Q: Am I too old for this surgery?

A: Age is not a problem if you are in reasonable health and have the desire to continue living a productive, active life. You may be asked to see your physician for an opinion about your general health and readiness for surgery.



Frequently Asked Questions

Q: What will occur during surgery and how long will the knee replacement operation take?

A: The surgeon will make an incision on the top of your knee in order to expose the damaged area of your joint. The standard incision size can be as long as 10 inches, but a minimally invasive procedure can result in incisions as short as 4 inches. During the operation, the surgeon moves your kneecap aside and cuts away damaged bone and cartilage, which are then replaced with new metal and plastic components. The components combine to form a synthetic (but biologically compatible) joint that mimics the movement of your natural knee. Most knee replacement procedures take 1.5 to two hours to complete.

Q: How long will recovery and rehabilitation take?

A: Rehabilitation and recovery take time and hard work. Each person is different; the length of recovery depends on your particular situation, overall health, and on your individual circumstances. Many people achieve recovery in three to six months.

Q: How long will the artificial knee joint last and will I ever require a revision (a second knee replacement)?

A: Studies show that upwards of 85 percent of patients still have a functioning artificial joint 20 years after receiving it. However, wear and tear on the joint can adversely affect its performance and lifespan. Younger patients are more likely to have the joint wear out and require a revision during their lifetime. Consult with a doctor about what's right for you.



MYTHS of Total Knee Replacement [TKR]

- 1. Hip replacement works but knee replacement doesn't.**
- 2. Knee replacements are still experimental**
- 3. Knee replacements only last 8-10 years may be 15 years maximum**
- 4. I am too fat - my implants might break**
- 5. TKR surgery is too costly**
- 6. TKR is not successful.**
- 7. After TKR, I have to be bedridden for 3 months.**
- 8. A total knee replacement implies that everything about the joint is being replaced**

All These Are False !!!



BENEFITS of Total Knee Replacement [TKR]

- TKR can **relieve pain** that doesn't respond to other treatment options
- Pain reduction in over **95% of the patients**
- **Reduced stiffness and improved joint movement**
- Increased **walking ability**
- **Improved alignment** of deformed joints



SECTION B



Patients' Experiences [All Ortho Procedures]



**Maya Ghosh, 66 years
Kolkata**

"I had been suffering from knee pain for last one year. It was difficult to walk. I heard of Dr. Santosh Kumar from my friend and got my knee operated. I now can walk. My friend too is well now. Thanks to Dr. Kumar".



Mr Das, Ulta Danga, Kolkata

Operated for Rheumatoid Arthritis of knee. Total knee replacement done in may 2012. Retired but socially very active, was crippled and home bound, till he started moving out after knee replacement. He says, " it feels as if my age has reduced by 20 years".



Prem Lakhani, 75 years, Kolkata

"I had long knee problem . I consulted Dr. Santosh Kumar. I was operated on 7 Jan, 14, detained in hospital for 4 days and started walking within 4 days. No pain and I am walking almost normally. I am back to normal work. Thanks to Dr"



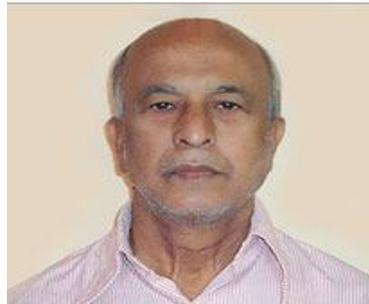
Parbati Roy, 67 years, Kolkata

"I am 67 year. I have been suffering since 2005 and was under medication. In Oct 2013, I was almost crippled. At this stage, one of my cousins suggested for Dr. Santosh Kumar. He operated my right knee and my left knee was operated in next July. Am fine now"



Sister Jaya, Belle Vue Clinic

"Working as in-charge nurse had become so painful till I saw some operated cases by Dr Kumar and their results at our hospital. I decided to go for Knee Arthroplasty(replacement). Am happy that within a month I joined back my work with confidence."



Mr Banerjee, Beliaghata, Kolkata

An retired footballer says, "knee pain and stiffness had crippled my life in sharp distinction to the joy of playing football in my early age, actually I had suffered from ACL injury which accelerated osteoarthritis. I am happy that the joy of movement has been restored".



