



# Treatment Zaroori Hai

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**K**nee Osteoarthritis has no known medication or treatment process for permanent cure and this degenerative disease primarily affects senior adults of 65 years and above. Agonising knee pain, swelling, and stiffness are the main symptoms of this disease and with progressing age, the symptoms gradually become severe and impact complete mobility of the patients. Age, obesity, and lifestyle are major risk factors for developing this disease and the only effective long-term treatment option is a Total Knee Replacement Surgery that helps to alleviate pain and restore joint mobility.

“Non-surgical treatment options like knee joint injections, activity modification, and non-steroid anti-inflammatory medications are effective only in the initial phase of the disease and as the condition deteriorates, a Total Knee Replacement surgery is essential to alleviate pain and regain joint mobility” informs Dr Kalpit Patel, a senior orthopaedic and specialist joint replacement surgeon at Naisarg Orthospeciality Hospital, Vadodara.

### 3D Robotic Assisted Surgery

In India, nearly 2,50,000 people opt for a Total Knee Arthroplasty every year. Apart from conventional surgery, patients can now also choose 3D Robotic Assisted Surgery (RAS) that is gaining prominence amongst surgeons and patients due to the added advantage of technology support for a successful outcome. In comparison to conventional surgery, wherein the surgeon and his team are responsible for every minute nuances while performing the surgery, a RAS involves the advancements of medical technology and robotics to aid surgeons prior and during the surgery.

### Major advantages of 3D Robotic Assisted Surgery

#### ● Improved Accuracy:

The use of robotics allows greater precision and accuracy during knee surgery. With a customised pre-operative 3D plan of the affected joint for precise implant placement, the robotic surgery greatly reduces probability of tissue damage around affected area.

● **Less Bone & Blood Loss:** Since the precision using a robotic arm is close to 100 per cent, accuracy compared to the conventional open ortho instruments result in less bone and blood loss. This leads to lesser

trauma, less pain, and faster recovery.

● **Personalised Surgery:** The robotic arm used in knee surgery is programmed on the basis of CT scan which further helps in developing a 3D view to match the unique anatomy of each patient. This allows for per-

## Painless solutions for painful problems

Bionik Gold Knee Implants have improved durability for active life after a Total Knee Arthroplasty, says Dr Kalpit Patel

sonalised surgery that can better address the individual needs of senior citizens including those with more complex conditions.

● **Reduced Hospital Stay:** 3D robotic knee surgery can reduce the risk of hospital-acquired infections and lead to a faster recovery.

● **Bionik Gold Knee Implants:** Ideal for young and old active patients The new generation biocompatible Bionik Gold Knee Implants are made of Titanium Niobium Nitride (TiNbN) materials and were introduced to overcome certain limitations of the previous generation implants for improved and long-term functionality.

### Main features

● TiNbN coating is eight times harder than a regular CoCr implant.

● TiNbN implants are twice as hard as the Zirconium Oxide implants.

● TiNbN are the most biocompatible, non-allergic surface material with a mere 0.0008 times ionic release compared to that of regular CoCr products.

Bionik Gold Knee Implants are designed to be compatible with natural fluids in the knee joints and special surface of the implant allows fluids to spread evenly for smoother

movements. These implants are also built to minimise friction between the implant and natural knee joint for easier knee functionality.

“The hi-flexion design provides full flexion of leg and allows the patient to squat, kneel, and climb stairs with ease after the Total Knee Replacement procedure,” adds Dr Kalpit Patel.

### Patient Testimony

A 62-year-old patient with severe knee osteoarthritis in Vadodara needed a Total Knee Arthroplasty and was advised a Robotic Assisted Surgery as the patient was in prime of his health. The patient wished to continue his active lifestyle and needed a strong knee implant that could take the pressure of his daily activities.

“We replaced the diseased knee with a Bionik Gold Knee Implant as it is made of hard materials and are corrosion resistant. A 3D Robotic Assisted Knee Surgery helped to reduce the chances of any possible human error, reduced blood loss, and provided an accurate alignment of the prosthetic implant for better knee movement and faster recovery post surgery,” informed Dr Patel.

“The integration of technology, precision tools, and high-resolution scanning with human expertise and experience have highly improved the outcome of Total Knee Arthroplasty amongst senior patients,” added Dr Patel.

After the surgery and post his recovery period, the patient is leading an active life with the TiNbN implant functioning optimally with perfect alignment.



**Dr Kalpit Patel**

Senior orthopaedic and specialist joint replacement surgeon at Naisarg Orthospeciality Hospital, Vadodara

### Highlights:

- Over 15 million people develop osteoarthritis every year in India
- Osteoarthritis can affect any joints like wrist, knees, neck, and hips
- Women are twice as prone to osteoarthritis than men\*
- Knee Osteoarthritis is the most common form of Osteoarthritis affecting senior adults
- Over 250,000 Total Knee Replacement procedures are performed annually in India

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