Arun Kumar Jana, 71 years

"I have been suffering from knee pain since 2005. I got Dr. Santosh Kumar's contact through internet. He advised for knee replacement. Although I was scared by many, yet Dr. Kumar explained all in details and operated. He and his team had been cooperative".



Prof. Malabika Deb

After the knee replacement, I can climb up the stairs and walk. Feeling much better...



A Patient rides a bicycle with ease after undergoing Knee Replacement by Dr.Santosh Kumar using Orthopilot, an advanced computer navigation procedure.

More Patients Experiences & Testimonials can be provided on request



What The Press Says : Set 1

THE TIMES OF INDIA

21 November, 2013

New surgery boon for knee patients

TIMES NEWS NETWORK

Kolkata: The periods of hospitalization and recovery for knee-replacement surgery patients have come down significantly, thanks to improved techniques and quality implants. Such surgery was conducted on three patients at Belle Vue Clinic on Wednesday.

Earlier, a knee-replacement surgery meant at least six days of post-operative hospitalization and the patient would be able to walk only four days later. But now, patients can stand up within hours of the surgery and start walking on the second day.

While doctors in the city have been performing minimally invasive surgery for quite some time now, minimally invasive computer-assisted total knee arthroplasty was performed on three patients — Sambhunath Bit (52), Meena Devi Chowdhury (65) and Chhaya Chattopadhyay (72) — at Belle Vue on Wednesday.

"Computer-assisted total knee arthroplasty and minimally invasive surgeries have been performed in the city, but independently. Minimally invasive



A patient after surgery

computer-assisted total knee arthroplasty is being done in Belle Vue Clinic for the first time in eastern India," said Dr Santosh Kumar, who performed the surgery, one of them live, on Wednesday.

The conventional procedure enabled the patient to stand up on the third day of surgery, walk on the fourth day and get discharged from the hospital either on the fifth or the sixth day. But minimally invasive surgery enables the patient to stand within a few hours of the surgery, walk on the second day and walk out of the hospital on the third.

The Telegraph METRO

26th January, 2013

Tech boost for surgery

SPECIAL CORRESPONDENT

Hip and knee replacement surgeries in the city will now be more precise and less risky with a new computer-navigated technique that can tell from outside the exact position of bones and the alignment of ligaments.

Belle Vue Clinic on Monday claimed to be the first in the city to introduce the "fourth generation" machine from Germany.

The new technique will make the surgeries at least 10 minutes longer. "It has more checks and balances and so it takes more than the standard one and a half hours for other

computer-assisted procedures," said Santosh Kumar, orthopaedic surgeon and head of the joint replacement surgery unit at Belle Vue.

Computer-navigated surgeries have been conducted in Calcutta since 2006, but the German technology promises to increase the accuracy of knee-replacement surgeries from around 60 per cent to up to 95 per cent, say doctors.

The machine maps the position of bones in the knee joint using sensors. These sensors create a detailed image and provide information on a computer screen that helps the surgeon install the implant. "The equipment not only

takes into account the bones but also aligns soft tissues like ligaments. So there is less chance of damage to ligaments and other uncertainties too," Kumar pointed out.

Buddhadeb Chatterjee, orthopaedic surgeon with Apollo Gleneagles Hospitals, said the software would make things easier for surgeons. "Steps like bone registration are not required. Bone registration is a process in which pointers are rubbed on the bones and the images are transferred to the computer through infrared," said Chatterjee.

He said the software was more precise and therefore better results were expected.

THE ASIAN AGE

21 November, 2013

Advanced knee surgery raises patients' hopes

AGE CORRESPONDENT KOLKATA, NOV. 20

For the first time in eastern India, Minimally Invasive Computer-Assisted Total Knee Arthroplasty (MICA-TEKA) surgery was performed on three patients on Wednesday. The knee surgery reduces recovery time for patients.

The surgeries were performed at Belle Vue Clinic under the supervision of Dr Santosh Kumar. Interestingly, the live surgery performed on the knee of 72-year-old Chhaya

Chatterjee was shown on a giant screen at the clinic. It was a unique way to introduce one of the best medical advancements.

This latest (MICA-TEKA) procedure enables patients to stand up on his feet on the same day of the surgery, climb the stairs on the second day and are released on the third day. While the conventional procedure takes at least seven days' time for the knee of a patient to function properly.

According to Dr Kumar, the knee transplant is use-

ful for professionals who need a high performing knee.

"The surgery results in fantastic tacking of knee cap bone which leads to improved and full knee bending."

"With this knee transplant, people now will be able to use public transport, indulge in sports activities and lead a normal life," said Dr Santosh Kumar, who is also the head of the clinic's Computer-Assisted (Navigated) Joint replacement Centre.

The Statesman

KOLKATA, THURSDAY 21 NOVEMBER 2013

Urgent joint replacement at prominent city hospital

STATESMAN NEWS SERVICE Kolkata, 20 November

Good news awaits for people requiring urgent joint replacement and expecting a speedy recovery. The Belle Vue Clinic has introduced a minimally invasive procedure, which would take one-and-a-half hours to conduct knee surgeries and



and importantly, the patient would be able to stand on his feet on the same day of the surgery.

A team of deputed by Dr Santosh Kumar, who performed a live surgery before a battery of media persons at the Belle Vue today said: "The minimal invasive technique is less time taking and the patient can stand on his feet on the same day of the surgery and can walk or climb stairs on the second day."

"The computer assisted

total knee arthroplasty has been done for the first time in the eastern part of the country. Unlike conventional surgeries where the patient takes a longer time to heal, the latest procedure not only saves time, but also leads to a very minimal blood loss," said Dr Kumar, the head of computer-assisted (navigated) joint replace-

ment centre at Belle Vue. He further said, the transplant costs a little more than its bulky and can last for several years. "The treatment is of immense help to those who are at the peak of their professional lives and look for early recovery. They can resume normal life within a few days of surgery."

THE ASIAN AGE

29th January, 2013

KNEE JOINT REPLACEMENT MACHINE UNVEILED

AGE CORRESPONDENT KOLKATA, JAN. 28

The world's most modern and advanced knee-joint replacement navigation machine, OrthoPilot, an innovation to make knee and hip surgeries accurate and mathematical was unveiled on Monday at Belle Vue Clinic.

Made in Germany, the

fourth generation machine is said to be the first of its kind in eastern India. Consultant orthopaedic surgeon and head of KIMS, Hyderabad, Dr Krishna Kiran said: "It's the precision which has enhanced with OrthoPilot. It is more accurate as machine allows error-free surgery."

hindustantimes

29th January, 2013

NOW, COMPUTERS AID IN JOINT REPLACEMENT SURGERY IN CITY

HT Correspondent

letters@hindustantimes.com

KOLKATA: Belle Vue Clinic installed 'orthopilot', on Monday, the fourth generation navigation system that helps doctors eliminates human errors in hip and knee replacement and corrective surgeries.

"The machine's efficiency is much higher than the devices normally used for knee and hip replacement surgeries. Orthopilot is a hi-tech machine for enhancing precision during surgeries," Dr Krishna Kiran, director, Institute of Computer Assisted Joint Replacement Centre, Hyderabad, said during the launch of the German-manufactured device.

"Prior to computer-assisted devices, we couldn't be certain that an implant would be placed in the optimal position. It allows easy minimally invasive surgery, decreasing recovery time and post-operative pain," he said.

The increased accuracy also help increase the life of the implants, while causing less blood loss in the patient. In fact, most patients are able to walk one day after the surgery.

Stating that Orthopilot is a powerful surgical tool that combines dedicated software with superior instrument design, knee

surgeon, said Dr Santosh Kumar, head of the institute of Computer-assisted (navigated) joint replacement centre at the clinic.

"It guides a surgeon to make precise cuts in the joints and remove deformities, by using infrared camera. It gives patient specific information during surgery while virtually eliminating expensive and radiation intensive CT and MRI scans before the surgery," Dr Kumar added.

THE TIMES OF INDIA

29th January, 2013

Orthopilot for accurate joint surgery

Kolkata: Have someone in your family, who needs to undergo a hip or knee joint replacement surgery? Yes, these surgeries are common in the city now but precision levels depend on the surgeon's eyes. Hence, many patients complain of problems post surgery as the replaced knee is misaligned. So, those asked to go under the scalpel may harbour apprehension after hearing tales of misalignment.

But help is at hand in the form of a computer-guided orthopilot. The fourth generation hip and knee joint replacement navigation machine was inaugurated at the Belle Vue Clinic on Monday. Housed in the hospital's Institute of Computer As-

sisted (navigation) Joint Replacement Centre, the orthopilot is the first in eastern India.

The institute's head, Dr Santosh Kumar, said: "Orthopilot eliminates uncertainty and enhances precision. It also enhances long term results as deviation from goals during surgery is eliminated and the implants survive 1.5 to two times longer." According to him, a replaced knee under conventional surgery lasts 8-10 years, while one implanted with an orthopilot stays intact for 15-20 years. The costs under both techniques remain around the same—Rs 1.60 lakh. The same surgery costs Rs 15 lakh in Indian currency in the UK, he said.

News About Dr.Santosh Kumar, About Ortho Pilot & Advanced Procedures Done By Him



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Consult the Doctor via Online or Video Conference

Dr. Santosh Kumar is available for video conference with the patients for better understanding between the patient and the doctor. What you need to do is to fill in the form in the website [format given below] and submit. You will be intimated duly over phone/through mail the date and time for video conference.



You need to have Skype (free software for video conferencing) downloaded in your computer. Now add Dr. Kumar in the contact with his ID, E-mail and Phone No that will be communicated to you. You should have a web camera attached to your computer. You can interact with the doctor at the pre appointed date and time.

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Please check our website for details



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Please call the Helpline numbers



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Before surgery / procedure, do meet the Dr in person once.



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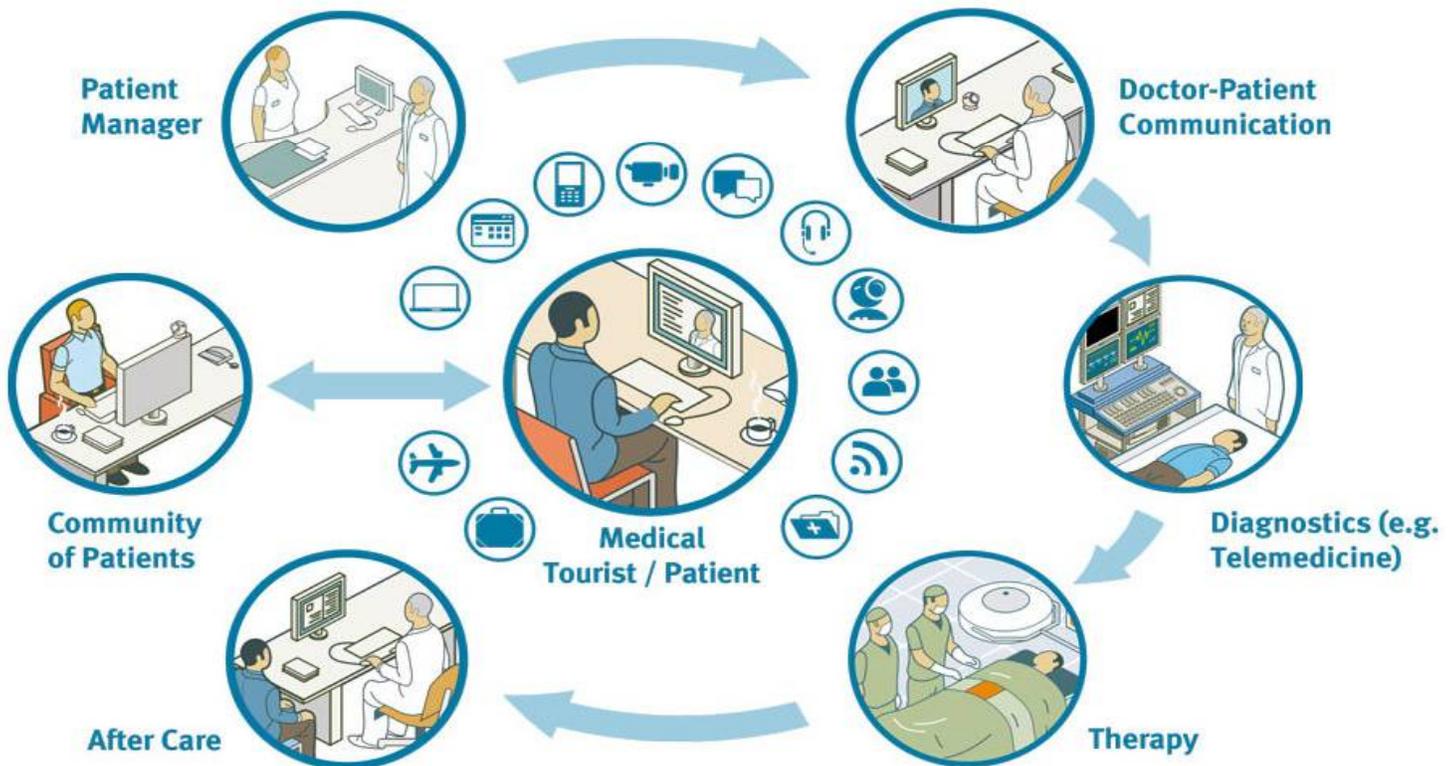


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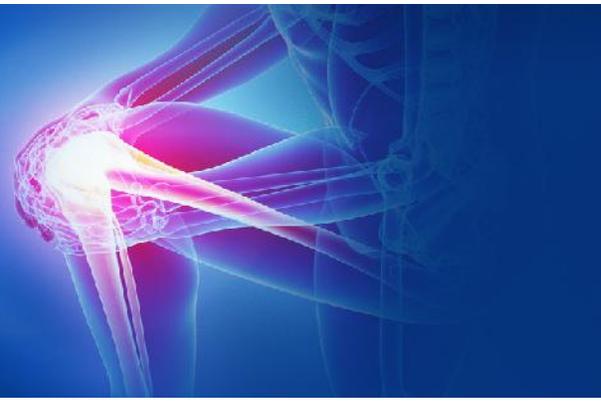
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- \$ 13 [US Dollars]

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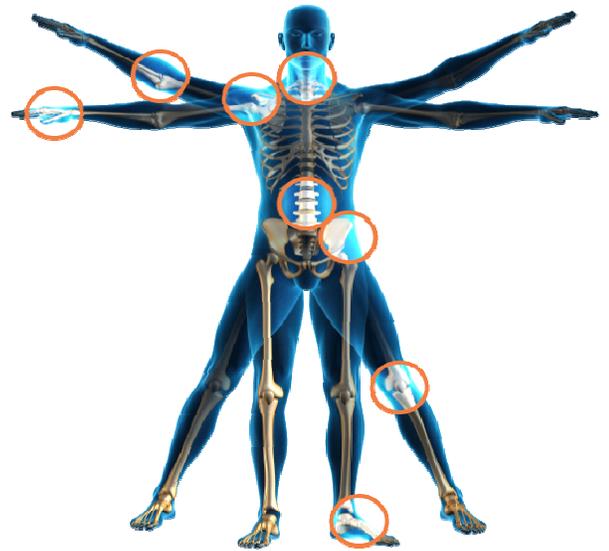
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About the Foundation

Poorva International Orthopaedic Foundation was created as a health charity dedicated solely to help people build, maintain and restore their bone and joint health. We do this by raising and allocating funds for the research, education, treatment and care that help patients to live and move independently - longer and stronger.

We invite you to help us in whatever capacity you can to fight against orthopaedic diseases & disorders. Your participation helps the tens of thousands of people living with pain, isolation, unhappiness and an inability to enjoy life due to bone and joint disorders such as arthritis, osteoporosis and injury.



Founded in 2014, Poorva Orthopaedic Foundation is a national registered charity powered by professional staff and network of volunteers. The Foundation is Kolkata's only health charity dedicated solely to helping people maintain and restore their bone and joint, or orthopaedic health.

What we do

Poorva Orthopaedic Foundation raises money through the trustees' donations and invests those funds in programs to advance orthopaedic research, promote patient and public education, and improve community care.

The Foundation is committed to patient education and to providing patients and their families with accurate, up-to-date information that will make going through orthopaedic surgery a little easier and less frightening.

Our Vision:

To be Patients' voice for bone and joint health.

Our Mission:

To achieve excellence in bone and joint health, mobility and function for all patients through the advancement of research, education, and care.

Our Values:

People: We work in the interest of orthopaedic patients, their families, and the professionals who treat them and for the future of any Individual who may require orthopaedic care.

Making a Healthy Difference: We contribute to the health of our communities and our nation by working with volunteers, patients, professionals, government and industry toward timely and quality access to bone and joint care.

Good Governance: We are committed to excellence in the governance of our organization and will do so ethically, morally, according to the law, and towards the achievement of our Mission.

Help to keep people on the move!



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